Oracle Utilities Customer Care and Billing Integration to Oracle PeopleSoft Financials for General Ledger and Accounts Payable

Implementation Guide

Release 12.1

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Oracle Utilities Customer Care and Billing Integration to Oracle PeopleSoft Financials for General Ledger and Accounts Payable, Release 12.1 Implementation Guide

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Preface

This document is intended for anyone implementing the Oracle Utilities Customer Care and Billing Integration to Oracle PeopleSoft Financials.

Documentation and Resources

For more information regarding this integration, foundation technology and the edge applications, refer to the following documents:

Product Documentation

Topic	Description
Integration documentation:	
Oracle Utilities Customer Care and Billing Integration to Oracle PeopleSoft Financials Release Notes	
Oracle Utilities Customer Care and Billing Integration to Oracle PeopleSoft Financials Implementation Guide	Refer to the Oracle Utilities applications documentation page: http://docs.oracle.com/cd/E72219_01/documentation.html
Oracle Utilities Customer Care and Billing Integration to Oracle PeopleSoft Financials Installation Guide	
Edge application documentation:	
Oracle Utilities Customer Care and Billing PeopleSoft Financials for General Ledger (GL) and Accounts Payable (AP)	

Additional Documentation

Resource	Location
SOA Suite 12c documentation	Refer to the SOA documentation at: http://www.oracle.com/technetwork/middleware/soasuite/documentation/index.html
Oracle Support	Visit My Oracle Support at https://support.oracle.com regularly to stay informed about updates and patches. Access the support site for the Edge Application Certification Matrix for Oracle Utilities Products (Doc ID 1454143.1) or refer to the Oracle Utilities Integrations page at http://my.oracle.com/site/tugbu/productsindustry/productinfo/utilities/integration/index.htm
Oracle Technology Network (OTN) Latest versions of documents	http://www.oracle.com/technetwork/index.html
Oracle University for training opportunities	http://education.oracle.com/
Web Services Security	For more information about Web services security using Oracle Fusion Middleware 12c refer to https://docs.oracle.com/middleware/12211/cross/webservicestasks.htm.
Oracle Fusion Middleware 12c documentation	Refer to the Oracle applications documentation page: http://docs.oracle.com/en/middleware/
Oracle Fusion Middleware "What's New In Oracle WebLogic Server" Section: Standards Support, Supported Configurations and WebLogic Server Compatibility, Database Interoperability For additional information on the type of database to use.	http://docs.oracle.com/middleware/1221/wls/NOTES/toc.htm
Instructions on installing this integration on non-Windows/ Linux platforms	Refer to Oracle Support Knowledge Article ID 1349320.1.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

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Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

The following table lists the commonly used abbreviations in these guides

Abbreviation	Expanded Form
AIA	Application Integration Architecture
AP	Accounts Payable
AP data	Accounts Payable Data
AP Request	Accounts Payable Request
BPEL	Business Process Execution language
CCB or OUCCB	Oracle Utilities Customer Care and Billing
EBF	Enterprise Business Flow
EM	Enterprise Manager
FT	Financial Transaction
GL	General Ledger
MDS	Meta Data Store

Abbreviation	Expanded Form
PS	Oracle PeopleSoft Financials
SOA	Service Oriented Architecture

Part 1

Understanding the Integration

This section provides an overview of the participating applications and information regarding the business processes addressed by this integration.

This section contains the following chapters:

- Overview
- Understanding the Integration Process

Chapter 1

Overview

This document provides configuration and administration information for the integration between Oracle Utilities Customer Care and Billing and PeopleSoft Financials for General Ledger (GL) and Accounts Payable (AP).

Prerequisites

All participating applications must be installed, set up, and working properly.

About the Integration Product

This section provides general information about the functionality and processing of the Oracle Utilities Customer Care and Billing Integration to PeopleSoft Financials for General Ledger and Accounts Payable. This is an AIA Direct Integration using SOA and does not require AIA Foundation Pack to be installed.

Oracle Utilities Customer Care and Billing

Oracle Utilities Customer Care and Billing (CCB) is a customer and billing system that manages all aspects of customer service needed by most utilities to operate their business. Basic objects form the core of the system: person, account, premise, service agreement, and service point. These objects hold demographic, geographic, and financial information about a company's customers and properties. Related to these objects are the processes that they manage: bills, payments, meter readings, field activities, etc.

> **Note**: Refer to the Documentation and Resources section for a reference to the product matrix which provides current application version details.

Oracle PeopleSoft Financials for General Ledger and Accounts Payable

Oracle PeopleSoft Financials for General Ledger and Accounts Payable (PS) is a family of applications in Oracle's PeopleSoft product line. This system helps to automate and standardize business processes by providing a single repository of physical and financial data on an organization's equipment and assets. This information can then be incorporated into the budgeting and planning process. Accounts Payable, Accounts Receivable, and General Ledger functionality can be used to manage disbursements and collections, monitor credit risks, and capture and access financial information based on configurable requirements.

> **Note**: Refer to the Documentation and Resources section for a reference to the product matrix which provides current application version details.

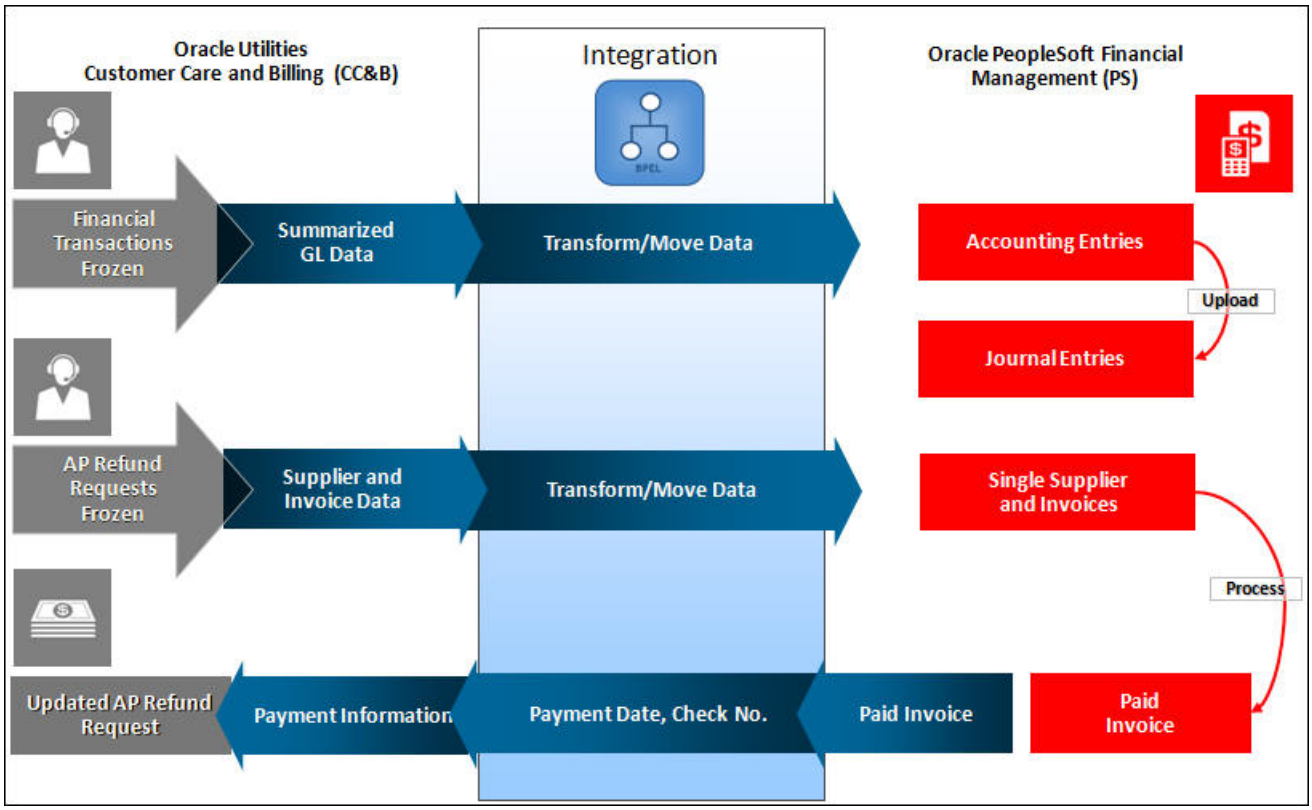
Supported Business Processes

This integration of products incorporates three areas of key functionality to facilitate the transfer of information between two applications. Data is sent from Oracle Utilities Customer Care and Billing to PeopleSoft Financials for General Ledger and Accounts Payable and vice versa to support the following transactions and actions:

Oracle Customer Care and Billing	**Oracle PeopleSoft Financials for General Ledger and Accounts Payable**
A bill is created/ cancelled.	The general ledger is updated with journal information.
A payment is created/ cancelled.	
An adjustment is created/ cancelled.	
An adjustment whose type indicates AP Request is created.	Customer and AP Request information is used to create a one-time supplier and supplier site. An account payable voucher is created and associated with this supplier and supplier site. An AP voucher or payment can also be setup to make multiple vendor or supplier payments.

Oracle PeopleSoft Financials for General Ledger and Accounts Payable	Oracle Utilities Customer Care and Billing
A payment is created for an invoice related to an Oracle Utilities Customer Care and Billing AP request.	Payment information is sent from PeopleSoft Financials for General Ledger and Accounts Payable to Oracle Utilities Customer Care and Billing. The AP Request is updated with payment information.
A check related to an invoice linked to an AP request is re-issued.	
A check related to an invoice linked to an AP request is voided and the liability is closed.	The AP request and its associated adjustment are cancelled.

The following diagram provides a visual representation of these processes:



Integration Points

Process Scheduling

Depending on the size and complexity of your accounting system and business practices, transactions generated in either of the participating applications are sent to the alternate application on a daily or weekly schedule. Schedule the transfer of this information between applications to occur according to a frequency that is most appropriate for your organization.

Best Practices

The following sections provide business information that helps achieve accurate and error-free movement of data between Oracle Utilities Customer Care and Billing and PeopleSoft Financials for General Ledger and Accounts Payable.

- One-Time Configuration Settings
- General Ledger Integration
- Accounts Payable (AP) Request and AP Data Integrations

  Note: Information on how to configure settings that are specific to the integration is provided in the chapter titled Configuring the Integration. Refer to product specific documentation for information on how to complete product specific configuration tasks.

One-Time Configuration Settings

Some one-time configuration settings must be coordinated manually to ensure proper results from the movement of data between Oracle PeopleSoft Financials for General Ledger and Accounts Payable and Oracle Utilities Customer Care and Billing.

General Ledger Configuration

Oracle PeopleSoft Financials for General Ledger and Accounts Payable General Ledger is the overriding source for all General Ledger information. Oracle Utilities Customer Care and Billing is considered to be the sub-ledger. It is assumed that the General Ledger has already been configured to accommodate your business needs.

Distribution Codes

Oracle Utilities Customer Care and Billing uses distribution codes to map sub-ledger transactions to the Oracle PeopleSoft Financials for General Ledger and Accounts Payable General Ledger accounts. As part of your Oracle Utilities Customer Care and Billing configuration, it is assumed that you have properly mapped your distribution codes to the General Ledger chart of accounts.

General Ledger Divisions for Non-Integrated Transactions

If some of the transactions created in Oracle Utilities Customer Care and Billing should not be integrated to your General Ledger you should configure a separate General Ledger Division for these. You should then configure the integration product to distinguish which General Ledger Division should be integrated with the General Ledger (it ignores all others).

> **Note**: Refer to the Implementation Guide, Oracle Utilities Customer Care and Billing documentation, or Oracle PeopleSoft Financials for General Ledger and Accounts Payable documentation for more information on any of the configuration settings referenced in this section.

General Ledger Integration

Oracle PeopleSoft Financials for General Ledger and Accounts Payable General Ledger accounts is structured using account segments. These are set up in your existing Oracle PeopleSoft Financials for General Ledger and Accounts Payable configuration according to your business practices. Oracle Utilities Customer Care and Billing distribution codes must be configured to mirror the segments in Oracle PeopleSoft Financials for General Ledger and Accounts Payable. The segment positions are separated by dots '.' in Oracle Utilities Customer Care and Billing so that the first segment is Account, the second segment is Department ID, and so on.

Create your chart of accounts in the Oracle PeopleSoft Financials for General Ledger and Accounts Payable General Ledger then set up your Oracle Utilities Customer Care and Billing distribution codes to map to the General Ledger account structure using dot separators.

Do not become confused by the dual use of the word account, for the Oracle PeopleSoft Financials for General Ledger and Accounts Payable general ledger accounts and the Oracle Utilities Customer Care and Billing customer billing accounts. A customer billing account is simply information associated with a customer that is used in the Oracle Utilities Customer Care and Billing payment and billing process, and does not relate to the Oracle PeopleSoft Financials for General Ledger and Accounts Payable accounting

definition of account (General Ledger Account). The Oracle Utilities Customer Care and Billing distribution code translates to the Oracle PeopleSoft Financials for General Ledger and Accounts Payable general ledger account.

The following sections cover:

- Oracle PeopleSoft Financials for General Ledger and Accounts Payable General Ledger Settings
- Oracle Utilities Customer Care and Billing General Ledger Settings
- General Ledger Settings in the Integration Layer
- Accounting

Oracle PeopleSoft Financials for General Ledger and Accounts Payable General Ledger Settings

Configure General Ledger settings in Oracle PeopleSoft Financials for General Ledger and Accounts Payable according to the following guidelines and keeping in mind that Oracle PeopleSoft Financials for General Ledger and Accounts Payable is the overriding source for the general ledger.

- **Journal Generator Process**: Schedule the Journal Generator process to create journal vouchers from Oracle Utilities Customer Care and Billing information inserted into interface tables by the integration software. When you configure Oracle PeopleSoft Financials for General Ledger and Accounts Payable to run this process automatically at a preset time please ensure you have matched this timing with the timing of other actions completed by Oracle Utilities Customer Care and Billing and the integration product. Alternatively you may use the standard user interface within Oracle PeopleSoft Financials for General Ledger and Accounts Payable to run the Journal Generator process manually.
- **Accounting Entry Definition**: If not already configured, pre-configure an accounting entry definition in Oracle PeopleSoft Financials for General Ledger and Accounts Payable to indicate the staging table where incoming accounting entries should be stored, and the mapping from staging table fields to active chartfields. Ensure that all mandatory fields on the staging tables are mapped.
- **Journal Generator Template**: If not already configured, pre-configure a Journal Generator Template in Oracle PeopleSoft Financials for General Ledger and Accounts Payable to set the journal processing defaults for incoming Oracle Utilities Customer Care and Billing data.
- The integration software relies on other Oracle PeopleSoft Financials for General Ledger and Accounts Payable configuration information including: Business Unit, Calendars, Ledger groups and Ledger. These are normally already configured as part of your implementation. If these do not already exist please configure them for the Integration software to run correctly.

Oracle Utilities Customer Care and Billing General Ledger Settings

Configure General Ledger settings in Oracle Utilities Customer Care and Billing according to the following guidelines and keeping in mind that Oracle PeopleSoft Financials for General Ledger and Accounts Payable is the overriding source for the general ledger.

- Schedule the GLASSIGN and GLS batch processes to run at an appropriate time of day. These processes get sub ledger information in Oracle Utilities Customer Care and Billing and all information not previously integrated to the General Ledger ready to extract, transform and load to the General Ledger. When you configure Oracle Utilities Customer Care and Billing to run this process automatically at a preset time please ensure you have matched this timing with the timing of other actions done by Oracle PeopleSoft Financials for General Ledger and Accounts Payable and the integration product. (Alternatively you may use the standard user interface within Oracle Utilities Customer Care and Billing to run these batch processes manually).
- Verify that the Oracle Utilities Customer Care and Billing General Ledger Division matches the General Ledger Business Unit in Oracle PeopleSoft Financials for General Ledger and Accounts Payable.
- Ensure that Distribution Codes are configured in Oracle Utilities Customer Care and Billing to properly reflect the General Ledger accounts that should be debited and credited for each type of financial transaction created.

General Ledger Settings in the Integration Layer

As part of the technical configuration of this integration product you must indicate certain values to the product so that it can properly extract data from one application, transform it, and insert it for use by the other application. The following information must be configured:

- Email address of the person who should be notified if the integration software detect and logs an error while performing the integration.
- General Ledger line description to use for journal voucher lines in Oracle PeopleSoft Financials for General Ledger and Accounts Payable that came from Oracle Utilities Customer Care and Billing through the integration.
- The Journal ID, General Ledger, and Ledger group to use for journal vouchers in Oracle PeopleSoft Financials for General Ledger and Accounts Payable that came from Oracle Utilities Customer Care and Billing through the integration.
- If you enter an Oracle Utilities Customer Care and Billing GL Division name in the BPEL configuration table then only financial transactions associated with this GL Division are extracted for integration to Oracle PeopleSoft Financials for General Ledger and Accounts Payable GL.

  Note: Leave this configuration information blank if you want all Oracle Utilities Customer Care and Billing financial transactions to be integrated to Oracle PeopleSoft Financials for General Ledger and Accounts Payable GL.
- If all Oracle Utilities Customer Care and Billing financial transactions should come across the integration then do not name any General Ledger Divisions in the integration product configuration table.

Accounting

The following shows the basic accounting debits and credits that can be achieved through the configuration indicated above:

Oracle Utilities Customer Care and Billing Event	Debit Account	Credit Account
Charges generated by billing	Accounts Receivable	Revenue
Customer making payment	Cash	Accounts Receivable
AP Request adjustment	Accounts Receivable	Accounts Payable Clearing

Accounts Payable (AP) Request and AP Data Integrations

This section covers:

- Oracle PeopleSoft Financials for General Ledger and Accounts Payable AP Settings
- Oracle Utilities Customer Care and Billing AP Settings
- Integration Software AP Settings
- Accounting

Oracle PeopleSoft Financials for General Ledger and Accounts Payable AP Settings

Oracle PeopleSoft Financials for General Ledger and Accounts Payable AP Voucher Build Application Engine Process (AP_VCHRBLD) is run as scheduled to read the data from the AP Voucher Build Interface tables and create single payment vouchers corresponding to the Oracle Utilities Customer Care and Billing AP Requests.

Oracle PeopleSoft Financials for General Ledger and Accounts Payable vendors are used to identify standard customer related information used for all AP Requests coming from Oracle Utilities Customer Care and Billing. These must be configured in Oracle PeopleSoft Financials for General Ledger and Accounts Payable for the integration to process these transactions correctly.

Configuration needed for AP Request and AP Payment integrations includes:

- **Oracle PeopleSoft Financials for General Ledger and Accounts Payable AP Voucher Build Application Engine Process**: Schedule this process to create AP Vouchers from Oracle Utilities Customer Care and Billing information inserted into interface tables by the integration product software. When you configure Oracle PeopleSoft Financials for General Ledger and Accounts Payable to run this process automatically at a preset time please ensure you have matched this timing with the timing of other actions done by Oracle Utilities Customer Care and Billing and the integration product. (Alternatively you may use the standard user interface within Oracle PeopleSoft Financials for General Ledger and Accounts Payable to run the Oracle PeopleSoft Financials for General Ledger and Accounts Payable AP Voucher Build Application Engine Process manually).
- **Payment Vendor**:

- **Single Payment Vendor**: Configure this setting if Oracle PeopleSoft Financials for General Ledger and Accounts Payable will use a single vendor to process refunds from Oracle Utilities Customer Care and Billing. Pre-configure a single payment vendor in Oracle PeopleSoft Financials for General Ledger and Accounts Payable to accommodate payments sent to customers within Oracle Utilities Customer Care and Billing. An Oracle PeopleSoft Financials for General Ledger and Accounts Payable single payment vendor translates the concept of a customer from Oracle Utilities Customer Care and Billing to the concept of vendor in Oracle PeopleSoft Financials for General Ledger and Accounts Payable, and helps avoid the creation of a new vendor for every customer that needs to be issued a payment. The single payment vendor record holds default information for customers from Oracle Utilities Customer Care and Billing. If you have already set up a single payment vendor you can choose to use the existing vendor. No Oracle Utilities Customer Care and Billing specific configuration is required for the single payment vendor on this integration point.

  Note: By default, this integration is setup for single payment Vendor.

- **Multiple Payment Vendors**: Configure these settings only if Oracle PeopleSoft Financials for General Ledger and Accounts Payable will use different vendors to process refunds for Oracle Utilities Customer Care and Billing customers. Pre-configure multiple payment vendors in Oracle PeopleSoft Financials for General Ledger and Accounts Payable to accommodate payments sent to customers within Oracle Utilities Customer Care and Billing. Each payment vendor must be linked to an AP Business Unit.

- **Accounting Entry Template**: Pre-configure an accounting entry template in Oracle PeopleSoft Financials for General Ledger and Accounts Payable to indicate the accounts that accompany the refund. Each voucher that comes from the Oracle Utilities Customer Care and Billing system is accompanied by a General Ledger account. An Accounting Entry template is needed in Oracle PeopleSoft Financials for General Ledger and Accounts Payable to define the off-set account for the incoming Oracle Utilities Customer Care and Billing account. If you have already set up an accounting entry template you can choose to use the existing template. No Oracle Utilities Customer Care and Billing specific configuration is required for the accounting entry template on this integration point.

- **Payment Terms Code**: Create a new payment terms code for processing the payments for Oracle Utilities Customer Care and Billing customers. This Payment terms code needs to be of the type 'Single Payment'. These codes are used to define defaults for when payments should be made based on the invoice date, which status should be paid, any applicable discounts, rebates etc.

  Note: For specific guidelines on configuring these settings, refer the Oracle PeopleSoft Financials for General Ledger and Accounts Payable User documentation.

Oracle Utilities Customer Care and Billing AP Settings

Configure Accounts Payable settings in Oracle Utilities Customer Care and Billing according to the following guidelines and keeping in mind that Oracle PeopleSoft

Financials for General Ledger and Accounts Payable is the overriding source for the general ledger account information.

- **Characteristics for CIS Division**:
  - **AP Business Unit Characteristic**: The Oracle Utilities Customer Care and Billing CIS Division characteristic value for AP Business Unit must match the AP Business Unit in Oracle PeopleSoft Financials for General Ledger and Accounts Payable.
  - **AP Vendor ID Characteristic**: The Oracle Utilities Customer Care and Billing CIS Division characteristic value for AP Vendor ID must match the AP Business Unit's Vendor ID in Oracle PeopleSoft Financials for General Ledger and Accounts Payable.
- **Characteristic for Distribution Code**: An Oracle Utilities Customer Care and Billing characteristic associated with the distribution code assigned to an adjustment type used to create AP Requests in Oracle Utilities Customer Care and Billing, must be configured and its value must match the Oracle PeopleSoft Financials for General Ledger and Accounts Payable Accounting Entry template to be used.

  Note: For more information on the configuration settings referenced in this section, refer the Oracle Utilities Customer Care and Billing user documentation.

Integration Software AP Settings

The integration product extracts the unprocessed AP Requests from Oracle Utilities Customer Care and Billing and loads the Oracle PeopleSoft Financials for General Ledger and Accounts Payable AP Voucher Build Interface tables after applying the necessary translations and transformations on the Supplier/Invoice data extracted from Oracle Utilities Customer Care and Billing.

As part of the technical configuration of this integration product, you must indicate certain values to the product so that it can properly extract data from one application, transform it, and insert it for use by the other application. It is assumed that you have configured this information including:

- The email address of the person who should be notified if the integration software detects and logs an error while performing the AP Request and AP Data integrations,
- AP Voucher information required by Oracle PeopleSoft Financials for General Ledger and Accounts Payable including build keys, Voucher Style, and Vendor Set ID.
- The AP Single Vendor Flag must be set to determine whether Single Vendor or Multiple Vendors will be used to handle AP refund payment. By default, it is set to Single Vendor Payment.
- The AP Use Single Business Unit Flag must be set to determine whether the GL Business Unit or GL Division related to the AP Request uses single or multiple GL Division. By default, it is set to Use Single Business Unit.
- The Single Vendor ID, Location, Address Sequence Number, Payment Terms code, AP Rate Type, Multiplier, Division, Match Action, Voucher Source, Physical Nature Code, AP Business Unit Code, Bank Code, Bank account key, payment method, payment handling code, and the Oracle Utilities Customer

Care and Billing characteristic types holding the Oracle PeopleSoft Financials for General Ledger and Accounts Payable AP Business Unit must all be configured with valid values in the integration settings table.

- The AP data remit vendor must be set to valid values in the integration settings table.

Accounting

The following table shows the basic accounting debits and credits that can be achieved through the above AP configuration:

Event	Debit Account	Credit Account
AP Request Adjustment in Oracle Utilities Customer Care and Billing (As part of the General Ledger Integration)	Accounts Receivable	Accounts Payable Clearing
AP Invoice Created in Oracle PeopleSoft Financials for General Ledger and Accounts Payable	Accounts Payable Clearing	AP Liability
AP Invoice Payment in Oracle PeopleSoft Financials for General Ledger and Accounts Payable	AP Liability	Cash

Chapter 2

Understanding the Integration Process

This section provides detailed business process overviews and technical overviews of each of the business processes facilitated by this integration. These include the following:

- Technical Overview
- Integration Points

Technical Overview

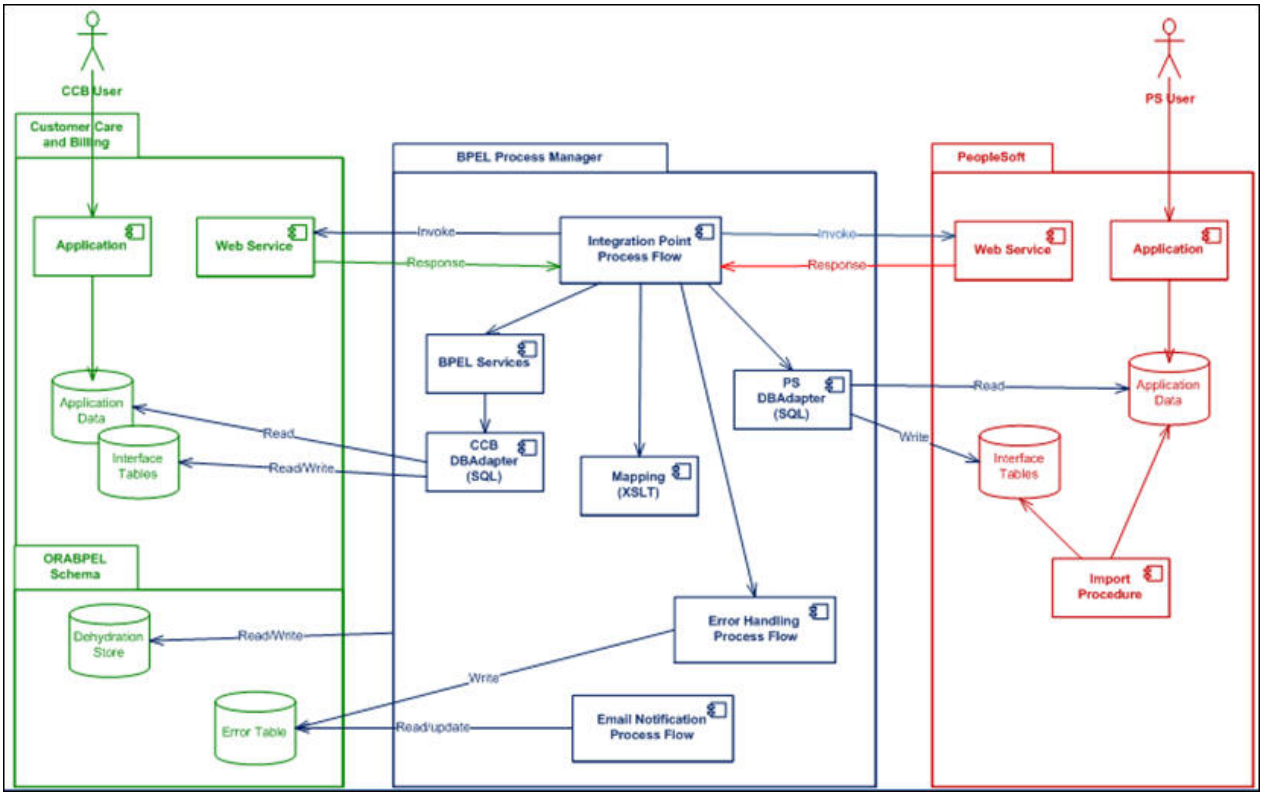
This is a direct integration between Oracle Utilities Customer Care and Billing and PeopleSoft Financials.

- This integration use two types of end-to-end integration processes: Asynchronous and Synchronous.
- Most of the integration processes interact with edge applications using data base adapters except for CCBCancellationWebService process where it invokes the Oracle Utilities Customer Care and Billing web service.

  These integration processes extract data from the source application database tables and convert the data extracted from source data base table into an XML format.
- Then, the source XML data is transformed into the target application format using XSLT.
- The transformed data is inserted into the target application database tables.
- When the target system receives this data, it validates and converts imported data into the appropriate format of entries in the target application.
- In case of any error in the process, the error data is inserted into the INTEGRATION_ERROR_STORE table and an optional email notification is sent based on the configuration.
- The extension processes are present for the main integration processes.
- The pre-extension and post-extension scopes are executed based on the extension flags enabled in the INTEGRATION_LOOKUP_TABLE.
- The extension point flags are defaulted to 'false' in the INTEGRATION_LOOKUP_TABLE table.

The following table shows the integration points, source, and target applications, tables, and processes used to load the data that is imported from the other system:

Integration Process	Source System	Target System	Process	Target Table
General Ledger	Oracle Utilities Customer Care and Billing	Oracle PeopleSoft Financials for General Ledger and Accounts Payable	Journal Generator	PS_JGEN_ACCT_ENTRY
AP Request	Oracle Utilities Customer Care and Billing	Oracle PeopleSoft Financials for General Ledger and Accounts Payable	Voucher Build	PS_VCHR_LINE_STG PS_VCHR_DIST_STG PS_VCHR_PYMT_STG PS_VCHR_VNDR_STG PS_VCHR_BANK_STG
AP Data	Oracle PeopleSoft Financials for General Ledger and Accounts Payable	Oracle Utilities Customer Care and Billing		The appropriate AP Request within Oracle Utilities Customer Care and Billing



High Level Architecture Diagram

Integration Schema

The integration requires a database to host the required integration schema. This schema can be created in any of the following:

- An integration database, if one exists.
- As a part of the Oracle Utilities Customer Care and Billing database.
- As part of another database as determined by your specific technical needs.

The tables listed here are created in the integration schema defined during installation, for the purpose of this integration product.

> **Note**: The integration does not require any database objects to be added to Oracle Utilities Customer Care and Billing or Oracle PeopleSoft Financials for General Ledger and Accounts Payable databases other than the objects mentioned here.

The following database tables are required to operate the Oracle Utilities Customer Care and Billing process integration for the Oracle PeopleSoft Financials for General Ledger and Accounts Payable product:

INTEGRATION_LOOKUP_TABLE

A lookup table to store all the configuration parameters used by the integration processes. This table is also used to configure the email addresses to be notified if errors occur. This table is seeded with data at the time of integration product installation.

INTEGRATION_PROCESS_ACTIVATION

This table is used to activate or deactivate various integration points available in the Integration product. This table is seeded with data at the time of integration pack installation and is by default populated to activate all the available integration points in the product.

INTEGRATION_ERROR_STORE

The table is used to hold the information regarding the errors encountered during integration transactions. A record is inserted for each error encountered by the integration process. The MailNotification process, accesses this table to get the error information needed to construct the notification email. This table is delivered with no data.

Integration Points

This section covers the following:

General Ledger

For general ledger transactions, Oracle Utilities Customer Care and Billing is considered the sub-ledger and Oracle PeopleSoft Financials for General Ledger and Accounts Payable is considered the general ledger.

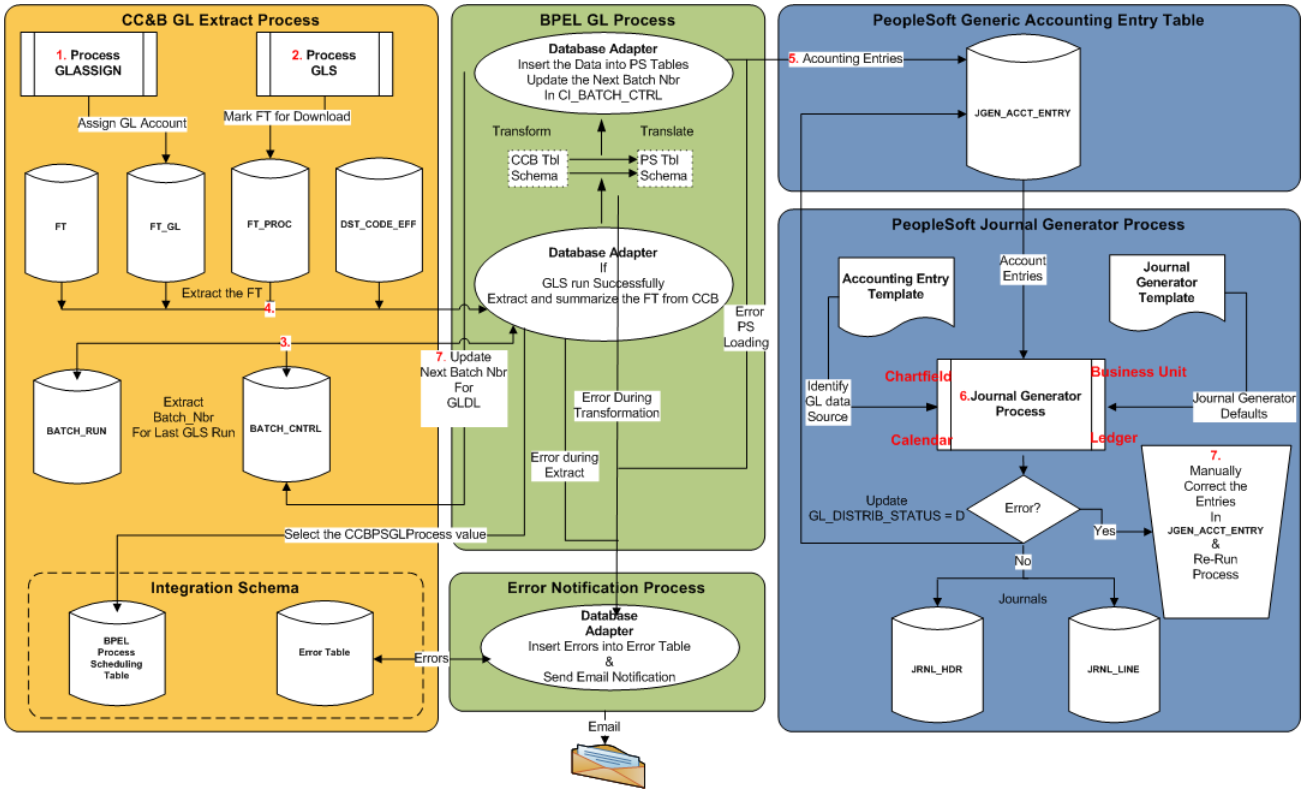
- General Ledger transactions are written in one direction; from Oracle Utilities Customer Care and Billing to Oracle PeopleSoft Financials for General Ledger and Accounts Payable.
- Financial transactions are moved from the sub-ledger to the general ledger when two consecutive Oracle Utilities Customer Care and Billing batch processes, GLASSIGN and GLS, are run according to a set schedule. These are standard processes released with Oracle Utilities Customer Care and Billing.
- The GLASSIGN and GLS processes group all the financial transactions in Oracle Utilities Customer Care and Billing that must be included in a batch. The GL integration point looks for batches of financial transactions that are ready to be sent, extracts and summarizes the data, translates the data from a sub-ledger format to the format required by the general ledger, and writes it to the Oracle PeopleSoft Financials for General Ledger and Accounts Payable Generic Accounting Entry Table: PS_JGEN_ACCT_ENTRY.

  Note: If your implementation wants to use a cloned PS_JGEN_ACCT_ENTRY table instead of the Generic Accounting Entry Table PS_JGEN_ACCT_ENTRY, customization for this process must be enabled to allow implementers to customize how they want to insert data to the cloned PS_JGEN_ACCT_ENTRY. Patch 24653860 must be applied.
- Once the entries are created in Oracle PeopleSoft Financials for General Ledger and Accounts Payable, the standard journal generation process must be executed to create the necessary journal entries within the General Ledger.

This can be accomplished by scheduling the standard Oracle PeopleSoft Financials for General Ledger and Accounts Payable journal generator process or by manually running this process through the standard user interface provided within the Oracle PeopleSoft Financials for General Ledger and Accounts Payable product.

You must set up a journal generator template to facilitate the Journal Generator's upload of data from the Oracle PeopleSoft Financials for General Ledger and Accounts Payable staging tables.

Note: For more information on GLASSIGN and GLS Batch jobs, refer to the Oracle Utilities Customer Care and Billing documentation.



GL Process Diagram

These are the steps for the GL Process:

1. Run the GLASSIGN batch program in Oracle Utilities Customer Care and Billing.
2. Run GLS batch program in Oracle Utilities Customer Care and Billing.
3. BPEL process extracts FT information from Oracle Utilities Customer Care and Billing.
4. BPEL process updates the Next_Batch_Nbr for GLDL in CI_BATCH_CTRL table in Oracle Utilities Customer Care and Billing.
5. Check the value of CCB.PS.GL.INVOKE_ALT_JGEN_TABLE_FLAG from the Integration Lookup Table to determine if customization is needed to insert GL data to Peoplesoft.
   - If false, GL BPEL process transforms and inserts the data into Oracle PeopleSoft Financials for General Ledger and Accounts Payable Generic Accounting Entry Table: PS_JGEN_ACCT_ENTRY.

- If true, implementation needs to write custom code to insert GL data to the specific Peoplesoft table they require.

  Note: This functionality is only available if patch 24653860 is applied. By default, CCB.PS.GL.INVOKE_ALT_JGEN_TABLE_FLAG is set to false.

6. GL BPEL process updates the Last_Update_DateTime in CI_BATCH_CTRL table in Oracle Utilities Customer Care and Billing.
7. Run Journal Import process in Oracle PeopleSoft Financials for General Ledger and Accounts Payable to import FTs.
8. Any errors in Oracle PeopleSoft Financials for General Ledger and Accounts Payable interface tables must be corrected in Oracle PeopleSoft Financials for General Ledger and Accounts Payable and Journal Import process must be re-run.

Logic Used in the General Ledger integration Point

BPEL Polls to Verify whether FTs are ready for Extraction

Oracle BPEL Process Manager polls Oracle Utilities Customer Care and Billing to verify whether financial tractions are ready for extraction.

```
If GLS has run since the last run of the integration
AND the GLS run has completed successfully
Retrieve the Batch of Rows identified in CI_BATCH_RUN (created by
GLS)
Else
Do nothing
```

Update the NEXT BATCH NUMBER in CI_BATCH_CNTRL

```
Increment by 1 the NEXT_BATCH_NBR in CI_BATCH_CTRL WHERE BATCH_CD
is GLDL
```

Extract Financial Transactions from Oracle Utilities Customer Care and Billing

Select the information shown in the table below:

```
FROM CI_FT_PROC, CI_FT_GL, CI_FT FT, CI_DST_CODE_EFF
WHERE the rows were marked by GLS as belonging to the latest batch
that is ready to be integrated

Summarize and group the rows
BY FTPR.BATCH_NBR, FTGL.DST_ID, FTGL.GL_ACCT, FT.CIS_DIVISION,
FT.GL_DIVISION, FT.CURRENCY_CD, DST.STATISTICS_CD,
FT.ACCOUNTING_DT, DST.FUND_CD
```

Extract Information

Field	Description
Source System	Set to Oracle Utilities Customer Care and Billing
BATCH_NBR	The batch number for the group of FTs extracted. The batch number is assigned to the financial transaction when GLS is run

Field	Description
DIST_ID	The distribution code used in Oracle Utilities Customer Care and Billing to derive the GL account information. A sample data example is R - ELERES for electric residential revenue financial transaction
GL_ACCT	The actual GL account with '.' separating the substructure numbers like department. For example 101.73653.8873.87
CIS_DIVISION	The CIS Division
GL_DIVISION	The GL Division
CURRENCY_CD	The currency type, such as USD
STATISTICS_CD	The identifier of the type of statistical amount being sent to GL such as KWH for electricity or CCF for gas
ACCOUNTING_DT	The effective accounting date for the GL transactions
AMOUNT	The dollar amount of the GL debit or credit
STATISTIC_AMOUNT	The quantity associated with the Statics code

When the processing above is executed successfully, continue by executing the following:

Update the LAST UPDATE TIME FOR GLDL in CI_BATCH_CTRL

```
Set the last update date and time by setting
CI_BATCH_CTRL LAST_UPDATE_DTTM to SYSDATE WHERE BATCH_CD = 'GLDL'
```

Composites

The following is the list of composite processes that comprise the GL Integration between Oracle Utilities Customer Care and Billing and Oracle PeopleSoft Financials for General Ledger and Accounts Payable:

Composite Name	Description
CCBPSGLRequestScheduler	Used to poll the INTEGRATION_PROCESS_ACTIVATION table at set intervals for GL interface.
CCBToPSGLBPELProcess	Main process of the GL Integration. Get the GL data from Oracle Utilities Customer Care and Billing and inserts into Oracle PeopleSoft.
GetCCBGLData	To verify that the GL data is available for transfer.
UpdateCCBGLControlTable	To update the Oracle Utilities Customer Care and Billing batch control table when applicable.

CCBPSGLRequestScheduler

Description	Polls the INTEGRATION_PROCESS_ACTIVATION table in the ORABPEL Schema at predefined intervals and invokes the CCBToPSGLBPELProcess
Calls to	CCBToPSGLBPELProcess
Calls from	None
Inputs	None
Outputs	None
Synch/Asynch	Asynchronous
Exceptions/Errors	Possible Exceptions - None

CCBToPSGLBPELProcess

Description	Main process of the GL Integration. Gets the GL data from Oracle Utilities Customer Care and Billing, transforms it, and inserts it into Oracle PeopleSoft Financials for General Ledger and Accounts Payable Generic Accounting Entry Table PS_JGEN_ACCT_ENTRY. Additionally, updates Oracle Utilities Customer Care and Billing Batch Control table with the next batch number. Invokes services for error handling and e-mail notification
Calls to	GetCCBGLData, UpdateCCBGLControlTable, ErrorhandlingProcess (if an error occurs), EmailNotification
Calls from	CCBPSGLRequestScheduler
Inputs	None
Outputs	None
Synch/Asynch	Asynchronous
Exceptions/Errors	Possible Exceptions - BPEL Remote Fault, BPEL Binding Fault

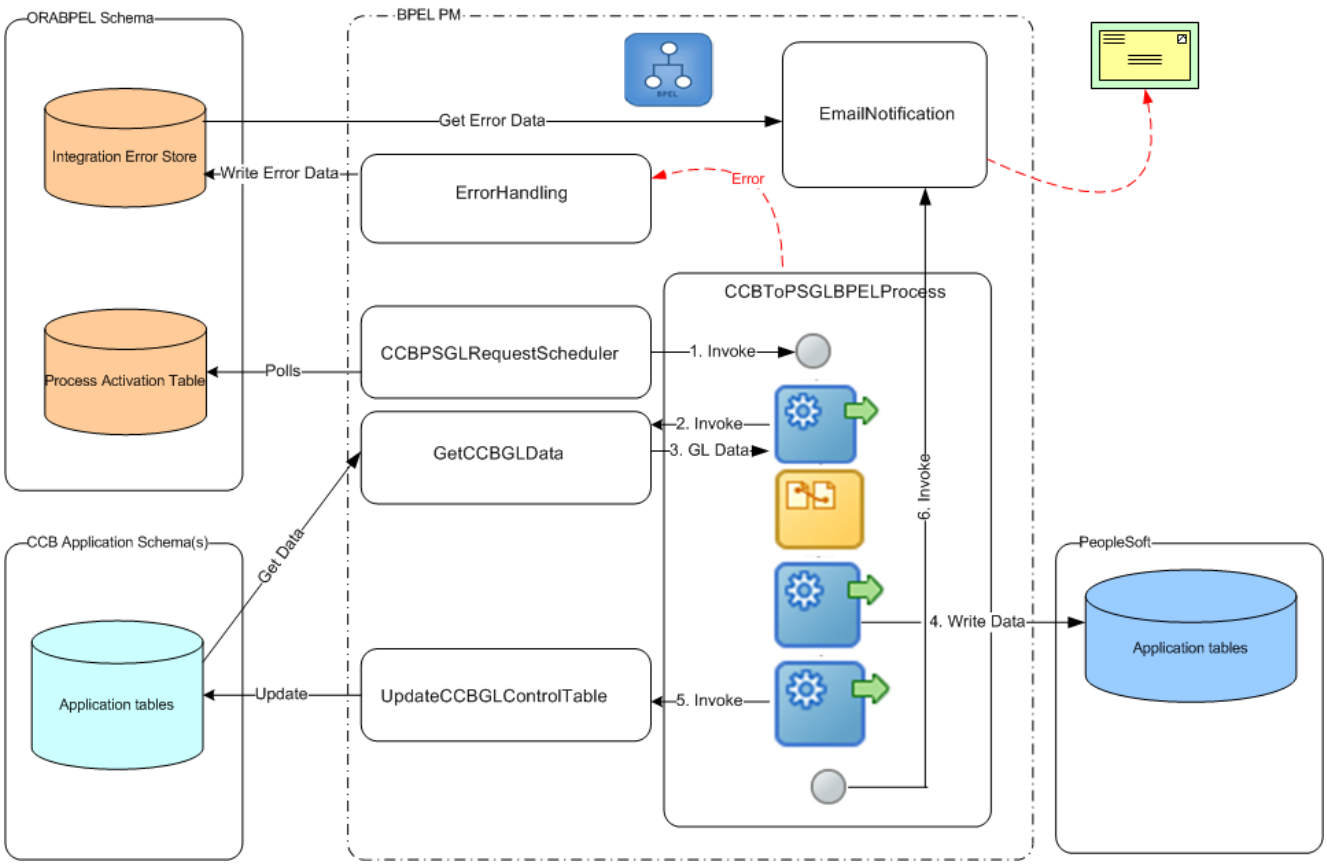
GetCCBGLData

Description	Checks if GL data is available in Oracle Utilities Customer Care and Billing for transfer. If data is available, it returns a dataset to the calling process
Calls to	ErrorhandlingProcess (if an error occurs)
Calls from	CCBToPSGLBPELProcess
Inputs	Input String object containing the integration point name invoking this BPEL process. For example, Oracle PeopleSoft Financials for General Ledger and Accounts Payable
Outputs	SelectCCBGLRecordsOutput xml object

Synch/Asynch	Synchronous
Exceptions/Errors	Possible Exceptions – BPEL Remote Fault, BPEL Binding Fault

UpdateCCBGLControlTable

Description	Updates the next batch number in the GL Batch Control table available in the Oracle Utilities Customer Care and Billing Database
Calls to	ErrorhandlingProcess (if an error occurs)
Calls from	CCBToPSGLBPELProcess
Inputs	None
Outputs	None
Synch/Asynch	Synchronous
Exceptions/Errors	Possible Exceptions – BPEL Remote Fault, BPEL Binding Fault



BPEL Processing for the GL Transaction Integration Point

Database Tables of General Ledger

The following Oracle Utilities Customer Care and Billing tables are used when extracting Financial Transaction data for sending to the GL as Journal Vouchers.

Table Name	Description	Application Name
CI_FT_GL	Financial Transaction General Ledger	Oracle Utilities Customer Care and Billing
CI_DST_CODE_EFF	Distribution Code GL Account	Oracle Utilities Customer Care and Billing
CI_FT_PROC	FT Process	Oracle Utilities Customer Care and Billing
CI_BATCH_CTRL	Batch Control	Oracle Utilities Customer Care and Billing
CI_BATCH_RUN	Batch Run	Oracle Utilities Customer Care and Billing
CI_BATCH_JOB	Batch Job	Oracle Utilities Customer Care and Billing
PS_JGEN_ACCT_ENTRY	Used to stage the incoming accounting entries from Oracle Utilities Customer Care and Billing	Oracle PeopleSoft Financials for General Ledger and Accounts Payable

AP Request

AP Request transactions are written in one direction from Oracle Utilities Customer Care and Billing to Oracle PeopleSoft Financials for General Ledger and Accounts Payable.

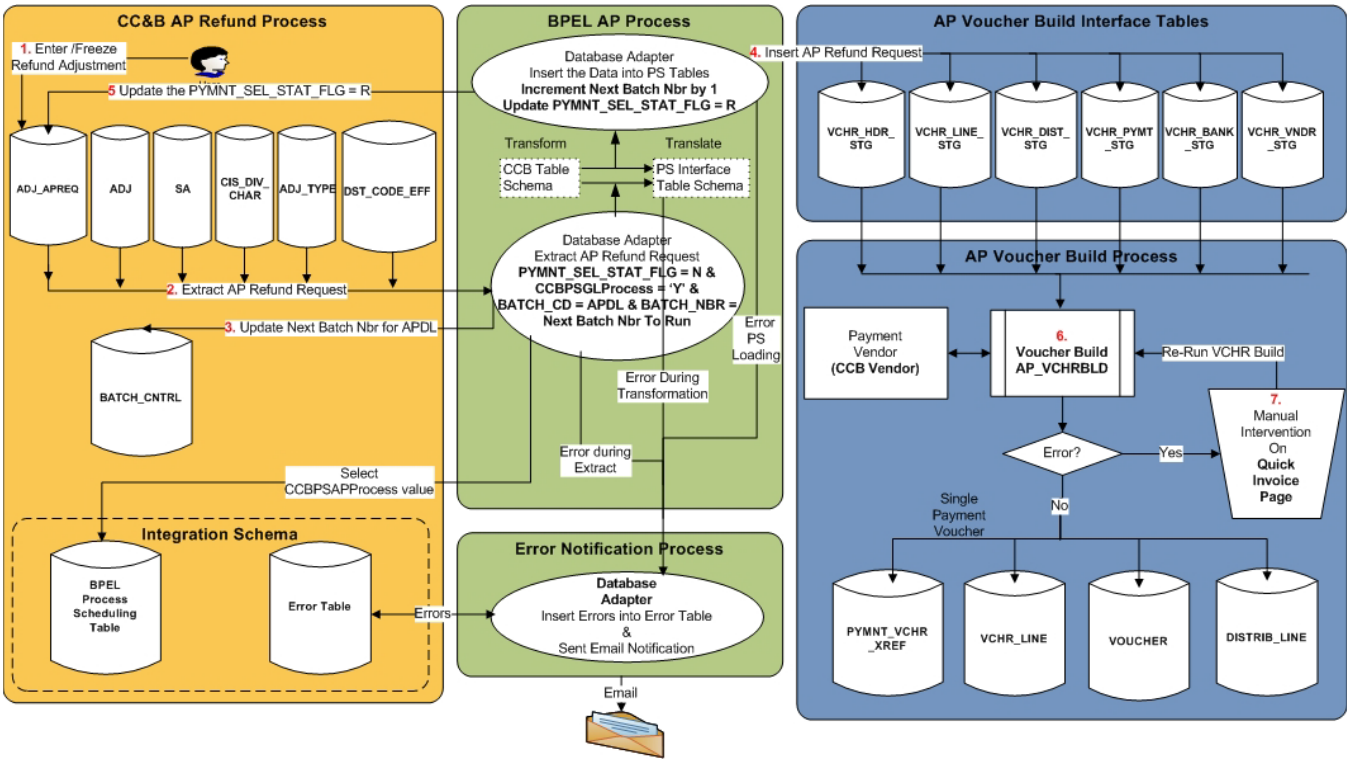
- Customer, customer account, and AP Request information is extracted from Oracle Utilities Customer Care and Billing and exported to Oracle PeopleSoft Financials for General Ledger and Accounts Payable as single payment voucher information.
- Once the customer and refund request data is loaded into Oracle PeopleSoft Financials for General Ledger and Accounts Payable, by the integration product, the standard voucher build process must be executed. This can be accomplished using a scheduled process or by manually running the process through the standard user interface provided within the Oracle PeopleSoft Financials for General Ledger and Accounts Payable product.
- Set up a single payment vendor or multiple payment vendors, depending on your implementation, to represent the Oracle Utilities Customer Care and Billing refund customers.
- It is also necessary to pre-configure an accounting entry template in Oracle PeopleSoft Financials for General Ledger and Accounts Payable to indicate the accounts that accompany the refund.

The integration extracts AP Requests from Oracle Utilities Customer Care and Billing where the status of the AP Request is 'N' indicating the AP Request is 'Not Selected for

Payment'. Once the data has been integrated the integration software updates the AP Request status in Oracle Utilities Customer Care and Billing to 'R' indicating it has been 'Requested for Payment'.

Note: By default, AP request is set up to use Single Payment Vendor. If an implementation wants to use multiple payment vendors for AP processing, patch 24653860 must be applied. For Multiple Payment Vendor, Vendor ID is obtained from CCB based on the account's CIS Division.

By default, AP request is set up to use Single GL Business Unit. If an implementation wants to use multiple GL Business Unit for their AP Request patch 25373631 must be applied. For Multiple GL Business Unit, GL Division is obtained from CCB based on the adjustment ID financial transaction GL Division.



AP Request Business Process Diagram

These are the steps in AP request process:

1. Create and Freeze Adjustment in Oracle Utilities Customer Care and Billing.
2. BPEL process extracts AP Refund Request information from Oracle Utilities Customer Care and Billing.
3. BPEL process updates the Next_Batch_Nbr for APDL in CI_BATCH_CTRL table in Oracle Utilities Customer Care and Billing.
4. BPEL process transforms and inserts the data into Oracle PeopleSoft Financials AP Voucher Build Interface tables.
5. BPEL updates the status of AP Request in Oracle Utilities Customer Care and Billing.

6. Run AP Voucher Build Process in Oracle PeopleSoft Financials for General Ledger and Accounts Payable to import Invoices. Any errors in Interface tables must be corrected in Oracle PeopleSoft Financials for General Ledger and Accounts Payable.

Logic Used in AP Request integration Point

Updating the NEXT BATCH NUMBER in the CI_BATCH_CTRL

```
Increment by 1 the NEXT_BATCH_NBR in CI_BATCH_CTRL where the
BATCH_CD is APDL
```

Polling Oracle Utilities Customer Care and Billing to Verify Extraction

The Oracle BPEL Process Manager polls Oracle Utilities Customer Care and Billing to verify whether AP Requests are ready for extraction.

```
If there are AP Requests where the CI_ADJ_APREQ PYMNT_SEL_STAT_FLG
is N (Not selected for Payment) AND the associated adjustment is in
a frozen status
Run the integration point
Else do nothing.
```

Extracting of Customer and AP Refund Request

An extract of Customer and AP refund request is made from Oracle Utilities Customer Care and Billing.

```
Select the following information
AP_REQ_ID, GL_ACCT, CHAR_VAL, SA_ID, ADJ_ID, CRE_DT, ADJ_TYPE_CD,
CIS_DIVISION, GL_DIVISION, CHAR_VAL(AP Business Unit), CHAR_VAL(AP
Vendor ID) ENTITY_NAME, COUNTRY, ADDRESS1, ADDRESS2, ADDRESS3,
ADDRESS4,
CITY, NUM1, NUM2, COUNTY, HOUSE_TYPE, STATE, POSTAL, CURRENCY_CD,
CURRENCY_PYMNT, GEO_CODE, IN_CITY_LIMIT, PYMNT_METHOD_FLG, ADJ_AMT,
SCHEDULED_PAY_DT


(Refer to the mapping table within this document for more details)

FROM CI_ADJ_APREQ, CI_ADJ, CI_SA, CI_CIS_DIV_CHAR, CI_ADJ_TYPE,
CI_DST_CODE_EFF, CI_DST_CD_CHAR, CI_CIS_DIV_CHAR, CI_FT
Where the PYMNT_SEL_STAT_FLG status flag is N (Not Selected for
Payment)
AND the Adjustment is frozen
AND BATCH_CD = 'APDL' and BATCH_NBR = Next Batch Number to Run
```

Update the CI_ADJ_APREQ Status

```
UPDATE CI_ADJ_APREQ
SET PYMNT_SEL_STAT_FLG to R (Requested for Payment)
```

Composites

The following is the list processes that comprise the AP Request Integration between Oracle Utilities Customer Care and Billing and Oracle PeopleSoft Financials for General Ledger and Accounts Payable:

CCBPSAPRequestScheduler

Description	Polls the INTEGRATION_PROCESS_ACTIVATION table in the ORABPEL Schema at predefined intervals and invokes the CCBToPSAPBPELProcess
Calls to	CCBToPSAPBPELProcess
Calls from	
Inputs	None
Outputs	None
Synch/Asynch	Asynchronous
Exceptions/Errors	Possible Exceptions - None

CCBToPSAPBPELProcess

Description	Main process of the AP Integration. Gets the AP data from Oracle Utilities Customer Care and Billing, transforms it, and inserts it into Oracle PeopleSoft Financials for General Ledger and Accounts Payable AP Voucher Build Interface tables (PS_VCHR_HDR_STG, PS_VCHR_LINE_STG, PS_VCHR_DIST_STG, PS_VCHR_VNDR_STG, PS_VCHR_PYMT_STG, PS_VCHR_MSCH_STG, PS_VCHR_BANK_STG, PS_VCHR_IBANK_STG). Additionally, updates status in two of the Oracle Utilities Customer Care and Billing tables. Invokes services for error handling and e-mail notification
Calls to	• GetCCBAPData, • UpdateCCBAPControlTable • UpdateCCBAPAdjReqTable • ErrorhandlingProcess (if an error occurs) • EmailNotofication
Calls from	CCBPSAPRequestScheduler
Inputs	None
Outputs	None
Synch/Asynch	Asynchronous
Exceptions/Errors	Possible Exceptions – BPEL Remote Fault, BPEL Binding Fault

GetCCBAPData

Description	Checks if AP data is available in Oracle Utilities Customer Care and Billing for transfer. If data is available, it returns a dataset to the calling process
Calls to	ErrorhandlingProcess (if an error occurs)

Calls from	CCBToPSAPBPELProcess
Inputs	Input String object containing the integration point name invoking this BPEL process - Oracle PeopleSoft Financials for General Ledger and Accounts Payable
Outputs	SelectCCBRecordsWithTemplate xml object
Synch/Asynch	Synchronous
Exceptions/Errors	Possible Exceptions - BPEL Remote Fault, BPEL Binding Fault

UpdateCCBAPControlTable

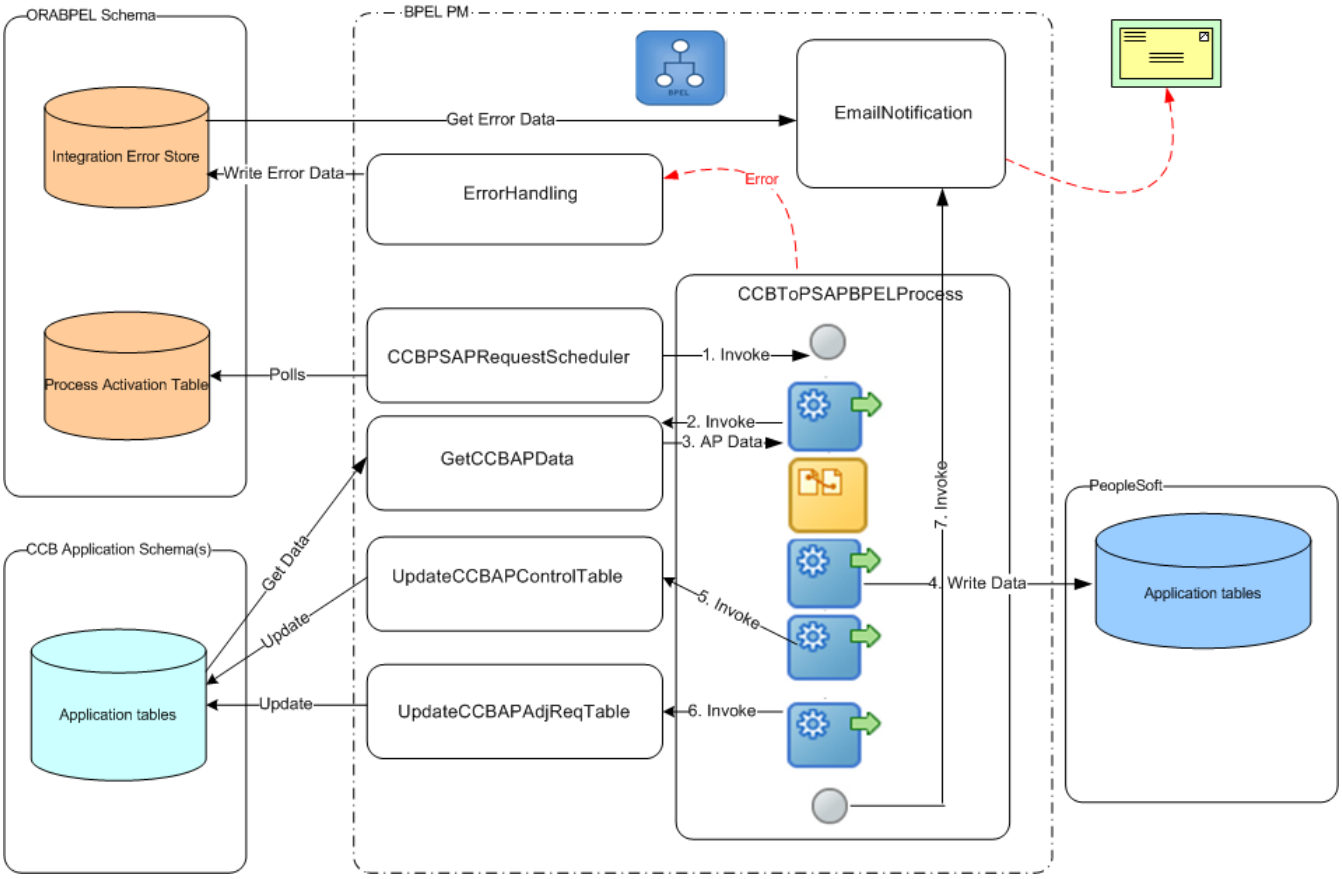
Description	Updates the next batch number in the AP Batch Control table available in the Oracle Utilities Customer Care and Billing database
Calls To	ErrorhandlingProcess (if an error occurs)
Calls From	CCBToPSAPBPELProcess
Inputs	None
Outputs	None
Synch/Asynch	Synchronous
Exceptions/Errors	Possible Exceptions - None

UpdateCCBAPAdjReqTable

Description	Updates PYMNT_SEL_STAT_FLG to R in the CCB AP Adjustment Request table (CI_ADJ_APREQ) for the provided AP request ID
Calls to	None
Calls from	CCBToPSAPBPELProcess
Inputs	CiAdjApreqCollection xml object
Outputs	None
Synch/Asynch	Synchronous
Exceptions/Errors	Possible Exceptions - None

InsertPSVoucher

Description	Inserts it into Oracle PeopleSoft Financials for General Ledger and Accounts Payable A/P Voucher Build Interface tables (PS_VCHR_HDR_STG, PS_VCHR_LINE_STG, PS_VCHR_DIST_STG, PS_VCHR_VNDR_STG, PS_VCHR_PYMT_STG, PS_VCHR_MSCH_STG, PS_VCHR_BANK_STG, and PS_VCHR_IBANK_STG)
Calls to	None
Calls from	CCBToPSAPBPELProcess
Inputs	SelectCCBAPRequestRecordsOutput xml object
Outputs	None
Synch/Asynch	Synchronous
Exceptions/Errors	Possible Exceptions - BPEL Remote Fault, BPEL Binding Fault



BPEL Processing for the AP Request Integration Point

Database Tables of AP Request

Table Name	Description	Application Name
CI_ADJ_APREQ	A/P check request	Oracle Utilities Customer Care and Billing
CI_ADJ	Adjustment	Oracle Utilities Customer Care and Billing
CI_FT	Financial Transaction	Oracle Utilities Customer Care and Billing
CI_SA	Service agreement	Oracle Utilities Customer Care and Billing
CI_ACCT	Account	Oracle Utilities Customer Care and Billing
CI_ACCT_PER	Account person relationship	Oracle Utilities Customer Care and Billing
CI_PER	Person	Oracle Utilities Customer Care and Billing
CI_PER_NAME	Person name	Oracle Utilities Customer Care and Billing
CI_CIS_DIV_CHAR	CIS Division Characteristic	Oracle Utilities Customer Care and Billing
PS_VCHR_HDR_STG	Voucher header stage table	Oracle PeopleSoft Financials for General Ledger and Accounts Payable
PS_VCHR_LINE_STG	Voucher line stage table	Oracle PeopleSoft Financials for General Ledger and Accounts Payable
PS_VCHR_DIST_STG	Voucher distribution stage table	Oracle PeopleSoft Financials for General Ledger and Accounts Payable
PS_VCHR_VNDR_STG	Voucher vendor stage table	Oracle PeopleSoft Financials for General Ledger and Accounts Payable
PS_VCHR_PYMT_STG	Voucher payment stage table	Oracle PeopleSoft Financials for General Ledger and Accounts Payable
PS_VCHR_BANK_STG	Voucher bank stage table	Oracle PeopleSoft Financials for General Ledger and Accounts Payable

AP Data

AP Data transactions are written in one direction from Oracle PeopleSoft Financials for General Ledger and Accounts Payable to Oracle Utilities Customer Care and Billing.

- Payment information for system-generated checks is created and processed in Oracle PeopleSoft Financials for General Ledger and Accounts Payable, then exported to Oracle Utilities Customer Care and Billing.

  This Payment information corresponds to the AP Refund Requests originally generated in Utilities Customer Care and Billing and exported to Oracle PeopleSoft Financials for General Ledger and Accounts Payable for payment processing. The AP Data integration point updates the original AP Request in Oracle Utilities Customer Care and Billing with the details of the payment including the check number and date.

- Once a payment has been created in Oracle PeopleSoft Financials for General Ledger and Accounts Payable and the information is integrated to Oracle Utilities Customer Care and Billing, the AP Request status in Oracle Utilities Customer Care and Billing is updated to 'P' indicating that the AP Request has been paid. Additional statuses that can occur include 'C' - Closed or Held and 'X' - Cancelled.

Refer to the table below to review how cancelled payments are handled.

Payment Cancellation

Oracle PeopleSoft Financials for General Ledger and Accounts Payable Action	Oracle Utilities Customer Care and Billing AP Request Resulting Action	Oracle Utilities Customer Care and Billing Adjustment Resulting Action
Payment is completed	Payment information updated and status changes to "P" for Paid	No change
Payment cancelled and placed on hold	Payment status changes to "C" for Closed	No change
Payment is re-issued	Payment information updated and status changes to "P" for Paid	No change
Payment is cancelled and the liability is closed	Payment status changes to "X" for Cancelled	Adjustment is cancelled

When a payment is cancelled in Oracle PeopleSoft Financials for General Ledger and Accounts Payable, the following options are available:

- Re-Open /Re-Issue
- Re-Open/Hold
- Do not Re-Issue/Close Liability

Re-Open /Re-Issue

If a check is cancelled for any reason in Oracle PeopleSoft Financials for General Ledger and Accounts Payable, the new information is updated on the AP Request in Oracle

Utilities Customer Care and Billing and the AP Request status is set to 'C' indicating that the AP Request has been closed.

The AP Request in Oracle Utilities Customer Care and Billing only holds the most recent check information sent (no history of checks re-issued).

A new payment schedule is created for the voucher and is picked up for payment processing by the pay cycle. When the payment is re-issued, the new payment information is sent to Oracle Utilities Customer Care and Billing and the AP Request status in Oracle Utilities Customer Care and Billing is set to 'P' indicating that the AP Request has been paid. A payment cannot be re-issued if the corresponding voucher is posted.

Re-Open/Hold

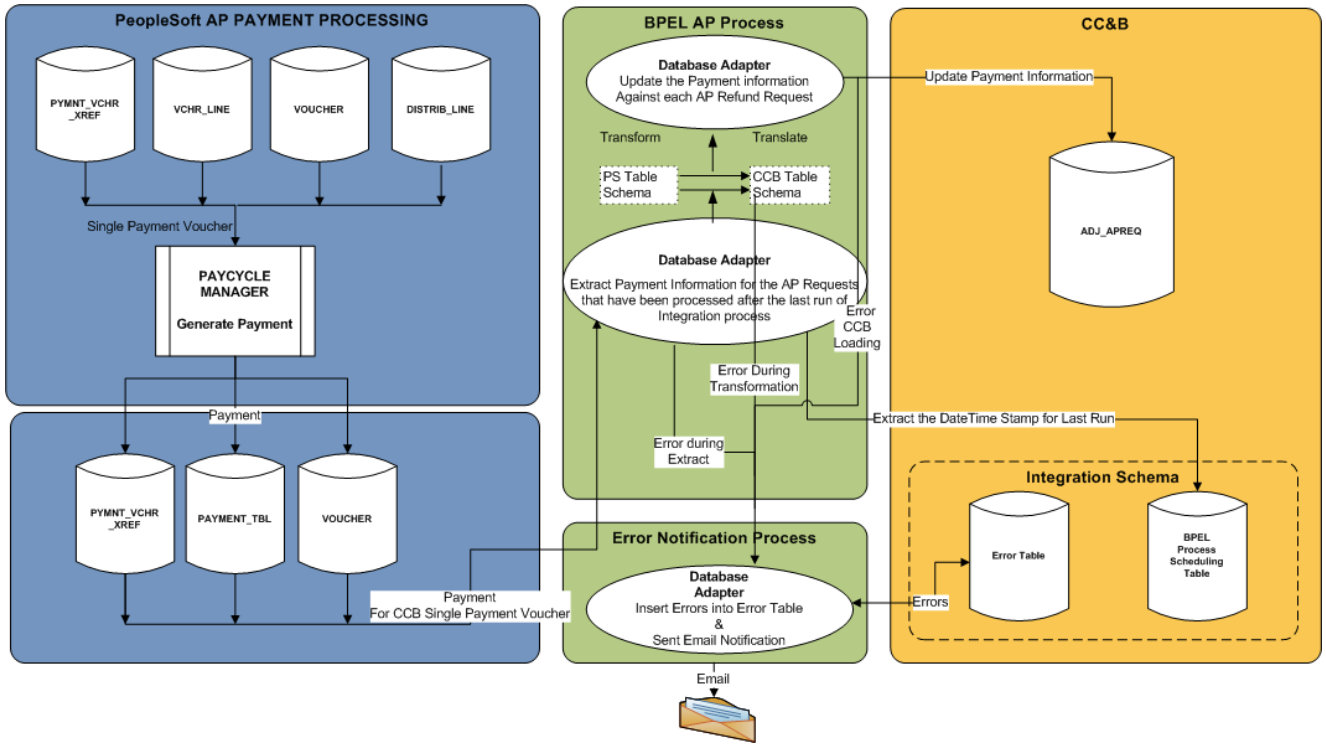
If a payment is stopped or voided to be re-opened and put on hold, the cancellation information is sent to Oracle Utilities Customer Care and Billing as updates to the AP Request. The AP Request payment status flag in the Oracle Utilities Customer Care and Billing is set to 'C' indicating a 'Closed' status. This affects only the AP Request, the adjustment in Oracle Utilities Customer Care and Billing is not impacted.

Do not Re-Issue/Close Liability

If the payment is voided or stopped and all liability is closed, the integration cancels the AP Request and then calls a service in Oracle Utilities Customer Care and Billing to cancel the adjustment related to the request. The AP Request payment status flag in Oracle Utilities Customer Care and Billing is set to 'X' indicating a 'Cancelled' status. The adjustment transaction is also cancelled using the standard adjustment maintenance object within the Oracle Utilities Customer Care and Billing application software.

An Oracle Utilities Customer Care and Billing adjustment cancellation algorithm, named CI_ADCA-CRTD - 'Adjustment Cancellation - Create To Do Entry', can be configured to create a To Do List entry to notify the users about the cancellation of the adjustment and AP Request within Oracle Utilities Customer Care and Billing. If this algorithm is configured to the adjustment type you are using for AP Refunds, the Oracle Utilities Customer Care and Billing system creates a To Do Entry when an adjustment of this type is cancelled.

The adjustment cancellation algorithm is shipped and documented as part of standard Oracle Utilities Customer Care and Billing application software.

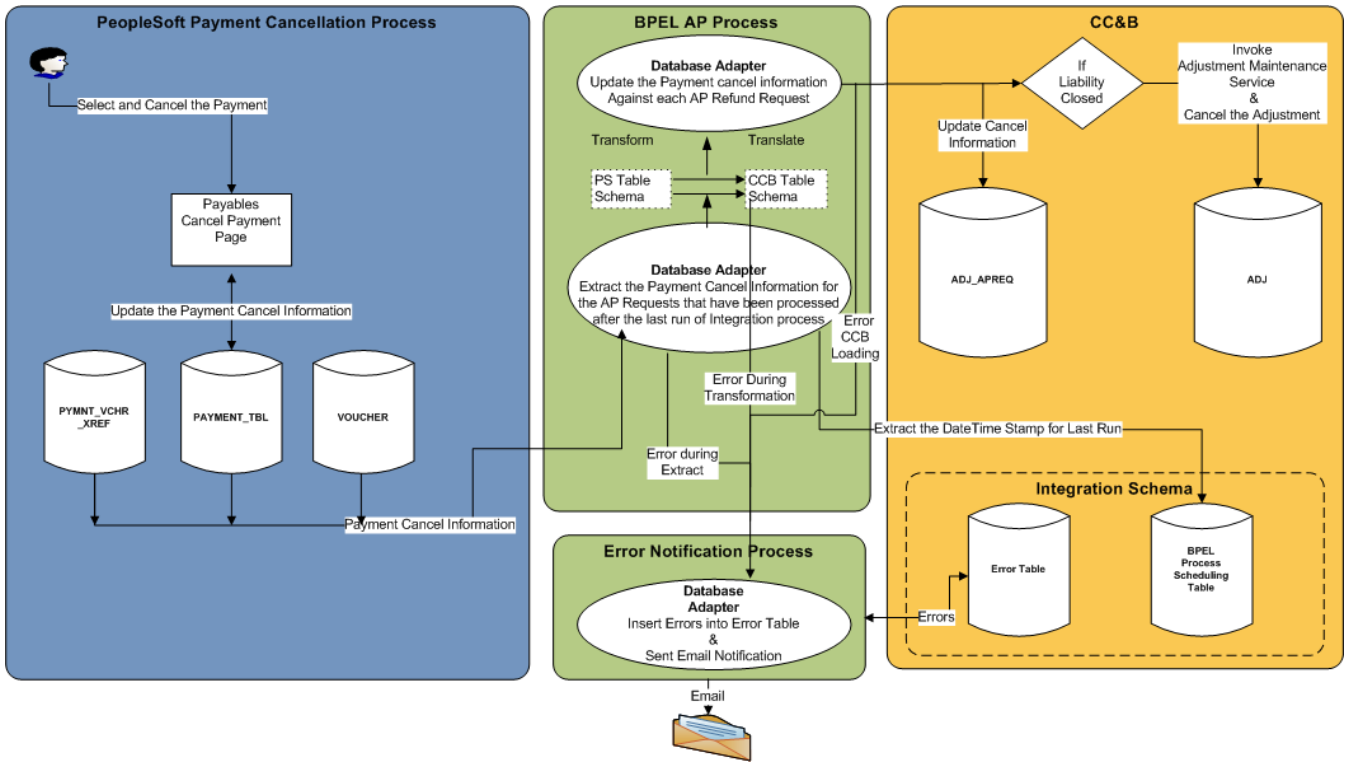


AP Data Process Diagrams

These are the steps in AP Data process:

1. Payment is made in Oracle PeopleSoft Financials for General Ledger and Accounts Payable for invoices originated from Oracle Utilities Customer Care and Billing.
2. BPEL process updates the payment information in Oracle Utilities Customer Care and Billing.

3. BPEL process updates the Last Run Date of AP Data process in the Integration schema.



AP Payment Cancellation Process

These are the steps in the AP Data process when a payment is cancelled in Oracle PeopleSoft Financials for General Ledger and Accounts Payable:

1. Payment is cancelled in Oracle PeopleSoft Financials for General Ledger and Accounts Payable for invoices originated from Oracle Utilities Customer Care and Billing.
2. The BPEL process updates the Cancellation information in Oracle Utilities Customer Care and Billing.
3. The BPEL process invokes AdjustmentMaintenance Web Service in Oracle Utilities Customer Care and Billing to cancel the adjustment.
4. The BPEL process updates the Last Run Date of AP Data process in the integration schema.

Logic Used in AP Data Integration Point

Extract the Payment Information from Oracle PeopleSoft Financials for General Ledger and Accounts Payable

```
SELECT the following information
BANK_CD, BANK_ACCT_KEY, PYMNT_ID, PYMNT_ID_REF, BANK_ACCOUNT_NUM,
REMIT_VENDOR, PYMNT_AMT, PYMNT_METHOD, PYMNT_STATUS, CANCEL_ACTION,
CANCEL_POST_STATUS,
VOUCHER_ID, PYMNT_MESSAGE, INVOICE_ID
FROM PS_PAYMENT_TBL, PS_PYMNT_VCHR_XREF, PS_VOUCHER
WHERE REMIT_VENDOR = 'CCBVENDOR' (The Single Payment Vendor
Identified in Configuration)
AND the cancel date is greater than the last date the interface was
run
OR the CANCEL_POST_STATUS is P (Paid)
```

```
OR the create date is greater than the last date the interface was
run
```

The 'CCBVENDOR' is a configuration parameter.

For each payment selected above, verify that this payment is already applied in Oracle Utilities Customer Care and Billing.

```
If PS_PAYMENT_TBL.CANCEL_DT<> Null and PS_PAYMENT_TBL.CANCEL_ACTION
IN ('C','H','R') (This payment has been cancelled after it was
created) If PS_PAYMENT_TBL.CANCEL_POST_STATUS='P' (This
cancellation is posted)
```

If the Payment has been canceled in Oracle PeopleSoft Financials for General Ledger and Accounts Payable and the liability has been closed update the CI_ADJ_APREQ PYMNT_SEL_STAT_FLG to 'X' (Cancelled) and invoke the service C1AdjustmentMaintenance to cancel the adjustment corresponding to this payment.

Composites

Composite name	Description
PSCCBAPDataRequestScheduler	Polls the INTEGRATION_PROCESS_ACTIVATION table at predefined intervals for AP Data interface.
PSToCCBAPDataBPELProcess	Main process of the AP Data Integration which collects the payment information from Oracle PeopleSoft and sends it to Oracle Utilities Customer Care and Billing.
CCBCancellationWebService	To cancel an adjustment in Oracle Utilities Customer Care and Billing.

PSCCBAPDataRequestScheduler

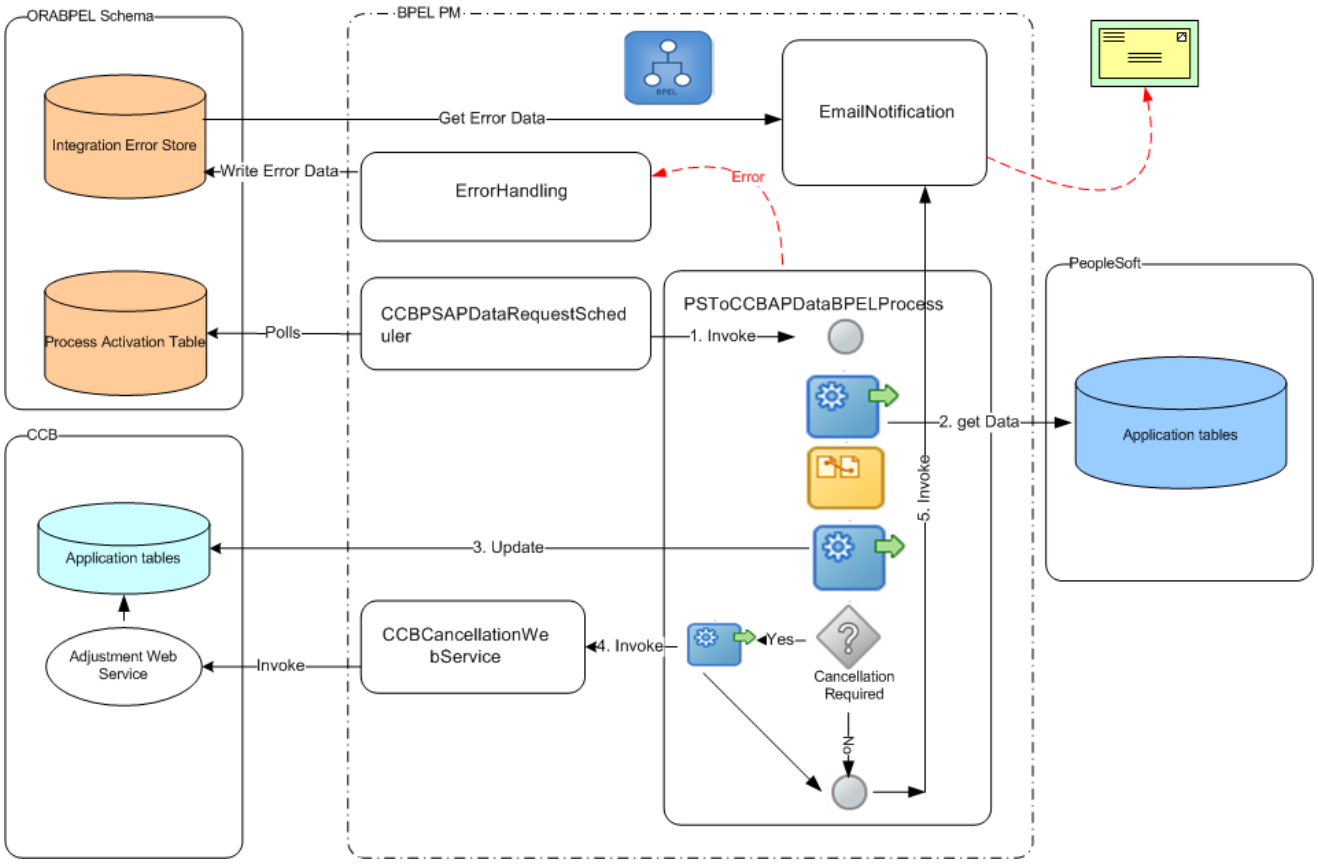
Description	Polls the INTEGRATION_PROCESS_ACTIVATION table in the ORABPEL Schema at predefined intervals and invokes the PSToCCBAPDataBPELProcess
Calls to	PSToCCBAPDataBPELProcess, ErrorhandlingProcess (if an error occurs)
Calls from	None
Inputs	None
Outputs	None
Synch/Asynch	Asynchronous
Exceptions/ Errors	Possible Exceptions – None

PSCCBAPDataBPELProcess

Description	Main process of the AP Data Integration which collects the payment information from Oracle PeopleSoft and sends it to Oracle Utilities Customer Care and Billing
Calls to	• CCBCancellationWebService • ErrorhandlingProcess (if an error occurs) • MailNotification
Calls from	PSCCBAPDataRequestScheduler
Inputs	None
Outputs	None
Synch/Asynch	Asynchronous
Exceptions/Errors	Possible Exceptions - BPEL Binding fault, BPEL Remote Fault

CCBCancellationWebService

Description	This process is a BPEL wrapper to call the Adjustment Maintenance web service in Oracle Utilities Customer Care and Billing to cancel the Adjustment ID corresponding to the AP Request ID for the given payment
Calls to	ErrorhandlingProcess (if an error occurs)
Calls from	PSToCCBAPDataBPELProcess
Inputs	String object - AdjustmentID
Outputs	String result - Contains APRequest ID to handle success or error messages
Synch/Asynch	Synchronous
Exceptions/Errors	Possible Exceptions - BPEL Binding fault, BPEL Remote Fault



BPEL Processing for the AP Data Integration Point

Database Tables of AP Data

Table Name	Description	Application Name
PS_PAYMENT_TBL	Payment	Oracle PeopleSoft Financials for General Ledger and Accounts Payable
PS_VOUCHER	Voucher	Oracle PeopleSoft Financials for General Ledger and Accounts Payable
PS_PYMNT_VCHR_XREF	Payment Voucher	Oracle PeopleSoft Financials for General Ledger and Accounts Payable
CI_ADJ_APREQ	This table is updated with the Payment Information received from Oracle PeopleSoft.	Oracle Utilities Customer Care and Billing

Shared Integration Points

These BPEL processes are used across multiple integration points within this product.

Error Handling Process.

Process Name	
Description	Invoked only if an error occurs. Inserts data into error table INTEGRATION_ERROR_STORE in the ORABPEL Schema
Calls to	
Calls from	GetCCBGLData, UpdateCCBGLControlTable, CCBToPSGLBPELProcess,GetCCBAPData,UpdateCCBAPControlTable,CCBToPSAPBPELProcess,CCBCancellationWebService,PSToCCBAPDataBPELProcess
Inputs	ErrorHandlingProcessRequest xml object
Outputs	String result
Synch/Asynch	Synchronous
Exceptions/Errors	Possible Exceptions - None

MailNotification

Process Name	
Description	This process is invoked at the end of each batch run. If there was any error generated, it assimilates all these messages into an e-mail and sends the e-mail to configured e-mail address
Calls to	None
Calls from	CCBToPSGLBPELProcess CCBToPSAPBPELProcess PSToCCBAPDataBPELProcess
Inputs	MailNotificationInpputParameters xml object
Outputs	None
Synch/Asynch	Asynchronous
Exceptions/Errors	Possible Exceptions - None

Part 2

Implementing the Integration Product

This section provides details on how to configure the participating applications and middleware layer for this AIA direct integration. It also includes information on error handling, monitoring, customization options, and data mapping.

This section contains the following chapters:

- Configuring the Integration
- Monitoring and Troubleshooting
- Customization Options

Chapter 3

Configuring the Integration

This section provides a configuration checklist which shows an overview of configuration tasks. The detailed steps and information are included in following sections along with instructions on how to set up security, configure error handling and how to verify the implementation once all steps are complete:

- Integration Configuration Checklist
- Oracle PeopleSoft Financials for General Ledger and Accounts Payable Configuration
- Oracle Utilities Customer Care and Billing Configuration
- Integration Product Configuration
- Verifying the Implementation

Integration Configuration Checklist

Extensive configuration is required to implement the integration between Oracle Customer Care and Billing and Oracle PeopleSoft Financials for General Ledger and Accounts Payable. This section provides a list of configuration tasks that may be used as a reference or roadmap, including.

- Oracle PeopleSoft Financials for General Ledger and Accounts Payable Configuration
- Oracle Utilities Customer Care and Billing Configuration
- Integration Product Configuration

Oracle PeopleSoft Financials for General Ledger and Accounts Payable Configuration

Step	Information	Comments
A1	GL Business Unit	Identify and document the GL Business Unit(s) to be used with the integrated data. Example: **US001**. This is used in checklist steps B1 and D16.
A2	Accounting Entry Definition	Identify or Create the accounting entry definition you will use with the Journal Generator process. This definition is used as an input parameter for the Journal Generator Process. It specifies the staging table from which the Journal Generator gets the accounting data. Your definition must specify the PS_JGEN_ACCT_ENTRY table. An example is the **GENERIC** accounting entry definition.
A3	AP Business Unit	Document the AP Business Unit(s) to be used with the integrated data. Example: **US001**. This is used in checklist step B4.
A4	AP Single Payment Vendor	Create and document the Single Payment Vendor to be used with the integrated data. Example: **CCBVENDOR**. This is used in checklist steps D7 and E2.
A5	Payment Terms Code	Create or document the payment terms code to be used for paying AP vouchers coming from Oracle Utilities Customer Care and Billing. Example: **07** (**CCBREFUND**). This is used in checklist step D10.
A6	Accounting Entry Template	Identify and document the Accounting Entry Template to be used with the integrated data. This template defines the offset account. Example: **STANDARD**. This is used in checklist step B3.
A7	AP Payment Vendor	This is only needed when multiple vendors are uses to process AP refund payments. Create and document the AP Payment Vendor(s) to be used with the integrated data. Example VND1 and VND2. This is used in checklist step B8.

Oracle Utilities Customer Care and Billing Configuration

The following table indicates the general settings needed to configure Oracle Utilities Customer Care and Billing.

Step	Information	Comments
B1	GL Division	Configure the GL Division(s) to be used in the integration. Example: **US001**. This must exactly match the GL Business Unit from step A1.
B2	Distribution Codes	Configure your distribution codes. Example: 111.222.333.… With '111' corresponding to Account, '222' corresponding to Department ID, and so on. Refer to the details of all mapping segments later in this document.
B3	Accounting Entry Template Characteristic Type	Configure a characteristic type to hold the value of the Accounting Entry Template to be used. Example characteristic type: **CCBTMPLT**. This is used in checklist step D22. The value you create in this characteristic (Example: **STANDARD**) must match what you documented in step A6**.**
B4	AP Business Unit Characteristic Type	Configure a characteristic type to hold the value of the AP Business Unit to be used. Example characteristic type: **PSBU**. This is used in checklist step D23**.** The value you create in this characteristic (Example: **US001**) must match what you documented in step A3.
B5	Verify Service and Cancel Reason	Verify that the cancel service C1AdjustmentMaintenance is configured and that the Cancel Reason to which it refers is also configured correctly.
B6	Link the characteristic type created in step B4 with the CIS Division	The CIS Division you are using (Example: **CA**) will now have a characteristic type linked to it (Example: **PSBU**) that holds the name of the AP Business Unit to use (Example: **US001**).

Step	Information	Comments
B7	Link the characteristic type created in step B3 with the appropriate distribution codes.	For each distribution code, linked with an adjustment type that has an associated AP Request configured, you must link the characteristic type that indicates the accounting entry template. The distribution code you are using (Example: **AP-OVPY**) will now have a characteristic type linked to it (Example: **CCBTMPLT**) that holds the name of the Accounting Entry Template to use (Example: **STANDARD**).
B8	AP Vendor Characteristic Type	This is only needed when multiple vendors are uses to process AP refund payments. Configure a characteristic type to hold the value of the Vendor ID to be used for Multiple Vendor AP Refund. Example: Characteristic Type PSVD. This is used in checklist step D24. The characteristic value is defined in the CIS Division. Each CIS Division use for AP will have a Vendor ID characteristic value. The values you create in the characteristic (Example: VND1 and VND2) must match what you documented in step A7.
B9	Link the characteristic type created in step B8 with the appropriate CIS Division	This is only needed when multiple vendors are uses to process AP refund payments. Link the AP Vendor characteristic type to each CIS Division use for AP. If two CIS Division are used for AP, CIS Division (Example: CA) will now have an AP Vendor characteristic type linked to it (Example: PSVD) that holds the AP Vendor ID (Example: VND1) to use. The other CIS Division (Example: TX) will now have an AP Vendor characteristic type linked to it (Example: PSVD) that holds the AP Vendor ID (Example: VND2) to use.

Integration Product Configuration

The following general steps are needed to configure the integration product.

Task	Description
Setting Configuration Properties	Set Configurations properties that are used by integration processes. Configuration is done in the INTEGRATION_LOOKUP_TABLE and INTEGRATION_PROCESS_ACTIVATION tables.
Setting Error Handling for the integration	Setup error notification

The INTEGRATION_PROCESS_ACTIVATION table controls the activation or deactivation of the specific integration points. The default settings include:

PROCESS_NAME	START_PROCESS (Y/N)	RUN_FREQUENCY (Seconds)	NEXT_RUN_INTERVAL (System Use)
CCB_PS_GL	Y	0	0
CCB_PS_AP	Y	0	0
PS_CCB_APDATA	Y	0	0

Configurations in the INTEGRATION_LOOKUP_TABLE manage external parameters used in the integration for the GL, AP Data, and AP Request integration points. These columns receive a default value as part of the installation of the product. You may choose to override the defaults as needed.

> **Note**: No user interface exists in this release. Use approved database tools to set column values.

Step	INTEGRATION_KEY	INTEGRATION_VALUE	Comments
C1	CCB_PS_GL CCB_PS_AP PS_CCB_APDATA	1800 seconds or 30 minutes.	Ensure that integration points are enabled in the INTEGRATION_PROCESS_ACTIVATION table as needed. Set RUN_FREQUENCY times, in seconds, for each integration point as needed. The default is every 1800 seconds or 30 minutes.
C2	CCB.PS.ADMIN_EMAIL	abc@oracle.com	Administrator's email
C3	CCB.PS.GL.EMAIL	abc.gl@xyz.com	Enter the e-mail address to be notified if errors occur in the GL integration point.
C4	CCB.PS.GL.LINE_DESCR	CCB Journal Line.	The Journal Voucher line description to be used.

Step	INTEGRATION_KEY	INTEGRATION_VALUE	Comments
C5	CCB.PS.GL.APPL_JRNL_ID	GENERIC	This is journal generator template and it is used in conjunction with the Accounting Entry Definition by the GL Integration point.
C6	CCB.PS.GL.LEDGER	US1 or UGBUCCB	Create or identify the ledger to be used.
C7	CCB.PS.GL.LEDGER_GROUP	US or UGBUCCB	Create or identify the ledger group to be used..
C8	CCB.PS.GL.GL_DIVISION	blank or US1	If this value is blank, then financial transactions associated with all GL divisions in Oracle Utilities Customer Care and Billing are integrated. If this column has a value, then only financial transactions associated with this specific GL Division indicated are integrated..
C9	CCB.PS.GL.COLLECTION.PRE.EXTN.FLAG	false	If set to true, the pre-transformation extension service is invoked at the collection level after retrieving all the FT records from CCB and before any transformation is done.
C10	CCB.PS.GL.COLLECTION.POST.EXTN.FLAG	false	If set to true, the post transformation extension service is invoked at the record level after transforming the FT record from CCB to PS format.
C11	CCB.PS.GL.OVERRIDE.GLDATA	false	If set to 'true' TransformationCCBToPSGLData.xsl result will be overridden by TransformationCCBToPSGLData_Override_Custom.xsl mappings.
C12	CCB.PS.GL.INVOKE_ALT_JGEN_TABLE_FLAG	false	If set to true, customizable scope is enabled to allow implementers to customize how they want to insert data to a cloned Oracle PeopleSoft Financials for General Ledger and Accounts Payable Generic Accounting Entry Table (PS_JGEN_ACCT_ENTRY). If set to false, it will insert the data to the Oracle PeopleSoft Financials for General Ledger and Accounts Payable Generic Accounting Entry Table (PS_JGEN_ACCT_ENTRY). Default to false. This integration key is only available if patch 24653860 is applied.

Configuration is done in the INTEGRATION_LOOKUP_TABLE. Most of these columns receive a default value as part of the installation of the product. You may choose to override the default as needed.

Note: No user interface exists in this release. Use approved database tools to set column values.

Step	INTEGRATION_KEY	INTEGRATION_VALUE	Comments
D1	CCB.PS.AP.EMAIL		Enter the e-mail address to be notified if errors occur in the AP Request integration point. Example abc.ap@oracle.com.
D2	CCB.PS.AP.VCHR_BLD_KEY_N1	0	Voucher Build Key Num 1
D3	CCB.PS.AP.VCHR_BLD_KEY_N2	0	Voucher Build Key Num 2
D4	CCB.PS.AP.SINGLE_VENDOR_FLAG	true	This flag is used to determine whether to use Single Vendor for AP refunds or not. If set to true, single vendor will be used and the vendor ID and bank information are obtained from the integration lookup table.
D5	CCB.PS.AP.VOUCHER_STYLE	SGLP	This indicates to the system a Single Payment voucher style.
D6	CCB.PS.AP.VENDOR_SETID	SHARE	Vendor SetID
D7	CCB.PS.AP.VENDOR_ID	CCBVENDOR	Vendor ID. This must match the vendor ID setup in step A4. Example: CCBVENDOR.
D8	CCB.PS.AP.VNDR_LOC	1	Vendor Location
D9	CCB.PS.AP.ADDRESS_SEQ_NUM	1	Address Sequence Number
D10	CCB.PS.AP.PYMNT_TERMS_CD	07	Payment Terms ID. This must match what you documented in step A5.
D11	CCB.PS.AP.RT_TYPE	CRRNT	Rate Type
D12	CCB.PS.AP.RATE_MULT	1	Rate Multiplier
D13	CCB.PS.AP.RATE_DIV	1	Rate Divisor
D14	CCB.PS.AP.MATCH_ACTION	N	Match Action
D15	CCB.PS.AP.VCHR_SRC	XML	Voucher Source
D16	CCB.PS.AP.BUSINESS_UNIT_GL	US001	GL Business Unit. This must match what you documented in step A1. If the Use Single GL Business Unit flag is set to true, this value will be pass to Peoplesoft GL Business Unit.
D17	CCB.PS.AP.PHYSICAL_NATURE	S	Physical Nature
D18	CCB.PS.AP.BANK_CD	USBNK	For Single Vendor Payment, define the Bank Code. For Multiple Vendor Payment, default to a space ' '. Bank information will be derived in Peoplesoft.

Step	INTEGRATION_KEY	INTEGRATION_VALUE	Comments
D19	CCB.PS.AP.BANK_ACCT_KEY	CHCK	For Single Vendor Payment, define the Bank Account. For Multiple Vendor Payment, default to a space ' '. Bank information will be derived in Peoplesoft.
D20	CCB.PS.AP.PYMNT_METHOD	CHK	Payment Method
D21	CCB.PS.AP.PYMNT_HANDLING_CD	RE	Payment Handling
D22	CCB.PS. AP.CHAR_TYPE_CD	TEMPLATE	Characteristic Type to store the PS Accounting Entry Template. This must match what you documented in step B3. Example: CCBTMPLT.
D23	CCB.PS. AP. CHAR_TYPE_CD_BU	PSBU	Characteristic Type to store PS AP Business Unit. This must match what you documented in step B4. Example: PSBU.
D24	CCB.PS.AP. CHAR_TYPE_CD_VNDR	PSVD	Characteristic Type to store Oracle PeopleSoft Financials for General Ledger and Accounts Payable Vendor Id This must match what you documented in step B8. Example: PSVD This integration key is only available if patch 24653860 is applied.
D25	CCB.PS.AP.DST_CNTRL_ID	CCBTMPLT	
D26	CCB.PS.AP.VOUCHER_ORIGIN		Origin field on voucher header. If a value is defined, make sure it is a valid origin value in PeopleSoft code table.Default is blank.
D27	CCB.PS.AP.XFORMCCBAPREQCOLL .PRE.EXTN.FLAG	false	If set to true, the pre transformation extension service is invoked at the collection level after retrieving all the AP Request records from CCB and before any transformation is done.
D28	CCB.PS.AP.INSERTVOUCHER .INVOKEVOUCHER.PRE.EXTN.FLAG	false	If set to true, the pre transformation extension service is invoked at the record level before transforming the AP Request record from CCB to PS format.
D29	CCB.PS.AP.INSERTVOUCHER .INVOKEVOUCHER.POST.EXTN.FLAG	false	If set to true, the post transformation extension service is invoked at the record level after the record is inserted in the PeopleSoft Voucher tables.
D30	CCB.PS.AP.INSERTVOUCHER .OVERRIDE.VOUCHERDIST	false	If set to 'true' TransformationCCBVoucherToPSVoucherDist.xsl result will be overridden by XformCCBVoucherToPSVoucherDist_Override_Custom.xsl mappings.
D31	CCB.PS.AP.INSERTVOUCHER .OVERRIDE.VOUCHERVENDOR	false	If set to 'true' TransformationCCBVoucherTOPSVoucherVendor-1.xsl result will be overridden by XformCCBVoucherTOPSVoucherVendor_Override_Custom.xsl mappings.

Step	INTEGRATION_KEY	INTEGRATION_VALUE	Comments
D32	CCB.PS.AP.INSERTVOUCHER .OVERRIDE.VOUCHERPYMNT	false	If set to 'true' TransformCCBVoucherToPSVoucherPayment.xsl result will be overridden by XformCCBVoucherToPSVoucherPayment_Override_Custom.xsl mappings.
D33	CCB.PS.AP.INSERTVOUCHER .OVERRIDE.VOUCHERHEADER	false	If set to 'true' TransformationCCBVoucherToPSVoucherHeader.xsl result will be overridden by XformCCBVoucherToPSVoucherHeader_Override_Custom.xsl mappings.
D34	CCB.PS.AP.INSERTVOUCHER .OVERRIDE.VOUCHERLINE	false	If set to 'true' TransformationCCBVoucherToPSVoucherLine.xsl result will be overridden by XformCCBVoucherToPSVoucherLine_Override_Custom.xsl mappings.
D35	CCB.PS.AP.INSERTVOUCHER .OVERRIDE.VOUCHERBANK	false	If set to 'true' TransformationCCBVoucherTOPSVoucherBank-1.xsl result will be overridden by XformCCBVoucherTOPSVoucherBank_Override_Custom.xsl mappings.
D36	CCB.PS.AP.CHAR_TYPE_CD	TEMPLATE	Characteristic Type to store the Oracle PeopleSoft Financials for General Ledger and Accounts Payable Accounting Entry template. This must match what you documented in step B3. Example: CCBTMPLT.
D37	CCB.PS.AP. CHAR_TYPE_CD_BU	PSBU	Characteristic Type to store Oracle PeopleSoft Financials for General Ledger and Accounts Payable AP Business Unit. This must match what you documented in step B4. Example: PSBU.
D38	CCB.PS.AP.PYMNT_SEPARATE	N	Payment separate
D39	CCB.PS.AP.CUSTOM_GETCCBAPDATA_FLAG	false	If set to true, customizable scope is enabled to allow implementers to customize how they want to get AP Request data from Customer Care and Billing. If set to false, it will use our base SQL to retireve AP Request Data from Customer Care and Billing. Default to false. This integration key is only available if patch 24653860 is applied.
D40	CCB.PS.AP.USE_SINGLE_GLBUSUNIT_FLAG	true	This flag is used to determine whether or not the GL Business Unit related to the AP Request only uses a Single GL Business Unit. If set to true, the GL Business Unit will be obtained from the integration lookup table; otherwise, the GL Division from CCB will be mapped to GL Business Unit in Peoplesoft.

Configuration is done in the INTEGRATION_LOOKUP_TABLE.

Note: No user interface exists in this release. Use approved database tools to set column values.

Step	INTEGRATION_KEY	INTEGRATION_VALUE	Comments
E1	PS.CCB.APDATA.EMAIL	abc@oracle.com	Enter the e-mail address to be notified if errors occur in the AP Data integration point.
E2	PS.CCB.APDATA. REMIT_VENDOR	CCBVENDOR	Remit Vendor. This must match what you documented in step A4.
E3	PS.CCB.APDATA.LASTRUNDTTM	01-01-2011 10:01:01	Last Updated time of BPEL process run. This is used to determine the payment data to be extracted and moved across the integration point. This column is updated by the integration application each time it is run.
E4	PS.CCB.APDATA.XFORMPSPAYMENTSCOLL .PRE.EXTN.FLAG	false	If set to true, the pre transformation extension service is invoked at the collection level after retrieving all the payment records from PeopleSoft Financials for General Ledger and Accounts Payable and before any transformation is done.
E5	PS.CCB.APDATA.XFORMPSPAYMENTSREC ORD .PRE.EXTN.FLAG	false	If set to true, the pre transformation extension service is invoked at the record level before transforming the PeopleSoft Financials for General Ledger and Accounts Payable payment record from PS to CCB format.
E6	PS.CCB.APDATA.PROCESSPAYMENTINFO .PRE.EXTN.FLAG	false	If set to true, the pre processing extension point is invoked. Base payment and cancellation processing are not invoked.
E7	PS.CCB.APDATA.POSTPROCESSPAYMENTI NFO .PRE.EXTN.FLAG	false	If set to true, the post processing extension point is invoked. After the base payment and cancellation processing are invoked, additional processing can be done here.
E8	PS.CCB.CANCEL.CANCEL_REASON	APVC	Cancel reason code. This must match the cancel reason setup in Oracle Utilities Customer Care and Billing.
E9	PS.CCB.APDATA.REMIT_VENDOR	CCBVENDOR	Remit Vendor. This must match what you documented in step A4.

	INTEGRATION_KEY	INTEGRATION_VALUE	Comments
F1	CCB.PS.CCB.ADJ.MAINT.URL	http://hostname:port/ouaf/XAIApp/ xaiserver/C1AdjustmentMaintenance (XAI) or http://hostname:port/ouaf/webservices/ C1AdjustmentMaintenance (IWS)	Oracle Utilities Customer Care and Billing adjustment maintenance web service URL.
F2	CCB.PS.ADMIN_EMAIL	abc@oracle.com	Administrator's email

Verifying the Configuration

To verify the configuration, you must manually create data and run each integration point to verify results.

Step	Information	Success (Y /N)	Comments
G1	GL Integration Point		Use the steps outlined in section Verifying the Implementation to test.
G2	AP Request Integration Point		
G3	AP Data Integration Point		

Note: If the integration point tests are not successful, refer to the troubleshooting and error correction information in this document.

Oracle PeopleSoft Financials for General Ledger and Accounts Payable Configuration

Configure GL accounts and other information in Oracle PeopleSoft Financials for General Ledger and Accounts Payable.

Note: For steps to configure the GL, refer to your product-specific user documentation.

- GL Integration Point
- AP Request Integration Point
- AP Data Integration Point

GL Integration Point

As long as your chart of accounts and other GL definitions and settings are configured in Oracle PeopleSoft Financials for General Ledger and Accounts Payable, there are no new settings required in Oracle PeopleSoft Financials for General Ledger and Accounts Payable for the GL integration point.

AP Request Integration Point

This covers the following:

- Configuring an AP Business Unit in Oracle PeopleSoft Financials for General Ledger and Accounts Payable (Optional)
- Identifying the Accounting Entry Template
- Configuring the Single Payment Vendor in Oracle PeopleSoft Financials for General Ledger and Accounts Payable
- Configuring the Payment Terms Code in Oracle PeopleSoft Financials for General Ledger and Accounts Payable

Configuring an AP Business Unit in Oracle PeopleSoft Financials for General Ledger and Accounts Payable (Optional)

If you plan to send Oracle Utilities Customer Care and Billing data to an existing AP business unit, your existing Oracle PeopleSoft Financials for General Ledger and Accounts Payable configuration suffices. If you need to segregate Oracle Utilities Customer Care and Billing data by AP business unit from other data within Oracle PeopleSoft Financials for General Ledger and Accounts Payable, create a new AP Business Unit definition. Take note of the AP Business Unit being used, as you require this in subsequent steps.

Identifying the Accounting Entry Template

If you already have an Accounting Entry Template defined to offset incoming Oracle Utilities Customer Care and Billing Accounts, then you do not need to set up a new one. You should however document in the implementation checklist the name of this Accounting Entry Template as it is used to accommodate the accounts that accompany the vouchers coming from Oracle Utilities Customer Care and Billing and you require it in subsequent implementation steps.

Configuring the Single Payment Vendor in Oracle PeopleSoft Financials for General Ledger and Accounts Payable

You must set up a Single Payment Vendor in Oracle PeopleSoft Financials for General Ledger and Accounts Payable to represent default accounting information for all of the incoming AP Requests from Oracle Utilities Customer Care and Billing. To do this, you require the name of the Accounting Entry template in Oracle PeopleSoft Financials for General Ledger and Accounts Payable to offset incoming Oracle Utilities Customer Care and Billing Accounts.

The values described in the table below indicate the minimum required to configure a single payment vendor. Based on the client requirements values for other fields may or may not be required.

To configure the Single Payment Vendor in Oracle PeopleSoft Financials for General Ledger and Accounts Payable, perform the following steps:

1. Open Oracle PeopleSoft Financials for General Ledger and Accounts Payable Financials and navigate to **Suppliers /Vendors** page.
   Navigation Path: Suppliers > Supplier Information > Add/Update > Supplier
2. Create Single Payment Vendor by selecting the **Add a New Value** tab. Choose the **Single Payment Vendor (SGLP)** persistence.
3. Use the following settings:

Field Label	Value	Comments
SetID	SHARE	
VENDOR	CCBVENDOR	This is an example value. You may use any value you wish but take note of it for future configuration steps.
ShortName	CCBVENDOR	Example
Name	CCB Single Payment Vendor	Example
Description	CCB Single Payment Vendor	Example

Field Label	Value	Comments
Terms Options	Default	This field denotes the payment terms of the voucher. It has two possible values: 1. Default: Values defaulted from higher level configuration. 2. Specify: Terms must be specified in the Terms field.
Currency Options	Default	This field denotes the currency code specifications. Two possible values are: 1. Default: Values defaulted from a higher level configuration. 2. Specify: Terms must be specified in the Terms field.
Handling Options	Default	This field denotes Payment Handling options for individual payments of this vendor. Two possible values are: 1. Default: Values defaulted from a higher level configuration. 2. Specify: Terms must be specified in the Terms field.
Banking Options	Default	This field denotes the Banking options for this Vendor. Two possible values are: 1. Default: Values defaulted from a higher level configuration. 2. Specify: Terms must be specified in the Terms field.

Refer to your Oracle PeopleSoft Financials for General Ledger and Accounts Payable documentation for further instructions.

Configuring the Payment Terms Code in Oracle PeopleSoft Financials for General Ledger and Accounts Payable

To configure the Payment Terms Code in Oracle PeopleSoft Financials for General Ledger and Accounts Payable, follow these steps:

1. Open Oracle PeopleSoft Financials for General Ledger and Accounts Payable Financials and navigate to the Procurement Options Payment Terms Timing Codes tab.
   Navigation Path: **Set Up Financials/Supply Chain** > **Product Related** > **Procurement Options** > **Payments** > **Payment Terms Timing Codes**
2. Create a Payment Terms Timing Code by selecting the **Add a New Value** tab.

   SetID: Share

   Timing Definition ID: 07 (example)
3. Define additional timing code values on the Payment Terms Timing Codes page.

Field Label	Value	Comments
SetID	SHARE	SetID
Timing ID	07	Timing Definition ID

Field Label	Value	Comments
Description	7 Days	Description
Short Description	7 Days	Short Description
Timing Basis Option	None End of Relative Month Fixed Month Day Values Specific Due Date	Timing Basis Option
Timing Adjustment	Day Increment Month Increment Year Increment	Timing Adjustment

In this example, the Days Increment is set to "7" to indicate that the amount will be paid seven days after the Invoice date.

4. Create a Payment Terms Code using the Payment Terms Timing Code that was created.

   Navigation Path: Set Up Financials/Supply Chain > **Product Related** > **Procurement Options** > **Payments** > **Payment Terms-Single Payment**

5. Create a Payment Terms - Single Payment Code by selecting the **Add a New Value** tab.

   SetID: Share

   Timing Definition ID: 07 (example)

6. Select the desired Payment Terms Timing code in the Timing ID field to complete the creation of the Payment Terms Code.

Field Label	Value	Comments
SetID	SHARE	SetID
Description	CCB Refund Payment Terms Code	Description
Payment Terms ID	07	Payment Terms ID
Short Description	CCBREFUND	Short Description
Effective Date	01/01/1900	Effective Date
Terms Applicability	Vendor-Only Terms	Terms Applicability
Status	Active	Effective Status
Split Net Terms	No	Split Net Terms
Basis From and To Days	01 and 31	Only apply when Starting and Ending Day of the month
Timing ID	07	Net Terms Timing ID
Rebate Term Available	No	Rebate Term Available
Daily Rebate Percent	0	Daily Rebate Percent
Maximum Rebate	0	Maximum Rebate Percent

Field Label	Value	Comments
Discount Terms Available	No	Discount Terms Available
Discount Terms	No	Discount Terms

AP Data Integration Point

No configuration is required in Oracle PeopleSoft Financials for General Ledger and Accounts Payable for this integration point. Product-delivered application tables are used for selecting data from Oracle PeopleSoft Financials for General Ledger and Accounts Payable to export payment information to Oracle Utilities Customer Care and Billing.

Oracle Utilities Customer Care and Billing Configuration

To configure the Oracle Utilities Customer Care and Billing portion of the integration define settings for all three integration points.

This section includes:

- GL Integration Point
- AP Request Integration Point
- AP Data Integration Point

  Note: For instructions on specific steps in Oracle Utilities Customer Care and Billing, refer the user documentation.

GL Integration Point

To enable this integration point, configure the following information in Oracle Utilities Customer Care and Billing:

- Configuring GL Division
- Configuring Distribution Codes
- Configuring Fund Code
- Configuring GLASSIGN, and GLS for Oracle Utilities Customer Care and Billing Extract

Configuring GL Division

You must map your GL Division in Oracle Utilities Customer Care and Billing to the GL Business Unit in Oracle PeopleSoft Financials for General Ledger and Accounts Payable GL Business Unit. To do this, you must know what GL Business Unit(s) you will be using within the GL and create GL Divisions in Oracle Utilities Customer Care and Billing to match these exactly.

You can then associate these GL Divisions with the appropriate Service Agreement Types in Oracle Utilities Customer Care and Billing.

Configuring Distribution Codes

You must map your distribution codes in Oracle Utilities Customer Care and Billing with the appropriate GL Accounts in the Oracle PeopleSoft Financials for General Ledger and

Accounts Payable GL. First configure the distribution codes and then assign them to various entities within the Oracle Utilities Customer Care and Billing applications.

Oracle PeopleSoft Financials for General Ledger and Accounts Payable GL accounts are structured using account segments. These are set up in your existing Oracle PeopleSoft Financials for General Ledger and Accounts Payable configuration according to your business practices. Oracle Utilities Customer Care and Billing distribution codes must be configured to mirror the segments in Oracle PeopleSoft Financials for General Ledger and Accounts Payable. The segment positions in Oracle Utilities Customer Care and Billing are dot '.' separated so that the first segment is Account, the second segment is Department ID, and so on, as shown in the following table:

Oracle PeopleSoft Financials for General Ledger and Accounts Payable Account Column name	**Oracle Utilities Customer Care and Billing Distribution (GL_ACCT) segment position**
ACCOUNT	Position1
DEPTID	Position 2
OPERATING_UNIT	Position 3
PRODUCT	Position 4
CLASS_FLD	Position 5
PROGRAM_CODE	Position 6
ALTACCT	Position 7
PROJECT_ID	Position 8
AFFILIATE	Position 9
AFFILIATE_INTRA1	Position 10
AFFILIATE_INTRA2	Position 11
BUDGET_REF	Position 12
CHARTFIELD1	Position 13
CHARTFIELD2	Position 14
CHARTFIELD3	Position 15

* Use a dot (.) as the delimiter to indicate a break between positions. Use 2 dots (..) to indicate skipping a position and giving that position a null value.

A sample GL Account string is 400000.10000.NEWYORK.ALLPR...211004.

When interpreted by the standard mapping in the product this GL Account String in the sub-ledger equates to the following in the Oracle PeopleSoft Financials for General Ledger and Accounts Payable GL:

- Account 400000
- Department ID 10000
- Operating Unit NEWYORK
- Product ALLPRD
- Alternate account 211004

Note: Only fields relevant to the integration are included in this table:

Field Label	Value	Comments
Distribution Code	Example: R-ELERES	The distribution code to be used for financial transactions of a certain type.
Description	Example: Electric residential revenue	A description of how the distribution code is used.
GL Account Algorithm	GLCNST-DFLT	The standard product, or customer modified, algorithm you use for determining the GL Account String from the distribution code.
GL Account Details	1 of 1	Create at least one set of account details as needed by your chosen algorithm above. Only one is used based on status and effective date.
Effective Date	01-01-1900	The date you wish the following GL Account string to become active and used by the system, and therefore the integration software.
Status	Active	Only active status accounts are used by the product and therefore the integration.
GL Account	400000.10000.NEWYORK. ALLPRD…211004.	Input the GL Account String as explained above.

Configuring Fund Code

Note: This section is only relevant for some organizations. The Fund Code configuration is needed only if your organization practices fund accounting (this type of accounting is typically performed by municipal utilities).

If you are using fund accounting, you must map your fund codes in Oracle Utilities Customer Care and Billing with the appropriate fund codes in the Oracle PeopleSoft Financials for General Ledger and Accounts Payable. First configure the appropriate fund codes and then assign them to their respective distribution codes within the Oracle Utilities Customer Care and Billing applications

For more information about enabling Fund Accounting and configuration of Fund Code, refer to Oracle Utilities Customer Care and Billing Implementation and User Guides.

Note: When setting up the fund code in Oracle Utilities Customer Care and Billing, please ensure that the length of the FUND_CD is not greater than five (5) characters as this is the maximum number of characters supported by the Oracle PeopleSoft Financials for General Ledger and Accounts Payable fund code.

Configuring GLASSIGN, and GLS for Oracle Utilities Customer Care and Billing Extract

To successfully execute extracts from Oracle Utilities Customer Care and Billing, two processes must be configured with the appropriate batch parameters and set to run on a scheduled basis. These processes can be scheduled using the Oracle Utilities Customer Care and Billing scheduling tool or an enterprise scheduler that meets the open architecture standards used by Oracle Utilities Customer Care and Billing.

AP Request Integration Point

This includes the following:

- Configuring the Accounting Entry Template Characteristic Type
- Configuring the AP Business Unit Characteristic Type
- Configuring the AP Vendor ID Characteristic Type

Configuring the Accounting Entry Template Characteristic Type

For each Adjustment Type that has an associated AP Request, you must identify, in Oracle Utilities Customer Care and Billing, the accounting entry template to be used in Oracle PeopleSoft Financials for General Ledger and Accounts Payable GL. This template is used by the Oracle PeopleSoft Financials for General Ledger and Accounts Payable applications to determine the offset account associated with the distribution code and GL account information sent from Oracle Utilities Customer Care and Billing with the AP Request information.

Complete the following configuration in Oracle Utilities Customer Care and Billing to reference the Accounting Entry Template corresponding to the distribution code as follows.

1. Create a Characteristic Type.
   Navigate to the **Characteristic Type** portal on the **Admin** menu.

   The value for this characteristic type stores the value of the Oracle PeopleSoft Financials for General Ledger and Accounts Payable Accounting Entry Template. In this example, it is CCBTMPLT. Use the name of the template you have established for this purpose in Oracle PeopleSoft Financials for General Ledger and Accounts Payable Enterprise Management.

2. Set up the details on the Characteristic Type as follows:

Field Label	Value	Comments
Characteristic Type	TEMPLATE	The code associated with your characteristic type. This is used in future steps.
Description	Oracle PeopleSoft Financials for General Ledger and Accounts Payable Template	A description of the use for this characteristic type.
Type of Char Value	Predefined Value	No free-form text is allowed, only a predefined set of values.
Allow Search by Char Val	Allowed	Allow Searches

Field Label	Value	Comments
Characteristic Value	CCBTMPLT	The name of the Oracle PeopleSoft Financials for General Ledger and Accounts Payable Template to be used.
Description	CCB Account Template	

3. Select the **Characteristic Entities** tab to allow the Characteristic Type to be associated with the CIS Division:

Field Label	Value	Comments
Characteristic Entity	Distribution Code	This characteristic type can be inserted on a distribution code.

4. Attach the Characteristic Type, created above, to any distribution codes that will be used for AP Request Adjustments. In sample data an example is provided as the A/P - OVPY Distribution Code that is attached to the REFUNDAP Adjustment Code. Navigate to the **Distribution Code** portal on the **Admin** menu.

Field Label	Value	Comments
Distribution Code	Example: A/P-OVPY	The distribution code to be used for financial transactions of a certain type.
Description	Example: AP overpayment refund	A description of how the distribution code is used.
GL Account Algorithm	GLCNST-DFLT	The standard product, or customer modified, algorithm you use for determining the GL Account String from the distribution code.
GL Account Details	1 of 1	Create at least one set of account details as needed by your chosen algorithm above. Only one is used based on status and effective date.
Effective Date	01-01-1900	The date you wish the following GL Account string to become active and used by the system, and therefore the integration software.
Status	Active	Only active status accounts are used by the product and therefore the integration.
GL Account	400000.10000.NEWYORK.ALLPRD…211004.	Input the GL Account String as explained above.

Field Label	Value	Comments
Characteristic Type	Oracle PeopleSoft Financials for General Ledger and Accounts Payable Template	The characteristic type you created above.
Characteristic Value	Example: CCBTMPLT	The value you gave to the characteristic type created above.

Note: Only fields relevant to the integration are included in this table.

Configuring the AP Business Unit Characteristic Type

For each CIS Division used in Oracle Utilities Customer Care and Billing, you must configure the AP Business Unit to be used in Oracle PeopleSoft Financials for General Ledger and Accounts Payable GL.

Complete the following configuration in Oracle Utilities Customer Care and Billing to reference the AP Business Unit corresponding to the CIS Division as follows:

1. Create a Characteristic Type.
   Navigate to the **Characteristic Type** portal on the **Admin** menu.

   The value for this characteristic type stores the value of the Oracle PeopleSoft Financials for General Ledger and Accounts Payable AP Business Unit. In this example it is PSBU. You will use the AP Business Unit you have established for this purpose in Oracle PeopleSoft Financials for General Ledger and Accounts Payable.

2. Set up the details on the Characteristic Type as follows:

Field Label	Value	Comments
Characteristic Type	PSBU	The code associated with your characteristic type. This will be used in future steps.
Description	Oracle PeopleSoft Financials for General Ledger and Accounts Payable Business Unit	A description of the use for this characteristic type.
Type of Char Value	Predefined Value	No free-form text is allowed, only a predefined set of values.
Allow Search by Char Val	Allowed	Allow Searches
Characteristic Value	US001	The name of the Oracle PeopleSoft Financials for General Ledger and Accounts Payable AP Business Unit to be used.
Description	US001 Business Unit	

3. Select the Characteristic Entities tab to allow the Characteristic Type to be associated with the Distribution Code:

Field Label	Value	Comments
Characteristic Entity	CIS Division	This characteristic type can be inserted on a CIS Division.

4. Attach the Characteristic Type, created above, to any CIS Divisions that will be used for AP Request Adjustments. In sample data an example is provided as the CA CIS Division.
Navigate to the **CIS Division** portal on the **Admin** menu.

Field Label	Value	Comments
CIS Division	Example: CA	The CIS Division to be used.
Description	Example: California	A description of how the CIS Division is used.
Characteristic Tab		
Effective Date	Example: 01-01-1900	The date you wish the characteristic type and value to become active and used by the system, and therefore the integration software.
Characteristic Type	Oracle PeopleSoft Financials for General Ledger and Accounts Payable Business Unit	The characteristic type you created above.
Characteristic Value	Example: US001	The value you gave to the characteristic type created above.

Note: Only fields relevant to the integration are included in this table.

Configuring the AP Vendor ID Characteristic Type

For each CIS Division used in Oracle Utilities Customer Care and Billing, you must configure the AP Vendor ID to be used in Oracle PeopleSoft Financials for General Ledger and Accounts Payable AP Process.

Complete the following configuration in Oracle Utilities Customer Care and Billing to reference the AP Vendor ID corresponding to the CIS Division as follows:

1. Create a Characteristic Type.
Navigate to the **Characteristic Type** portal on the **Admin** menu.

   The value for this characteristic type stores the value of the Oracle PeopleSoft Financials for General Ledger and Accounts Payable AP Vendor ID. In this example it is PSVD. You will use the AP Vendor ID you have established for this purpose in Oracle PeopleSoft Financials for General Ledger and Accounts Payable.

2. Set up the details on the Characteristic Type as follows:

Field Label	Value	Comments
Characteristic Type	PSVD	The code associated with your characteristic type. This will be used in future steps.
Description	Oracle PeopleSoft Financials for General Ledger and Accounts Payable Vendor ID	A description of the use for this characteristic type.
Type of Char Value	Predefined Value	No free-form text is allowed, only a predefined set of values.
Allow Search by	Allowed	Allow Searches
Characteristic Value	VND1 (example only) VND2 (example only)	List the valid Vendor IDs in Oracle PeopleSoft Financials for General Ledger and Accounts Payable to be used for AP refund payments.
Description	Vendor 1 Vendor 2	

3. Select the Characteristic Entities tab to allow the Characteristic Type to be associated with the Distribution Code:

Field Label	Value	Comments
Characteristic Entity	CIS Division	This characteristic type can be inserted on a CIS Division.

4. Attach the Characteristic Type, created above, to any CIS Divisions that will be used for AP Request Refund Payments. In sample data, an example is provided as the CA CIS Division.
Navigate to the **CIS Division** portal on the **Admin** menu.

Field Label	Value	Comments
CIS Division	Example: CA	The CIS Division to be used.
Description	Example: California	A description of how the CIS Division is used.
Characteristic Tab		

Effective Date	Example: 01-01-1900	The date you wish the characteristic type and value to become active and used by the system, and therefore the integration software.
Characteristic Type	PSVD	Oracle PeopleSoft Financials for General Ledger and Accounts Payable Vendor ID
Characteristic Value	Example: VND1	The value you gave to the characteristic type created above.

Note: Only fields relevant to the integration are included in this table.

AP Data Integration Point

AP payment data is extracted from PeopleSoft Financials for General Ledger (GL) and Accounts Payable (AP) when an AP Request invoice is paid. This data is then translated by PSToCCBAPDataBPELProcess and inserted into the Oracle Utilities Customer Care and Billing AP Request that originally initiated the invoice.

The CCBCancellationWebService invokes the Oracle Utilities Customer Care and Billing service, **C1AdjustmentMaintenance**, when a payment is canceled and the liability is closed in PeopleSoft Financials for General Ledger (GL) and Accounts Payable (AP) . The service uses the cancel reason specified in the integration lookup table when canceling the adjustment associated with an AP Request. The sample data cancel reason comes pre-configured as APVC (Accounts Payable Void Check) in Oracle Utilities Customer Care and Billing version 2.2.0.2 and later.

Verify that the following are configured correctly in Oracle Utilities Customer Care and Billing.

Adjustment Cancel Reason

Create the Adjustment Cancel Reason to be used when canceling an adjustment.

1. Navigate to the **Adjustment Cancel Reason** portal on the **Admin** menu.
2. Provide the **Cancel Reason** and **Description**.

Cancel Adjustment Service (C1AdjustmentMaintenance)

1. Navigate to the **Inbound Service** portal on the **Admin** menu.
2. Verify the **XAI Inbound Service** details.

Field Label	Value	Comments
XAI Inbound Service Name	Adjustment Maintenance	This service is used to change data associated with adjustment transactions.
Description	Adjustment Maintenance for AP Cancel	
Long Description	Adjustment Maintenance for AP Cancel	
Active	Checked	Active checkbox checked.
Request Schema	C1AdjustmentMaintenance.xsd	Used by BPEL to call this service.
Response Schema	C1AdjustmentMaintenance.xsd	Used by BPEL to receive the response from this service.
Transaction Type	Update	Service used to update an existing adjustment transaction.

In Oracle Utilities Customer Care and Billing v2.5.0.x, there is an option to use **C1AdjustmentMaintenance** IWS (Inbound WebService).

1. Navigate to the **Inbound Web Service Deployment** portal on the **Admin** menu.
2. Verify that the **Inbound Web Service C1AdjustmentMaintenance** is deployed

3. Click the **WSDL** link to view **C1AdjustmentMaintenance** IWS WSDL.

Integration Product Configuration

At this time there is no user interface for entering the configuration parameters associated with Customer Care and Billing Integration Pack for Oracle PeopleSoft Financials for General Ledger and Accounts Payable. The implementer must use an approved database access tool to establish the appropriate configuration parameters in the following tables and columns.

This section includes the following:

- Setting Configuration Properties
- Error Handling

Setting Configuration Properties

Set Configuration properties that are used by specific integration processes. Configuration for the scheduler process is done in the INTEGRATION_PROCESS_ACTIVATION table. Remaining process configurations are done in the INTEGRATION_LOOKUP_TABLE.

> **Note**: The INTEGRATION_PROCESS_ACTIVATION and INTEGRATION_LOOKUP_TABLE tables are created in the integration schema, during installation, for the BPEL processes to access these tables.

Process Activation

The table INTEGRATION_PROCESS_ACTIVATION controls the activation or deactivation of the specific integration points. The initial install defaults all of the START_PROCESS values to 'Y'. Set the START_PROCESS value to 'N' for any given PROCESS_NAME that you are not using.

Set the run frequency to the time interval you wish to have between integration runs for each of the integration points.

PROCESS_NAME	START_PROCESS (Y/N)	RUN_FREQUENCY (Seconds)	NEXT_RUN_INTERVAL (System Use)
CCB_PS_GL	Y	0	0
CCB_PS_AP	Y	0	0
PS_CCB_APDATA	Y	0	0

> **Note**: You cannot use APDATA if you do not also use AP Request.

Lookup Table

The data base table INTEGRATION_LOOKUP_TABLE is used to manage external parameters used in the integration for the GL, AP Data, and AP Request integration points.

Refer to section <Color>Section <$elemparanumonlyIntegration Product Configuration for more details.

Process Scheduling

You may schedule these processes independently or using an enterprise scheduling tool. To schedule the processes independently, you may schedule the Oracle Utilities Customer Care and Billing processes using the standard tools available with the product. You may schedule the Oracle PeopleSoft Financials for General Ledger and Accounts Payable processes using the standard tools shipped with the product. You may schedule the BPEL processes to at the time intervals you have configured. Each of the main BPEL processes that form this process integration have been designed to first look and see if data exists that should be extracted. If data exists, it is extracted, transformed, and loaded to the target system. If data does not exist, then the process does nothing until the next time it tries again.

For example, schedule the Oracle Utilities Customer Care and Billing GL processes to run at 6AM each weekday morning. Then initiate the BPEL GL process at 7:00 AM and have it run every 4 hours to see if data exists. Accounting staff could then schedule the Journal Generator to run at 9:00 AM each morning using the Oracle PeopleSoft Financials for General Ledger and Accounts Payable Process Scheduler.

You may run the integration manually by initiating each process using the tools provided with each application. Or you can use an enterprise scheduler to initiate all or some of the processes mentioned above.

The frequency of the run for each integration point is at the client's discretion. As a default, each integration point runs every 2 minutes from the time you start them the first time. If data exists, the integration is completed for the integration point. Else, the system does nothing and the integration point tries again 2 minutes later.

If you wish to extend the time between runs you may insert a value of time, in seconds, in the RUN_FREQUENCY column of the INTEGRATION_PROCESS_ACTIVATION table for the appropriate integration point. This column controls the timing of the integration points 'waking up' to see if there is data to integrate. The integration points only check this table every 2 minutes so you cannot schedule the runs in less than 2 minute increments.

Set the run frequency to the time interval, in 120 second increments, you wish to have between integration runs for each of the integration points.

PROCESS_NAME	START_PROCESS (Y/N)	RUN_FREQUENCY (Seconds)	NEXT_RUN_INTERVAL (System Use)
CCB_PS_GL	Y	14400	0
CCB_PS_AP	Y	7200	0
PS_CCB_APDATA	Y	7200	0

In the above example the GL integration point looks for data every 4 hours (14,400 second), and the AP Request and AP Data integration points look for data to integrate every 2 hours (7200 seconds).

Every 2 minutes each integration point checks this table with the following logic:

```
If START_Process flag is NOT Y do nothing
 else
 If Run Frequency is 0 run the IP
 else
 If next run interval is =< 0 run the integration point AND set
Next_run_interval = run_frequency
 else
```

DO not run the integration point, just set Next_run_interval = Next_run_interval - 120 (the polling interval set in BPEL)

General Ledger (GL)

The following processes must be run in sequence to extract, transform, and load GL transactions from Oracle Utilities Customer Care and Billing to Oracle PeopleSoft Financials for General Ledger and Accounts Payable.

Product	Process Name	Description
Oracle Utilities Customer Care and Billing	GLASSIGN	Assigns GL account numbers to the GL details associated with financial transactions by referencing the distribution code that calls the appropriate assignment algorithm.
Oracle Utilities Customer Care and Billing	GLS	Follows GLASSIGN to create Financial Transaction (FT) download staging records for all financial transactions that are ready to be posted to the GL.
BPEL	CCBToPSGLBPELProcess	Extracts financial transactions from Oracle Utilities Customer Care and Billing into BPEL to be transformed and prepared for upload to Oracle PeopleSoft Financials for General Ledger and Accounts Payable.
Oracle PeopleSoft Financials for General Ledger and Accounts Payable	PeopleSoft Journal Generator	Reads the staged data in the Generic Accounting Entry Table (PS_JGEN_ACCT_ENTRY) and creates journal entries in the Oracle PeopleSoft Financials for General Ledger and Accounts Payable. This process can be scheduled or run manually.

AP Request

The following processes must be run in sequence to extract, transform, and load AP Requests from Oracle Utilities Customer Care and Billing to Oracle PeopleSoft Financials for General Ledger and Accounts Payable:

Product	Process Name	Description
BPEL	CCBToPSAPBPELProcess	Extracts AP Requests from Oracle Utilities Customer Care and Billing into BPEL to be transformed and prepared for upload to Oracle PeopleSoft Financials for General Ledger and Accounts Payable.
Oracle PeopleSoft Financials for General Ledger and Accounts Payable	AP Voucher Build Application Engine Process (AP_VCHRBLD)	Creates single payment vouchers in Oracle PeopleSoft Financials for General Ledger and Accounts Payable.

AP Data

The following process must be run, sometime after the Oracle PeopleSoft Financials for General Ledger and Accounts Payable check run, to extract, transform, and load AP Data from Oracle PeopleSoft Financials for General Ledger and Accounts Payable to Oracle Utilities Customer Care and Billing.

Product	Process Name	Description
BPEL	PSToCCBAPDataBPELProcess	Extracts all payments and cancellations created during pay cycle processing.

Note: The BPEL processes mentioned above are exposed as standard, stand-alone SOAP Web Services. They can therefore be invoked as regular web services by the BPEL console or any platform supporting scheduling web service invoke activities. These services do not require any external inputs to run. Industry standard enterprise scheduling tools that support this capability may therefore be used to initiate these processes if desired.

There is an open source tool bundled with the SOA Suite called Quartz, which can be used as a scheduler. In fact the BPEL Process Manager uses the Quartz scheduler internally.

Error Handling

If errors occur during the main integration processes, they are logged in the Integration Error table, INTEGRATION_ERROR_STORE and the Mail Notification sub process is invoked.

The integration has an error table in the integration schema which keeps a record of all transactions that have failed either during BPEL processing, including insertion of data in the target system.

When errors are found during data extraction integration process inserts errors into the error table, INTEGRATION_ERROR_STORE. There is no user interface to access this table; however, the MailNotification process, if configured, notifies the user by e-mail of the error and the error details. The layout of the error table INTEGRATION_ERROR_STORE is shown below:

Column	Data Type
SOURCE_SYSTEM	VARCHAR2 (3)
INT_BATCH_NUMBER	NUMBER
INTERFACE_NAME	VARCHAR2 (30)
BPEL_INSTANCE_ID	NUMBER
ERROR_CODE	VARCHAR2(400)
ERROR_SUMMARY	VARCHAR2 3000)
ERROR_MESSAGE	VARCHAR2 3000)
NOTIFIED	VARCHAR2 (1)
LAST_UPDATE_DATE_TIME	DATE

If errors occur during the extraction or load process for any of the integration points, the system logs an error in INTEGRATION_ERROR_STORE. Business data is stored in the ERROR_MESSAGE field of the table, and the information is also included in the notification email.

The e-mail notification sub process reads the information in the error table and sends an e-mail notification, based on settings configured for the integration layer.

Each time the e-mail notification process runs, it picks up records from the integration error table where NOTIFIED = 'N' (meaning that notifications have not yet been sent). It loops through all the distinct INTERFACE_NAME entries and sends one email to the corresponding email address (specific to the interface name) with the error information of all the entries in the table. So if there are 6 records with INTERFACE_NAME="GL" one e-mail is sent out to the email address corresponding to the GL interface. After the email is sent, the system updates the indicator so that NOTIFIED = 'Y.'

This e-mail contains the following information about each of the 6 GL transactions that failed:

- Subject: “Source System” “Target System” “Interface Name” “Process Instance”
- Body
- Source system
- Integration batch number
- BPEL Instance ID
- Error Code
- Error Summary
- Error Message

Error Notification Configuration

Enable email notification for the error handling module.

1. Log in to the Enterprise Manager console.

2. Expand **SOA** and then right-click. From the menu, click **SOA Administration** and then click **Workflow Properties**.
3. From the drop-down list, select **EMAIL**.
4. Enter the Email IDs in the '**From**' address field.

Verifying the Implementation

The best way to verify the implementation is to start each application individually then manually running the integration points:

- GL Integration Point
- AP Request Integration Point
- AP Data Integration Point

GL Integration Point

1. Identify financial transactions in the CI_FT table that must be sent to Oracle PeopleSoft Financials for General Ledger and Accounts Payable for creating journal entries. If needed, generate a bill, adjustment or payment event to create financial transactions.
2. Run the GLASSIGN process to assign the Account Number to the FT in CI_FT.
3. Run the GLS process to mark the FTs in the CI_FT table for download. The staging process to create a GL download (GLS) creates a staging record for every financial transaction that is ready for download. This process populates the FT / Batch Process table with the unique ID of all financial transactions to be interfaced to the GL. This process marks each staging record with the batch process ID (defined on the installation record) for the GL interface. It also stamps the current run number for the respective batch control record.

   Note: The integration BPEL process uses the information on this staging table to create the consolidated journal entries that are interfaced to your GL. The Oracle BPEL process reads the CI_BATCH_JOB table to check for new BATCH_JOB_ID and BATCH_JOB_STAT_FLG.
4. Invoke the GL Integration process from Oracle BPEL Process Manager or wait for its next run to occur. The package should do the following:
   - Select the FT in the CI_FT table based on the batch code and the run number provided to it by Oracle BPEL Process Manager.
   - Extract and group (summarize) the Financial Transactions (FT) and push them into Oracle BPEL Process Manager.
   - Update the Distribution status to 'D' after extracting the FT and increment the NEXT _BATCH_NBR in the CI_BATCH_CTRL table.
   - Data is transformed by the BPEL process and written to the GL journal staging table in Oracle PeopleSoft Financials for General Ledger and Accounts Payable.
5. Use the Oracle PeopleSoft Financials for General Ledger and Accounts Payable Journal Generator to Load the GL data into the Generic Accounting Entry Table: PS_JGEN_ACCNT_ENTRY.

AP Request Integration Point

1. Create an AP Request for a refund customer in Oracle Utilities Customer Care and Billing. You must generate an adjustment of the appropriate type to do this.
2. Invoke the AP Request Integration process to extract the AP Request Information, and the corresponding customer information from Oracle Customer Care and Billing, transform it, and load it into Oracle PeopleSoft Financials for General Ledger and Accounts Payable AP voucher build integration tables.
3. Run the voucher build process in Oracle PeopleSoft Financials for General Ledger and Accounts Payable to create vouchers from the AP Check Request and Customer data that is staged in the voucher build integration tables.

AP Data Integration Point

1. Generate a payment in Oracle PeopleSoft Financials for General Ledger and Accounts Payable Payables for a voucher created by the Oracle Utilities Customer Care and Billing AP Request process above.
2. Invoke the AP Data Integration process to update the AP Check Request table (CI_ADJ_APREQ) with the Payment Information from Oracle PeopleSoft Financials for General Ledger and Accounts Payable.
3. If you wish to further test a cancellation of payment functionality, cancel the Payment you made above in Oracle PeopleSoft Financials for General Ledger and Accounts Payable Payables and close the liability.
4. Invoke the Integration process to update the AP Request table (CI_ADJ_APREQ) with the Payment Information from Oracle PeopleSoft Financials for General Ledger and Accounts Payable. This should also cancel the AP request and adjustment.

Chapter 4

Monitoring and Troubleshooting

If Oracle Utilities Customer Care and Billing integration to Oracle PeopleSoft Financials for General Ledger and Accounts Payable integration is configured properly and data entry into these two applications is correct, you should not experience errors related to the integration. The following sections address common scenarios which may produce errors and offer possible solutions toward error resolution.

This section provides information on the following:

- Monitoring from Oracle Utilities Customer Care and Billing
- Monitoring from Oracle PeopleSoft Financials for General Ledger and Accounts Payable
- Monitoring from Integration
- Troubleshooting

Monitoring from Oracle Utilities Customer Care and Billing

Errors related to the online integration invocation from Oracle Utilities Customer Care and Billing are stored in the CCB_ENVIRONMENT_NAME/logs/system folder. Example: V24_V24020_CCB_SOA12C_CERT_LIN_ORA_WLS/logs/system

Errors related to batch integration invocation from Oracle Utilities Customer Care and Billing are stored in the $SPLOUTPUT/CCB_ENVIRONMENT_NAME folder. Example: /spl/sploutput/V24020_CCB_SOA12C_CERT_LIN_ORA_WLS

Example: If any error occurs when GLASSIGN or GLS batches are run are reported in Oracle Utilities Customer Care and Billing product batch run tree. Then you must correct the underlying condition causing the error and then rerun the batch processes. The rest of the integration cannot occur until the two Oracle Utilities Customer Care and Billing batch processes have successfully completed.

> **For more information** about errors and notifications, see the Oracle Utilities Customer Care and Billing documentation.

Monitoring from Oracle PeopleSoft Financials for General Ledger and Accounts Payable

Any error occurs during the execution of the journal generator process are reported in Oracle PeopleSoft Financials for General Ledger and Accounts Payable process monitor. The monitor shows the status of the process and an error log.

Monitoring from Integration

Use any of the following to monitor the integration:

- Monitoring Using WebLogic SOA Enterprise Manager
- Monitoring Using WebLogic Logs
- Monitoring Using Integration Error Store table

Monitoring Using WebLogic SOA Enterprise Manager

Perform the following steps to monitor through WebLogic SOA Enterprise Manager:

1. Log in to the WebLogic SOA Server Enterprise Manager, and then navigate to **SOA** > **soa-infra** > **CCB-PS**.

   All composite processes deployed for integration are available under the partition CCB-PS.

2. Select the appropriate process to list all the instances for the processes sorted by time of execution.

3. Click the appropriate process instance and it displays the flow for the process. The composite flow lists all activities in the process instance.

Monitoring Using WebLogic Logs

Log in to the machine where SOA server is installed. The SOA logs are stored in:

<WebLogic installation folder>/user_projects/domains/<SOA Domain name>/servers/<SOA Server name>/logs

Example: /Oracle/Middleware/Oracle_Home/user_projects/domains/soa_domain/servers/soa_server1/logs

Monitoring Using Integration Error Store table

Errors occurring during the integration such as when financial transactions are extracted or summarized, when data formats are translated, or when data is inserted into one of the edge applications are logged and reported by the integration product in the INTEGRATION_ERROR_STORE table.

Use standard database (SQL based) tools to view the error information in the table if necessary, however the e-mail notification you receive must include all of the information necessary to investigate and correct the error.

If errors occur during the extraction or load process for any of the integration points, the system logs an error in INTEGRATION_ERROR_STORE. Business data is stored in

the ERROR_MESSAGE field of the table, and the information is also included in the notification email.

The following sections indicate where to locate error messages and logged error data in each of the integration point:

- GL Integration Point
- AP Request Integration Point
- AP Data Integration Point

GL Integration Point

If errors occur during the extraction of Financial Transactions from Oracle Utilities Customer Care and Billing tables or during loading these transactions into Oracle E-Business Suite Financials for General Ledger and Accounts Payable GL_INTERFACE table, integration process inserts the error into INTEGRATION_ERROR_STORE.

The following business data is stored in the ERROR_MESSAGE field of INTEGRATION_ERROR_STORE. This information is included in the notification email.

The GL integration point utilizes set based processing. If there is an error, with any part of the batch, the entire batch is rejected.

TABLE	COLUMN	DATA TYPE
CI_FT_PROC	BATCH_NBR	NUMBER (10)
CI_FT_GL	DST_ID	CHAR (10)
CI_FT_GL	GL_ACCT	VARCHAR2 (48)
CI_FT	CIS_DIVISION	CHAR (5)
CI_FT	GL_DIVISION	CHAR (5)

AP Request Integration Point

If errors occur during the extraction of Financial Transactions from Oracle Utilities Customer Care and Billing tables or during loading these transactions into Oracle E-Business Suite Financials for General Ledger and Accounts Payable Invoice Interface tables, BPEL inserts the error into INTEGRATION_ERROR_STORE.

The following business data is stored in the ERROR_MESSAGE field of INTEGRATION_ERROR_STORE. This information is included in the notification email:

TABLE	CLOUMN	DATA TYPE
CI_ADJ_APREQ	AP_REQ_ID	CHAR (12)
	BATCH_NBR	NUMBER (10)
	ENTITY_NAME	VARCHAR2 (64)
	SCHEDULED_PAY_DT	DATE
CI_ADJ	ADJ_ID	CHAR (12)
	CRE_DT	CHAR (12)

TABLE	CLOUMN	DATA TYPE
	ADJ_TYPE_CD	CHAR (8)
	ADJ_AMT	NUMBER (15,2)
CI_SA	CIS_DIVISION	CHAR (5)

AP Data Integration Point

The following business data is stored in the ERROR_MESSAGE field of INTEGRATION_ERROR_STORE. This information is included in the notification email:

TABLE	COLUMN	DATA TYPE
PS_PAYMENT_TBL	BANK_CD	VARCHAR2 (5)
	BANK_ACCT_KEY	VARCHAR2 (4)
	PYMNT_ID	VARCHAR2 (10)
	PYMNT_ID_REF	VARCHAR2 (20)
	BANK_ACCOUNT_NUM	VARCHAR2 (17)
	REMIT_VENDOR	VARCHAR2 (10)
PS_PYMNT_VCHR_XREF	VOUCHER_ID	VARCHAR2 (8)
	PYMNT_MESSAGE	VARCHAR2 (70)
PS_VOUCHER	INVOICE_ID	VARCHAR2 (30)

Troubleshooting

The following sections detail error scenarios which may occur, and how to resolve them. Usually when errors occur, you must correct configuration settings, data errors, or both:

- The General Ledger Integration uses set based processing. This means that either all or none of the transactions in a batch are successful.
- The AP Request Integration uses row-by-row processing.
- The AP Data Integration uses row-by-row processing.

Error	Interface	Application / Process	Error Details	Error Resolution
Data failed to insert in the Oracle PeopleSoft Financials for General Ledger and Accounts Payable interface table.	GL integration process	BPEL Process	If one row fails to insert into the Oracle PeopleSoft Financials for General Ledger and Accounts Payable Interface table during a batch, the entire batch rolls back. In this instance, the BPEL process shows a status of error and an error notification is sent via e-mail.	Re-establish the connections between BPEL and the edge applications if necessary. Correct the configuration and/or transactional data in the Oracle Utilities Customer Care and Billing database if necessary. Make sure that the GLASSIGN and GLS processes are run again. The Integration process must also be re-run once you have taken the above actions.
Data successfully inserted in the Oracle PeopleSoft Financials for General Ledger and Accounts Payable interface table, but data has errors.	GL integration process	Oracle PeopleSoft Financials for General Ledger and Accounts Payable Process	If the integration process completes successfully and data is inserted into the Oracle PeopleSoft Financials for General Ledger and Accounts Payable interface tables, but the data has errors in it, the Journal Generator process may not be able to process the data and create journal vouchers from it.	Correct the information directly in the Oracle PeopleSoft Financials for General Ledger and Accounts Payable application and load the journal voucher using the online tools provided in Oracle PeopleSoft Financials for General Ledger and Accounts Payable.
Journal Generator process cannot complete successfully.	GL integration process	Oracle PeopleSoft Financials for General Ledger and Accounts Payable Process	When the Journal Generator process encounters errors, the error status/reason associated with the Journal Generator process is also identified in the Oracle PeopleSoft Financials for General Ledger and Accounts Payable Process monitor. All the rows in the interface table remain unprocessed and the Distribution Status remains unchanged as 'N'.	Correct the information directly in the Oracle PeopleSoft Financials for General Ledger and Accounts Payable application and load the journal voucher using the online tools provided in Oracle PeopleSoft Financials for General Ledger and Accounts Payable.

Error	Interface	Application / Process	Error Details	Error Resolution
Journal Generator process completes successfully with bad data.	GL integration process	Oracle PeopleSoft Financials for General Ledger and Accounts Payable Process	In this instance, journals are created for the row of bad data, which can be detected and rectified by viewing, editing, and loading the journal online.	Correct the information directly in the Oracle PeopleSoft Financials for General Ledger and Accounts Payable application, and load the journal voucher using the online tools provided in Oracle PeopleSoft Financials for General Ledger and Accounts Payable. After the process is successfully completed, the Distribution Status of all the rows in the Interface table is updated to 'D'.
Row of bad data in Oracle PeopleSoft Financials for General Ledger and Accounts Payable interface table does not get picked up	GL integration process	Oracle PeopleSoft Financials for General Ledger and Accounts PayableProcess	The Journal Generator process does not error out and the row of bad data in the Oracle PeopleSoft Financials for General Ledger and Accounts Payable interface table does not get picked up. This situation can occur if the Accounting Date lies outside the Open Period.	Correct the Accounting Date manually in the Oracle PeopleSoft Financials for General Ledger and Accounts Payable application. After the process has completed successfully, the Distribution Status of the row still remains in 'N'.(does not change to 'D').
GL Account Mapping inconsistency	GL integration process	BPEL, Oracle Utilities Customer Care and Billing configuration	When the Journal Voucher is created in Oracle PeopleSoft Financials for General Ledger and Accounts Payable, the Accounting information is incorrect.	Since the source of truth is Oracle PeopleSoft Financials for General Ledger and Accounts Payable, the user needs to correct the Accounting Structure in the Oracle Utilities Customer Care and Billing distribution code using information from the Oracle PeopleSoft Financials for General Ledger and Accounts Payable.

Error	Interface	Application / Process	Error Details	Error Resolution
Wrong GL Business Unit	GL integration process	Oracle Utilities Customer Care and Billing	The financial information being sent to Oracle PeopleSoft Financials for General Ledger and Accounts Payable has the wrong business unit associated with it.	Correct the GL Division configuration in Oracle Utilities Customer Care and Billing to match the GL Business Unit in Oracle PeopleSoft Financials for General Ledger and Accounts Payable.
Data in AP Request row and BPEL process does not fail.	AP request integration point	Oracle Utilities Customer Care and Billing Process	If a particular AP Request has an error in Oracle Utilities Customer Care and Billing, it is not picked by the integration process but the remaining requests of that BPEL run are picked up and inserted into the interface tables and the BPEL process status will be successful. If one or more rows have failed at any point in the integration, the information is logged in the integration log table and an error e-mail generated.	Correct the specific AP Request in error using the tools provided by Oracle Utilities Customer Care and Billing. Then rerun the BPEL integration process.
Error Data in Oracle PeopleSoft Financials for General Ledger and Accounts Payable staging table and Oracle PeopleSoft. Financials for General Ledger and Accounts Payable process fails.	AP request integration point	Oracle PeopleSoft Financials for General Ledger and Accounts Payable Process	All the data is successfully inserted into the Oracle PeopleSoft Financials for General Ledger and Accounts Payable Interface tables, but there is an error while running the voucher build process.	Load the vouchers directly into the Oracle PeopleSoft Financials for General Ledger and Accounts Payable application and resolve any incorrect data.
Error Data in Oracle PeopleSoft Financials for General Ledger and Accounts Payable staging table and Oracle PeopleSoft Financials for General Ledger and Accounts Payable process does not fail.	AP request integration point	Oracle PeopleSoft Financials for General Ledger and Accounts Payable Process	Oracle PeopleSoft Financials for General Ledger and Accounts Payable Voucher Build process ends successfully but the vouchers are in recycle status.	Load the vouchers directly in the Oracle PeopleSoft Financials for General Ledger and Accounts Payable application and resolve any incorrect data.

Error	Interface	Application / Process	Error Details	Error Resolution
The integration is unable to update the AP Request table with payment information.	AP Data integration point	BPEL Process	It is likely that the error is technical in nature (data mapping etc).	Review BPEL error table and product error logs. Update BPEL and/or product configurations as needed to correct the errors reported. Re-run the integration once corrections have been made.
The integration is unable to invoke the Adjustment Maintenance Service.	AP Data integration point	BPEL Process	It is likely that the error is technical in nature (service retired etc).	Review BPEL error table and product error logs. Update BPEL and/or product configurations as needed to correct the errors reported. Re-run the integration once corrections have been made.
System or Network Down	Any integration Point	BPEL Process	If BPEL goes down in the middle of an integration process.	If BPEL goes down in the middle of a long running process, it can be restarted and it resumes where it went down. A retry policy can be set up in the Oracle BPEL Process Manager which administratively enables BPEL process instances to retry adapter connectivity.

Chapter 5

Customization Options

This chapter provides information on the various methods that can be used to extend or customize the integration:

- Extension Methods
- Implementing Extension Points
- Implementing Custom Transformations
- Migrating Custom Components
- Steps to Customize SOA Composite Applications

Extension Methods

The Integration Process allows extensibility of transaction messages using the following methods:

- Custom Extension Points
- Custom Transformations
- Customizable Scopes

Custom Extension Points

The integration layer defines an external call from each extension point which accepts the source/target XML as input and gives the source /target XML as output. The integration layer points to an abstract WSDL and can be plugged in by a concrete WSDL by the implementation team.

This helps the implementation to invoke any external web service and transform the respective XML.

Pre-transformation Extension Point

The pre-transformation extension point is invoked before the main transformation is executed. This transformation helps in transforming the source XML coming as an input to the integration process and helps the implementation to invoke any external web service and transform the input XML.

Post-transformation Extension Point

The post transformation extension point is invoked after the main transformation is executed. This transformation helps in transforming the target XML that is input into the target system and helps the implementation to invoke external web services and/or transform the output XML.

Refer to Implementing Extension Points for more instructions and examples.

Custom Transformations

This integration has placeholders for custom elements in the incoming schema and outgoing schema at record level. When querying data into incoming message, the custom elements will be empty. This can be populated through the Extension points.

The custom transformations have a standard template to map elements to existing fields that are still unmapped and a custom template to map custom elements. The main transformation invokes custom transformation. Empty custom transformations are shipped with the product.

Note: The custom elements in the Target variable are not passed to the Database Adapter but they are passed to Post Collection Extension point.

Customizable Scopes

Along with the pre, post extension points this integration provides an option to customize the composite at specific scopes.

In order to customize a base composite you have to login jdeveloper in Customization Developer role.

You can only customize the composite.xml file, .bpel file (for Oracle BPEL Process Manager), .xsl map file, and .mplan file (for Oracle Mediator) when logged into Oracle JDeveloper with the Customization Developer role.

For ex: bpel can be customized at scopes which has “customizable=‘true”’.

Refer to section <Color>Section <$elemparanumonlySteps to Customize SOA Composite Applications for instructions on how to customize a base composite.

Note: Refer to the SOA Documentation for more information: http://docs.oracle.com/middleware/12212/soasuite/develop/GUID-46083A5B-B61C-41BA-A9EE-5CEE758BC7C7.htm#SOASE85064.

Implementing Extension Points

To implement extension points, perform the following:

1. Each process in the integration has pre and post transformation extension points which can be used to invoke web services and transform the payload.
2. The desired extension point can be triggered from the process by enabling the pre and post transformation extension flags defined in the integration lookup table.
3. The processes that include extension points have their own concrete wsdl. This is used to read the endpoint location for the extension service.

4. The binding and service elements for the extension service must be added to the concrete wsdl in the product install home at CCB-PS/MDS- Artifacts/MetaData/ExtensionServiceLibrary and the wsdl must be updated in MDS.
5. These concrete wsdl files are located in MDS under the directories /apps/CCB-PS/MetaData/ExtensionServiceLibrary. Refer to the instructions in the Installation Guide for updating MDS.
6. Re-deploy the composite or restart the SOA server for the extension point to invoke the web service in the concrete wsdl.
   For example: To enable the extension points for CCBToPSGLBPELProcessExtension add the binding and service elements to the CCBToPSGLBPELProcessExtensionConcrete.wsdl

```
<binding
name="CCBToPSGLBPELProcessV1ExtensionServiceSOAP11Binding"
   type="ccbext:CCBToPSGLBPELProcessV1ExtensionService">
   <soap:binding style="document" transport="http://
schemas.xmlsoap.org/soap/http"/>
     <operation name="PreXformCollectionCCBtoPS">
      <soap:operation style="document" soapAction="http://
xmlns.oracle.com/CCBToPSGLBPELProcess/
CCBToPSGLBPELProcessExtension/V1/PreXformCollectionCCBtoPS"/>
       <input>
        <soap:body use="literal" parts="CollectionCCBtoPS"/>
       </input>
       <output>
        <soap:body use="literal" parts="CollectionCCBtoPS"/>
       </output>
       <fault name="fault">
        <soap:fault name="fault" use="literal"/>
       </fault>
     </operation>
     <operation name="PreInvokePSJGenTable">
      <soap:operation style="document" soapAction="http://
xmlns.oracle.com/CCBToPSGLBPELProcess/
CCBToPSGLBPELProcessExtension/V1/PreInvokePSJGenTable"/>
      <input>
       <soap:body use="literal" parts="PSRecord"/>
      </input>
      <output>
       <soap:body use="literal" parts="PSRecord"/>
      </output>
      <fault name="fault">
       <soap:fault name="fault" use="literal"/>
      </fault>
     </operation>
   </binding>
   <service name="CCBToPSGLBPELProcessV1ExtensionService">

<!-- Sample: Port name must match the port name used for the
Extension service in the composite.xml for the process -->

   <port name="CCBToPSGLBPELProcessV1ExtensionService"

binding="ccbext:CCBToPSGLBPELProcessV1ExtensionServiceSOAP11Bindin
g">
      <soap:address location="http://soa_host:soa_port/soa-infra/
services/default/GLTestExtensionService/GLExtService"/>
    </port>
   </service>
```

7. For the custom BPEL process invoked from the extension point to be in the same global transaction as the main BPEL process, make sure that the transaction flag on the Custom BPEL component is set to "Required":

```
<component name="ExtensionService">
 <implementation.bpel src="ExtensionService.bpel"/>
    <property name="bpel.config.transaction"
         many="false" type="xs:string">required</property>
 </component>
```

8. Also, if security policies are attached to the composites, then "oracle/Utilities_wss_http_token_service_policy_OPT_ON" should be attached to the service and "oracle/Utilities_wss_http_token_client_policy_OPT_ON" should be attached to all the references of the custom BPEL process invoked from the Extension Points.

Implementing Custom Transformations

To implement custom transformations, perform the following:

1. Each process in the integration has its own xsd files for the incoming and outgoing messages. The messages have custom elements at record level which can be used to pass additional data.
2. Each xsd has a corresponding CustomType xsd in which the complexType elements for each customElements tag are defined.
3. To pass additional elements in the customElements tag the corresponding complexType needs to be modified. Add the additional elements required in both the complexType elements i.e. xsd for both edge applications.
4. The custom xsd files are located in the product install home under the directories: CCB-PS/MDS-Artifacts/CCB-PS/MetaData/ApplicationObjectLibrary/OUCCB/V1/schemas and CCB-PS/MDS-Artifacts/CCB-PS/MetaData/ApplicationObjectLibrary/Peoplesoft/V1/schemas
5. The custom elements in the incoming message can be populated through the Extension points.
6. Each transformation file has a corresponding Custom xsl, and standard and custom templates are defined in the Custom xsl.
7. Each transformation invokes the standard and custom templates at the record level.
8. The Custom xsl has a standard template to map elements that are still unmapped coming from the Oracle Utilities Customer Care and Billing DB Adapter Table schema to fields in the Oracle PeopleSoft Financials for General Ledger and Accounts Payable DB Adapter Table schema or vice versa.
9. The Custom xsl has a custom template to map custom elements.
10. The custom xsl files are located in the product install home under the directory CCB-PS/services/industry/Utilities/EnterpriseBusinessFlow/<Process Name>/xsl.
11. After updating the xsd and xsl files in the product install home, update MDS using the ant scripts and restart the SOA server.
12. Refer to the instructions for updating MDS located in the Installation Guide.

    Example:

    ```
    CCB Schema: GetCCBGLData.xsd
    ```

```
PS Schema: InsertIntoPS_table.xsd
```

To modify the GL integration process to map Accounting Date from Oracle Utilities Customer Care and Billing to Oracle PeopleSoft Financials for General Ledger and Accounts Payable.
Modify TransformationCCBToPSGLData_Custom.xsl

```
<xsl:template name="PsJgenAcctEntry_standardElements">
  <!-- this template is use for custom transformation of CCB GL Data
to PS Journal Entry -->
  <ns0:journalDate>
     <xsl:value-of select="ccbgl:ACCOUNTING_DT"/>
    </ns0:journalDate>
 </xsl:template>
</xsl:stylesheet>
```

Migrating Custom Components

This section includes the following:

- Migrating Custom Composites
- Migrating Custom XSLs

Migrating Custom Composites

All integration services provided with this integration pack have extension points available to extend the functionality using custom composites. All custom extension composites can be migrated from 11g to 12c. Ensure you have a proper backup of the 11g process before doing the upgrade from 11g to 12c.

Open the 11g composite in Jdeveloper 12.1.3 and save the composite. The directory structure of the composite changes and some files are added and deleted.

Perform these manual changes when migrating from 11g to 12c:

1. All the transformations currently are either in xsl folder or under the composite directory, should be moved to Transformations folder and all references in the .bpel file should be changed accordingly.
2. All the WSDLs should be moved to WSDLs folder manually.
3. All the BPEL files should be moved to BPEL folder.
4. All the XSD files should be moved to a Schemas folder.
5. All the adapter related files should be moved to Adapters folder.
6. All human task related artifacts should be moved to HumanTasks folder.
7. All the mediator artifacts should be moved to Mediators folder.

   Ensure that there are no errors and deploy directly from JDev or using DeploUndeployUtility.xml file.

Perform the following steps to deploy individual composites using DeploUndeployUtility:

1. Execute the following commands in the Command prompt for Linux and Windows respectively:

Linux:

```
cd $PRODUCT_HOME/bin
ant -f DeployUndeployUtility.xml -DInstallProperties=$PRODUCT_HOME/
config/InstallProperties.xml DeployComposite
```

Windows:

```
cd %PRODUCT_HOME%\bin
ant -f DeployUndeployUtility.xml -
DInstallProperties=%PRODUCT_HOME%/config/InstallProperties.xml
DeployComposite
```

2. Validate the following parameters when prompted with default values during deployment. Press **Enter** to use the default prompted value.

   - **Composite Name**: The name of the custom composite to be deployed to SOA server. This parameter does not have a default value.
   - **Composite folder location**: The folder name should be an absolute path beginning with %PRODUCT_HOME%/services/industry/Utilities/<EBF/utility>.

     For example: to deploy the composite from %PRODUCT_HOME%/services/industry/Utilities/EBF, then pass %PRODUCT_HOME%/services/industry/Utilities/EBF to this property.

     The default value for this property is %PRODUCT_HOME%/services/industry/Utilities/EBF, as most of the business-specific composites reside in this folder.

     Note: make sure the custom composite is located on the server physical directory/PRODUCT_HOME where the integration is running.
   - **SOA Partition Name**: The SOA partition name to which the composite should be deployed.

     For more information on deploying/undeploying individual composites refer to the *Oracle Utilities Customer Care and Billing Integration to Oracle PeopleSoft Financials for General Ledger and Accounts Payable Release 12.1 Media Pack Installation Guid*e, under *Deploying/Undeploying Individual Composites*.

     Note: It is not mandatory for customers to migrate their custom/extension composite from 11g to 12c. The 11g custom composite service can still be called by the 12c CCB-PS processes.

Migrating Custom XSLs

Same Custom XSLs previously available in 11g are now available in 12c. In order to ensure that the source/target mapping feature is not lost, do not copy the XSL as is from 11g to 12c but instead manually merge those changes from the 11g version of XSL to 12c version of XSL. Redeploy the modified processes either from JDEV or using the DeploUndeployUtility file as specified above.

Steps to Customize SOA Composite Applications

To implement custom SOA Composites, refer to section 52.4 Customizing the Customer Version in the SOA Documentation for more information: http://docs.oracle.com/middleware/12212/soasuite/develop/GUID-46083A5B-B61C-41BA-A9EE-5CEE758BC7C7.htm#SOASE85064.

This section provides a summary of the required steps:

1. Obtain the Composite Archive (SAR) file for the base composite that is to be customized. This SAR file may be obtained in one of a few ways:
   - If the composite has already been installed and deployed as part of a process integration pack (PIP), the composite project may be found under the CCB-PS\services\industry\Utilities\EBF\CCBToPSGLBPELProcess/... directory tree and within the project's deploy subdirectory you may find the SAR file.
   - If the composite has already been deployed, you can export the SAR from the server using EM console or WLST or Ant commands
   - Open the project in JDeveloper (default role) and deploy it to a SAR file
2. Open JDeveloper (default role) and create a new SOA application and then create a new SOA Project with an empty composite.
   The SOA Project should be named with a distinguishing prefix (such as "XX") followed by the original project or composite name. For example: XXCCBToPSGLBPELProcess
3. In the **Application Navigator** pane, click the project name to select it.
4. Select **File** > **Import**... from the main JDeveloper menu.
5. Choose **SOA Archive Into SOA Project**.
6. Browse for the SAR file obtained in step 1.
   The composite name will populate automatically after selecting the SAR file. Verify that it is correct.
7. Select the **Import for Customization** checkbox, and click Finish. The project is now ready for customization.

   Note: In case of any compilation errors like MDS-00054 : MDS Exception, make sure adf-config.xml has the MDS database (where CCB-PS integration is deployed) details
8. Customization class jar "ugbucust.jar" must be added to your SOA composite project. This file is located in $PRODUCT_HOME/Customizations/ugucust.jar
9. The SOA Application in JDeveloper must be configured to use the customization class and layer
   - In the Applications window, expand Application Resources > Descriptors > ADF META_INF.
   - Open the adf-config.xml file and select the MDS tab.
   - Click the Add icon to add "UGBUCustomerExtensionCustomizationClass" customization class.
   - To add application-specific layer values, click the "Configure Design Time Customization Layer Values" link.

- Add the below snippet to add "UGBUCustomizationLayer" value in CustomizationLayerValues.xml.

```
<cust-layers xmlns="http://xmlns.oracle.com/mds/dt">
  <cust-layer name="UGBUCustomizationLayer" id-
prefix="ugbuext">
    <cust-layer-value value="UGBUCustomizationLayer"
display-name="UGBU Customer Extension"/>
  </cust-layer>
</cust-layers>
```

10. Save all the changes.
11. From the **Tools** menu, select **Switch Roles** > **Customization Developer.**
12. Restart Oracle JDeveloper.
    The Customization Context dialog displays the available customization layers and layer values.
13. Select "UGBUCustomizationLayer" layer and value to customize.
14. Customize the BPEL process. You can make required changes to the composite and its BPEL components.

    Note: Only scopes that have been marked as customizable in BPEL will be editable. Non-editable activities appear greyed out.

    After making the customizations, the project can be deployed to the SOA server and/or a SAR file.

Appendix A

Data Mapping

This section provides mapping details for each integration point, including:

- GL Transaction
- AP Request
- AP Data

GL Transaction

Oracle PeopleSoft Financials for General Ledger and Accounts Payable GL Table Mapping to Oracle Utilities Customer Care and Billing

Column	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Column	Data Type	Remarks
BUSINESS_UNIT	CHAR (5)	BUSINESS UNIT	CI_FT	GL_DIVISION		Derived from BPEL, Identifies the GL Business Unit in Oracle PeopleSoft Financials for General Ledger and Accounts Payable.
TRANSACTION_ID	CHAR (10)	REPORT ID	CI_FT_PROC	BATCH_NBR	NUMBER (10)	Identifies a Transaction. This is just a cross reference back to the source system. This is the Oracle Utilities Customer Care and Billing GLDL Batch Number.
SEQUENCENO	NBR (3)	SEQUENCENO				Derived from BPEL, It identifies a line within a transaction ID. BPEL inserts number starting with 1.
LEDGER_GROUP	CHAR(10)	LEDGER GROUP				Derived from BPEL. Identifies the Oracle PeopleSoft Financials for General Ledger and Accounts Payable Ledger Group to use for posting. Value = UGBUCCB
LEDGER	CHAR(10)	LEDGER				Derived from BPEL. Identifies the Oracle PeopleSoft Financials for General Ledger and Accounts Payable ledger to use for posting. Value = UGBUCCB
ACCOUNTING_DT	DATE(10)	ACCOUNTING DATE	CI_FT	ACCOUNTING_DT	DATE	Date used by GL to define the accounting period into which the Financial Transaction is booked.
APPL_JRNL_ID	CHAR(10)	JOURNAL TEMPLATE				Derived from BPEL. Identifies the Journal Template to use. Value = UGBUCCB

Column	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Column	Data Type	Remarks
BUSINESS_UNIT_GL	CHAR(5)	GL BUSINESS UNIT	CI_FT	GL_DIVISION		Derived from BPEL, Identifies the GL Business Unit in Oracle PeopleSoft Financials for General Ledger and Accounts Payable.
FISCAL_YEAR	NBR(4)	FISCAL YEAR				Populated by Oracle PeopleSoft Financials for General Ledger and Accounts Payable Journal Generator. Initial value derived by BPEL Value = 0
ACCOUNTING _PERIOD	NBR(3)	ACCOUNTING PERIOD				Populated by Oracle PeopleSoft Financials for General Ledger and Accounts Payable Journal Generator. Initial value derived by BPEL Value = 0
JOURNAL_ID	CHAR(10)	JOURNAL ID				Populated by Oracle PeopleSoft Financials for General Ledger and Accounts Payable Journal Generator. Initial value derived by BPEL Value = NEXT
JOURNAL_DATE	DATE(10)	JOURNAL DATE				Populated by Oracle PeopleSoft Financials for General Ledger and Accounts Payable Journal Generator. Initial value derived by BPEL Value = NULL
JOURNAL_LINE	NBR(9)	GL JOURNAL LINE NUMBER				Populated by Oracle PeopleSoft Financials for General Ledger and Accounts Payable Journal Generator. Initial value derived by BPEL Value = 0
ACCOUNT	CHAR(10)	ACCOUNT	CI_FT_GL	GL_ACCT Position1	Varchar2(254)	Use (dot) as the delimiter to extract this information from Gl_Acct. 2 dots (..) indicates skip or null.
ALTACCT	CHAR (10)	ALTERNATE ACCOUNT	CI_FT_GL	GL_ACCT Position 7	Varchar2(48)	Use (dot) as the delimiter to extract this information from Gl_Acct. 2 dots (..) indicates skip or null.

Column	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Column	Data Type	Remarks
DEPTID	CHAR (10)	DEPARTMENT	CI_FT_GL	GL_ACCT Position 2	Varchar2(48)	Use (dot) as the delimiter to extract this information from Gl_Acct. 2 dots (..) indicates skip or null.
OPERATING_UNIT	CHAR (8)	OPERATING UNIT	CI_FT_GL	GL_ACCT Position 3	Varchar2(48)	Use (dot) as the delimiter to extract this information from Gl_Acct. 2 dots (..) indicates skip or null.
PRODUCT	CHAR (6)	PRODUCT	CI_FT_GL	GL_ACCT Position 4	Varchar2(48)	Use (dot) as the delimiter to extract this information from Gl_Acct. 2 dots (..) indicates skip or null.
FUND_CODE	CHAR (5)	FUND CODE	CI_DST_CODE_EFF	FUND_CD	Varchar2(12)	Null unless fund accounting is enabled in Oracle Utilities Customer Care and Billing.
CLASS_FLD	CHAR (5)	CLASS FIELD	CI_FT_GL	GL_ACCT Position 5	Varchar2(48)	Use (dot) as the delimiter to extract this information from Gl_Acct. 2 dots (..) indicates skip or null.
PROGRAM_CODE	CHAR (5)	PROGRAM CODE	CI_FT_GL	GL_ACCT Position 6	Varchar2(48)	Use (dot) as the delimiter to extract this information from Gl_Acct. 2 dots (..) indicates skip or null.
BUDGET_REF	CHAR (8)	BUDGET REFERENCE	CI_FT_GL	GL_ACCT Position 12	Varchar2(48)	Use (dot) as the delimiter to extract this information from Gl_Acct. 2 dots (..) indicates skip or null.
AFFILIATE	CHAR (5)	AFFILIATE	CI_FT_GL	GL_ACCT Position 9	Varchar2(48)	Use (dot) as the delimiter to extract this information from Gl_Acct. 2 dots (..) indicates skip or null.
AFFILIATE_INTRA1	CHAR (10)	FUND AFFILIATE	CI_FT_GL	GL_ACCT Position 10	Varchar2(48)	Use (dot) as the delimiter to extract this information from Gl_Acct. 2 dots (..) indicates skip or null.
AFFILIATE_INTRA2	CHAR (10)	OPERATING UNIT AFFILIATE	CI_FT_GL	GL_ACCT Position 11	Varchar2(48)	Use (dot) as the delimiter to extract this information from Gl_Acct. 2 dots (..) indicates skip or null.
CHARTFIELD1	CHAR (10)	CHARTFIELD1	CI_FT_GL	GL_ACCT Position 13	Varchar2(48)	Use (dot) as the delimiter to extract this information from Gl_Acct. 2 dots (..) indicates skip or null.

Column	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Column	Data Type	Remarks
CHARTFIELD2	CHAR (10)	CHARTFIELD2	CI_FT_GL	GL_ACCT Position 14	Varchar2(48)	Use (dot) as the delimiter to extract this information from Gl_Acct. 2 dots (..) indicates skip or null.
CHARTFIELD3	CHAR (10)	CHARTFIELD3	CI_FT_GL	GL_ACCT Position 15	Varchar2(48)	Use (dot) as the delimiter to extract this information from Gl_Acct. 2 dots (..) indicates skip or null.
PROJECT_ID	CHAR (15)	PROJECT	CI_FT_GL	GL_ACCT Position 8	Varchar2(48)	Use (dot) as the delimiter to extract this information from Gl_Acct. 2 dots (..) indicates skip or null.
CURRENCY_CD	CHAR (3)	CURRENCY CODE	CI_FT	CURRENCY_CD	CHAR(3)	
STATISTICS_CODE	CHAR (3)	STATISTICS CODE	CI_DST_CODE_EFF	STATISTICS_CODE	CHAR(8)	
FOREIGN_CURRENCY	CHAR (3)	FOREIGN CURRENCY CODE				This field is not mapped. Leave the field Blank
RT_TYPE	CHAR (5)	RATE TYPE				This field is not mapped. Leave the field Blank.
RATE_MULT	SIGNNBR (7.8)	RATE MULTIPLIER				This field is mapped with '1' in BPEL process.
RATE_DIV	NBR (7.8)	RATE DIVISOR				This field is mapped with '1' in BPEL process.
MONETARY_AMOUNT	SIGNNBR (23.3)	MONETARY AMOUNT	CI_FT_GL	AMOUNT	NUMBER(15,2)	Base Currency Amount
OREIGN_AMOUNT	SIGNNBR (23.3)	FOREIGN AMOUNT				This field is not mapped.
STATISTIC_AMOUNT	SIGNNBR (13.2)	STATISTIC AMOUNT	CI_FT_GL	STATISTIC_AMOUNT	NUMBER(15,2)	
MOVEMENT_FLAG	CHAR (1)	MOVEMENT FLAG				Defines the sign of the Amount when debit/ credit options are separate. Value = N
DOC_TYPE	CHAR (8)	DOCUMENT TYPE				This field is not mapped to Oracle Utilities Customer Care and Billing field. Blank

Column	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Column	Data Type	Remarks
DOC_SEQ_NBR	CHAR (12)	DOCUMENT SEQUENCE NUMBER				This field is not mapped to Oracle Utilities Customer Care and Billing field. Blank
DOC_SEQ_DATE	DATE (10)	DOCUMENT SEQUENCE DATE				This field is not mapped to Oracle Utilities Customer Care and Billing field. Blank
JRNL_LN_REF	CHAR (10)	JOURNAL LINE REFERENCE	CI_FT_PROC	BATCH_NBR	NUMBER (10)	Identifies the Source of the Transaction. Mapped to Oracle Utilities Customer Care and Billing Batch Number for reference.
LINE_DESCR	CHAR (30)	JOURNAL LINE DESCRIPTION				Derived in BPEL. Describes a transaction.
IU_SYS_TRAN_CD	CHAR (8)	SYSTEM TRANSACTION				This field is not mapped to Oracle Utilities Customer Care and Billing field. Blank
IU_TRAN_CD	CHAR (8)	TRANSACTION CODE				This field is not mapped to Oracle Utilities Customer Care and Billing field. Blank
IU_ANCHOR_FLG	CHAR (1)	INTERUNIT ANCHOR				This field is not mapped to Oracle Utilities Customer Care and Billing field. Blank
GL_DISTRIB_STATUS	CHAR (1)	DISTRIBUTION STATUS				Derived from BPEL. Value = N (Ready for Distribution).
PROCESS_INSTANCE	NBR (10)	PROCESS INSTANCE				Populated by Journal Generator Initial value Derived from BPEL. Value =0
DTTM_STAMP	DATE(10)	DTTM_STAMP	CI_FT	ACCOUNTING_DT	DATE	Date used by GL to define the accounting period into which the Financial Transaction is booked.

AP Request

This section covers the following:

PS_VCHR_HDR_STG

Columns in PS_VCHR_HDR_STG	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Columns	Data Type	Remarks
BUSINESS_UNIT	VARCHAR2 (5)	Business Unit	CI_CIS_DIV_CHAR	CHAR_VAL	CHAR (16)	
VCHR_BLD_KEY_C1	VARCHAR2 (25)	Voucher Build Key Char 1	CI_SA	CIS_DIVISION	CHAR (5)	
VCHR_BLD_KEY_C2	VARCHAR2 (25)	Voucher Build Key Char 1	CI_ADJ_APREQ	AP_REQ_ID	CHAR (12)	
VCHR_BLD_KEY_N1	NUMBER (10)	Voucher Build Key Num 1	From Lookup Table, Value = 0			
VCHR_BLD_KEY_N2	NUMBER (10)	Vchr Build Key Num 2	From Lookup Table, Value = 0			
VOUCHER_ID	VARCHAR2 (8)	Voucher ID	Derived from BPEL. Value = Next			
VOUCHER_STYLE	VARCHAR2 (4)	Voucher Style	From Lookup Table, Value = SGLP			
INVOICE_ID	VARCHAR2 (30)	Invoice Number	CI_ADJ	ADJ_ID	CHAR (12)	
INVOICE_DT	DATE	Invoice Date	CI_ADJ	CRE_DT	DATE	
VENDOR_SETID	VARCHAR2 (5)	Vendor SetID	From Lookup Table. Value = SHARE			
VENDOR_ID	VARCHAR2 (10)	Vendor ID	If Single Vendor Flag = true, From Lookup Table Value = CCB VENDOR Else, from CI_CIS_DIV_CHAR	CHAR_VAL	CHAR (16)	
VNDR_LOC	VARCHAR2 (10)	Vendor Location	From Lookup Table, Value = 1			
ADDRESS_SEQ_NUM	NUMBER (38)	Address Sequence Number	From Lookup Table, Value = 1			
GRP_AP_ID	VARCHAR2 (10)	Control Group ID				Value = Blank
ORIGIN	VARCHAR2 (3)	Origin				Value = Blank
OPRID	VARCHAR2 (30)	User ID	Derived from BPEL. Voucher Build Process inserts the OPRID. Value = Blank			
ACCOUNTING_DT	DATE	Accounting Date				Value = Null
POST_VOUCHER	VARCHAR2 (1)	Post Voucher Now				Value = Blank
DST_CNTRL_ID	VARCHAR2 (10)	Accounting Template	CI_DST_CD_CHAR	CHAR_VAL	CHAR (16)	
VOUCHER_ID_RELATED	VARCHAR2 (8)	Related Voucher				Value = Blank
GROSS_AMT	NUMBER (26,3)	Gross Invoice Amount	CI_ADJ	ADJ_AMT	NUMBER (15,2)	
DSCNT_AMT	NUMBER (26,3)	Discount Amount	Derived from BPEL. Value = 0			
TAX_EXEMPT	VARCHAR2 (1)	Tax Exempt Flag	Derived from BPEL. Value = Y			

Columns in PS_VCHR_HDR_STG	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Columns	Data Type	Remarks
SALETX_AMT	NUMBER (26,3)	Sales Tax Amount	Derived from BPEL. Value = 0			
FREIGHT_AMT	NUMBER (26,3)	Freight Amount	Derived from BPEL. Value = 0			
MISC_AMT	NUMBER (26,3)	Misc Charge Amount	Derived from BPEL. Value = 0			
PYMNT_TERMS_CD	VARCHAR2 (5)	Payment Terms ID	From Lookup Table, Value = 07			
ENTERED_DT	DATE	Entered on	Derived from BPEL. Value = System Date			
TXN_CURRENCY_CD	VARCHAR2 (3)	Transaction Currency	CI_ADJ	CURRENCY_CD	CHAR (3)	
RT_TYPE	VARCHAR2 (5)	Rate Type	From Lookup Table. Value = CRRNT			
RATE_MULT	NUMBER (15,8)	Rate Multiplier	From Lookup Table. Value = 1			
RATE_DIV	NUMBER (15,8)	Rate Divisor	From Lookup Table. Value = 1			
VAT_ENTRD_AMT	NUMBER (26,3)	Entered VAT Amount	Derived from BPEL. Value = 0			
MATCH_ACTION	VARCHAR2 (1)	Match Action	From Lookup Table. Value = N			
CUR_RT_SOURCE	VARCHAR2 (1)	Exchange Rate Source	Derived from BPEL. Value = T			
DSCNT_AMT_FLG	VARCHAR2 (1)	Discount Amount Control	Derived from BPEL. Value = T			
DUE_DT_FLG	VARCHAR2 (1)	Due Date Control	Derived from BPEL. Value = T			
VCHR_APPRVL_FLG	VARCHAR2 (1)	Voucher Approval Flag	Derived from BPEL. Value = P			
BUSPROCNAME	VARCHAR2 (30)	Business Process Name	Derived from BPEL. Value = Blank			
APPR_RULE_SET	VARCHAR2 (30)	Approval Rule Set	Derived from BPEL. Value = Blank			
VAT_DCLRTN_POINT	VARCHAR2 (1)	Declaration Point	Derived from BPEL. Value = Blank			
VAT_CALC_TYPE	VARCHAR2 (1)	Calculation Type	Derived from BPEL. Value = E			
VAT_CALC_GROSS_NET	VARCHAR2 (1)	Calculate at Gross or Net	Derived from BPEL. Value = Blank			
VAT_RECALC_FLG	VARCHAR2 (1)	Recalculate at Payment	Derived from BPEL. Value = Blank			
VAT_CALC_FRGHT_FLG	VARCHAR2 (1)	Include Freight	Derived from BPEL. Value = N			
VAT_TREATMENT_GRP	VARCHAR2 (4)	VAT Treatment Group	Derived from BPEL. Value = Blank			
COUNTRY_SHIP_FROM	VARCHAR2 (3)	Ship From Country	Derived from BPEL. Value = Blank			
STATE_SHIP_FROM	VARCHAR2 (6)	Ship From State	Derived from BPEL. Value = Blank			
COUNTRY_SHIP_TO	VARCHAR2 (3)	Ship to Country	Derived from BPEL. Value = Blank			

Columns in PS_VCHR_HDR_STG	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Columns	Data Type	Remarks
STATE_SHIP_TO	VARCHAR2 (6)	Ship to State	Derived from BPEL. Value = Blank			
COUNTRY_VAT_BILLFR	VARCHAR2 (3)	Seller Registration Country	Derived from BPEL. Value = Blank			
COUNTRY_VAT_BILLTO	VARCHAR2 (3)	Buyer Registration Country	Derived from BPEL. Value = Blank			
VAT_EXCPTN_CERTIF	VARCHAR2 (20)	VAT Certificate ID	Derived from BPEL. Value = Blank			
VAT_ROUND_RULE	VARCHAR2 (1)	VAT Rounding Rule	Derived from BPEL. Value = Blank			
COUNTRY_LOC_SELLER	VARCHAR2 (3)	Seller Location Country	Derived from BPEL. Value = Blank			
STATE_LOC_SELLER	VARCHAR2 (6)	Seller Location State	Derived from BPEL. Value = Blank			
COUNTRY_LOC_BUYER	VARCHAR2 (3)	Buyer Location Country	Derived from BPEL. Value = Blank			
STATE_LOC_BUYER	VARCHAR2 (6)	Buyer Location State	Derived from BPEL. Value = Blank			
COUNTRY_VAT_SUPPLY	VARCHAR2 (3)	VAT Place of Supply Country	Derived from BPEL. Value = Blank			
STATE_VAT_SUPPLY	VARCHAR2 (6)	VAT Place of Supply State	Derived from BPEL. Value = Blank			
COUNTRY_VAT_PERFRM	VARCHAR2 (3)	Service Performed Country	Derived from BPEL. Value = Blank			
STATE_VAT_PERFRM	VARCHAR2 (6)	Service Performed State	Derived from BPEL. Value = Blank			
STATE_VAT_DEFAULT	VARCHAR2 (6)	Defaulting State	Derived from BPEL. Value = Blank			
PREPAID_REF	VARCHAR2 (10)	Prepayment Reference	Derived from BPEL. Value = Blank			
PREPAID_AUTO_APPLY	VARCHAR2 (1)	Automatically Apply Prepayment	Derived from BPEL. Value = Blank			
DESCR254_MIXED	VARCHAR2 (254)	More Information	CI_ADJ_APREQ	AP_REQ_ID	CHAR (12)	
EIN_FEDERAL	VARCHAR2 (9)	EIN Federal	Derived from BPEL. Value = Blank			
EIN_STATE_LOCAL	VARCHAR2 (20)	EIN State Local	Derived from BPEL. Value = Blank			
PROCESS_INSTANCE	NUMBER (10)	Process Instance	Derived from BPEL. Value = 0			
IN_PROCESS_FLG	VARCHAR2 (1)	In Process	Derived from BPEL. Value = N			
BUSINESS_UNIT_PO	VARCHAR2 (5)	PO Business Unit	Derived from BPEL. Value = Blank			
PO_ID	VARCHAR2 (10)	PO Number	Derived from BPEL. Value = Blank			
PACKSLIP_NO	VARCHAR2 (22)	Packing Slip Number	Derived from BPEL. Value = Blank			

Columns in PS_VCHR_HDR_STG	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Columns	Data Type	Remarks
PAY_TRM_BSE_DT_OPT	VARCHAR2 (1)	Payment Terms Basis Date Type	Derived from BPEL. Value = I			
VAT_CALC_MISC_FLG	VARCHAR2 (1)	Include Miscellaneous	Derived from BPEL. Value = N			
IMAGE_REF_ID	VARCHAR2 (12)	Image Reference ID	Derived from BPEL. Value = Blank			
IMAGE_DATE	DATE	Image Date	Derived from BPEL. Value = Null			
PAY_SCHEDULE_TYPE	VARCHAR2 (3)	Pay Schedule Type	Derived from BPEL. Value = Blank			
TAX_GRP	VARCHAR2 (4)	Tax Group Code	Derived from BPEL. Value = Blank			
TAX_PYMNT_TYPE	VARCHAR2 (5)	Tax Payment Type Code	Derived from BPEL. Value = Blank			
INSPECT_DT	DATE	Inspection Date	Derived from BPEL. Value = Null			
INV_RECPT_DT	DATE	Invoice Receipt Date	Derived from BPEL. Value = Null			
RECEIPT_DT	DATE	Received Date	Derived from BPEL. Value = Null			
BILL_OF_LADING	VARCHAR2 (30)	Bill of Lading	Derived from BPEL. Value = Blank			
CARRIER_ID	VARCHAR2 (10)	Carrier ID	Derived from BPEL. Value = Blank			
DOC_TYPE	VARCHAR2 (8)	Document Type	Derived from BPEL. Value = Blank			
DSCNT_DUE_DT	DATE	Discount Due Date	Derived from BPEL. Value = Null			
DSCNT_PRORATE_FLG	VARCHAR2 (1)	Prorate Discount	Derived from BPEL. Value = Blank			
DUE_DT	DATE	Due Date	Derived from BPEL. Value = Null			
ECQUEUEINSTANCE	NUMBER (38)	ECQUEUEINSTANCE - EC Queue Instance	Derived from BPEL. Value = 0			
ECTRANSID	VARCHAR2 (15)	EC Transaction ID	Derived from BPEL. Value = Blank			
FRGHT_CHARGE_CODE	VARCHAR2 (10)	Freight Charge	Derived from BPEL. Value = Blank			
LC_ID	VARCHAR2 (12)	Letter of Credit ID	Derived from BPEL. Value = Blank			
MISC_CHARGE_CODE	VARCHAR2 (10)	MISC_CHARGE_CODE - Miscellaneous Charge	Derived from BPEL. Value = Blank			
REMIT_ADDR_SEQ_NUM	NUMBER (38)	Remitting Address	Derived from BPEL. Value = 0			
SALETX_CHARGE_CODE	VARCHAR2 (10)	Sales Tax Charge	Derived from BPEL. Value = Blank			
VCHR_BLD_CODE	VARCHAR2 (6)	Voucher Build Code	Derived from BPEL. Value = Blank			

Columns in PS_VCHR_HDR_STG	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Columns	Data Type	Remarks
BUSINESS_UNIT_AR	VARCHAR2 (5)	AR Business Unit	Derived from BPEL. Value = Blank			
CUST_ID	VARCHAR2 (15)	Customer ID	Derived from BPEL. Value = Blank			
ITEM	VARCHAR2 (30)	Item ID	Derived from BPEL. Value = Blank			
ITEM_LINE	NUMBER (38)	Item Line	Derived from BPEL. Value = 0			
ERS_INV_SEQ	NUMBER (38)	Invoice Sequence	Derived from BPEL. Value = 0			
LS_KEY	NUMBER (15)	Lease Key	Derived from BPEL. Value = 0			
VCHR_SRC	VARCHAR2 (4)	VCHR_SRC - Voucher Source	Derived from BPEL. Value = XML			
VAT_EXCPTN_TYPE	VARCHAR2 (1)	Exception Type	Derived from BPEL. Value = Blank			
TERMS_BASIS_DT	DATE	Payment Terms Basis Date	CI_ADJ	CRE_DT	DATE	
BUSINESS_UNIT_AM	VARCHAR2 (5)	AM Business Unit	Derived from BPEL. Value = Blank			
ASSET_ID	VARCHAR2 (12)	Asset ID	Derived from BPEL. Value = Blank			
LEASE_ID	VARCHAR2 (30)	Lease ID	Derived from BPEL. Value = Blank			
CLAIM_NO	VARCHAR2 (30)	Claim Number	Derived from BPEL. Value = Blank			
POLCY_NUM	VARCHAR2 (30)	Policy Number	Derived from BPEL. Value = Blank			
ENDORSER_PARTY	VARCHAR2 (40)	Endorser Party	Derived from BPEL. Value = Blank			
BUSINESS_UNIT_BI	VARCHAR2 (5)	Business Unit BI	Derived from BPEL. Value = Blank			
BI_INVOICE	VARCHAR2 (22)	BI Invoice	Derived from BPEL. Value = Blank			
CUSTOM_C100_A1	VARCHAR2 (100)	Custom Field	Derived from BPEL. Value = Blank			
CUSTOM_C100_A2	VARCHAR2 (100)	Custom Field	Derived from BPEL. Value = Blank			
CUSTOM_C100_A3	VARCHAR2 (100)	Custom Field	Derived from BPEL. Value = Blank			
CUSTOM_C100_A4	VARCHAR2 (100)	Custom Field	Derived from BPEL. Value = Blank			
CUSTOM_DATE_A	Date	Custom Date Field	Value = Null			
CUSTOM_C1_A	VARCHAR2 (1)	Custom Field	Derived from BPEL. Value = Blank			
VAT_NRCVR_CHRG_CD	VARCHAR2 (10)	Prorate VAT Non-Recovery	Derived from BPEL. Value = Blank			

Columns in PS_VCHR_HDR_STG	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Columns	Data Type	Remarks
VAT_CF_ANLSYS_TYPE	VARCHAR2 (1)	VAT Chartfield Analysis	Derived from BPEL. Value = Blank			
USER_VCHR_CHAR1	VARCHAR2 (1)	User Character Field	Derived from BPEL. Value = Blank			
USER_VCHR_CHAR2	VARCHAR2 (1)	User Character Field 2	Derived from BPEL. Value = Blank			
USER_VCHR_DEC	NUMBER (26,3)	USER_VCHR_DEC - User Amount Field	Derived from BPEL. Value = 0			
USER_VCHR_DATE	DATE	User Date	Value = Null			
USER_VCHR_NUM1	NUMBER (38)	USER_VCHR_NUM1 - User Number field	Derived from BPEL. Value = 0			
USER_HDR_CHAR1	VARCHAR2 (1)	Header User Field	Derived from BPEL. Value = Blank			

PS_VCHR_LINE_STG

Columns in PS_VCHR_LINE_STG	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Columns	Data Type	Remarks
BUSINESS_UNIT	VARCHAR2 (5)	Business Unit	CI_CIS_DIV_CHAR	CHAR_VAL	CHAR (16)	
VCHR_BLD_KEY_C1	VARCHAR2 (25)	Voucher Build Key Char 1	CI_SA	CIS_DIVISION	CHAR (5)	
VCHR_BLD_KEY_C2	VARCHAR2 (25)	Voucher Build Key Char 1	CI_ADJ_APREQ	AP_REQ_ID	CHAR (12)	
VCHR_BLD_KEY_N1	NUMBER (10)	Voucher Build Key Num 1		From Lookup Table. Value = 0		
VCHR_BLD_KEY_N2	NUMBER (10)	Vchr Build Key Num 2		From Lookup Table. Value = 0		
VOUCHER_ID	VARCHAR2 (8)	Voucher ID		Derived from BPEL. Value = NEXT		
VOUCHER_LINE_NUM	NUMBER (38)	Voucher Line Number		Derived from BPEL. Value = 0		
BUSINESS_UNIT_PO	VARCHAR2 (5)	PO Business Unit		Derived from BPEL. Value = Blank		
PO_ID	VARCHAR2 (10)	PO Number		Derived from BPEL. Value = Blank		
LINE_NBR	NUMBER (38)	Line Number		Derived from BPEL. Value = 0		
SCHED_NBR	NUMBER (38)	Schedule Number		Derived from BPEL. Value = 0		
DESCR	VARCHAR2 (30)	Description		Derived from BPEL. Value = Blank		
MERCHANDISE_AMT	NUMBER (26,3)	Merchandise Amt	CI_ADJ	ADJ_AMT	NUMBER (15,2)	
ITM_SETID	VARCHAR2 (5)	Item SetID		Derived from BPEL. Value = Blank		
INV_ITEM_ID	VARCHAR2 (18)	Item ID		Derived from BPEL. Value = Blank		
QTY_VCHR	NUMBER (15,4)	Quantity Vouchered		Derived from BPEL. Value = 0		
STATISTIC_AMOUNT	NUMBER (15,2)	Statistic Amount		Derived from BPEL. Value = 0		
UNIT_OF_MEASURE	VARCHAR2 (3)	Unit of Measure		Derived from BPEL. Value = Blank		
UNIT_PRICE	NUMBER (15,5)	Unit Price		Derived from BPEL. Value = 0		
DSCNT_APPL_FLG	VARCHAR2 (1)	Apply Discount		Derived from BPEL. Value = Blank		
TAX_CD_VAT	VARCHAR2 (8)	VAT Code		Derived from BPEL. Value = Blank		

Columns in PS_VCHR_LINE_STG	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Columns	Data Type	Remarks
BUSINESS_UNIT_RECV	VARCHAR2 (5)	Receiving Business Unit		Derived from BPEL. Value = Blank		
RECEIVER_ID	VARCHAR2 (10)	Receipt Number		Derived from BPEL. Value = Blank		
RECV_LN_NBR	NUMBER (38)	Receipt Line		Derived from BPEL. Value = 0		
RECV_SHIP_SEQ_NBR	NUMBER (38)	Receiver Shipping Sequence		Derived from BPEL. Value = 0		
MATCH_LINE_OPT	VARCHAR2 (1)	Match Line Option		Derived from BPEL. Value = N		
DISTRIB_MTHD_FLG	VARCHAR2 (1)	Distribute by		Derived from BPEL. Value = A		
SHIPTO_ID	VARCHAR2 (10)	Ship To Location		Derived from BPEL. Value = Blank		
SUT_BASE_ID	VARCHAR2 (10)	Sales/Use Tax Destination		Derived from BPEL. Value = Blank		
TAX_CD_SUT	VARCHAR2 (8)	Tax Code - Sales and Use Tax		Derived from BPEL. Value = Blank		
ULTIMATE_USE_CD	VARCHAR2 (8)	Ultimate Use Code		Derived from BPEL. Value = Blank		
SUT_EXCPTN_TYPE	VARCHAR2 (1)	Sales/Use Tax Exception Type		Derived from BPEL. Value = Blank		
SUT_EXCPTN_CERTIF	VARCHAR2 (20)	Sales/Use Tax Exception Certif		Derived from BPEL. Value = Blank		
SUT_APPLICABILITY	VARCHAR2 (1)	Sales/Use Tax Applicability		Derived from BPEL. Value = Blank		
VAT_APPLICABILITY	VARCHAR2 (1)	VAT Applicability		Derived from BPEL. Value = Blank		
VAT_TXN_TYPE_CD	VARCHAR2 (4)	VAT Transaction Type		Derived from BPEL. Value = Blank		
VAT_USE_ID	VARCHAR2 (6)	VAT Use Type		Derived from BPEL. Value = Blank		
ADDR_SEQ_NUM_SHIP	NUMBER (38)	Address Sequence Number		Derived from BPEL. Value = 0		
BUS_UNIT_RELATED	VARCHAR2 (5)	AP Business Unit		Derived from BPEL. Value = Blank		
VOUCHER_ID_RELATED	VARCHAR2 (8)	Related Voucher		Derived from BPEL. Value = Blank		

Columns in PS_VCHR_LINE_STG	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Columns	Data Type	Remarks
VENDOR_ID	VARCHAR2 (10)	Vendor ID		If Single Vendor Flag = true, From Lookup Table Value = CCB VENDOR Else, from CI_CIS_DIV_CHAR - CHAR_VAL	CHAR (16)	
VNDR_LOC	VARCHAR2 (10)	Vendor Location		From Lookup Table. Value = 1		
DESCR254_MIXED	VARCHAR2 (254)	More Information	CI_ADJ_APREQ	AP_REQ_ID	CHAR (12)	
SPEEDCHART_KEY	VARCHAR2 (10)	SpeedChart Key		Derived from BPEL. Value = Blank		
BUSINESS_UNIT_GL	VARCHAR2 (5)	GL Business Unit		If Single GL BusinessUnit Flag= true, value From Lookup Table. else, from CI_FT. GL_DIVISION		
ACCOUNT	VARCHAR2 (10)	Account	CI_DST_CODE_EFF	GL_ACCT (Position 1)	VARCHAR2 (254)	
ALTACCT	VARCHAR2 (10)	Alternate Account		Derived from BPEL. Value = Blank		
OPERATING_UNIT	VARCHAR2 (8)	Operating Unit		Derived from BPEL. Value = Blank		
PRODUCT	VARCHAR2 (6)	Product		Derived from BPEL. Value = Blank		
FUND_CODE	VARCHAR2 (5)	Fund Code		Derived from BPEL. Value = Blank		
CLASS_FLD	VARCHAR2 (5)	Class Field		Derived from BPEL. Value = Blank		
PROGRAM_CODE	VARCHAR2 (5)	Program Code		Derived from BPEL. Value = Blank		
BUDGET_REF	VARCHAR2 (8)	Budget Reference		Derived from BPEL. Value = Blank		
AFFILIATE	VARCHAR2 (5)	Affiliate		Derived from BPEL. Value = Blank		
AFFILIATE_INTRA1	VARCHAR2 (10)	Fund Affiliate		Derived from BPEL. Value = Blank		
AFFILIATE_INTRA2	VARCHAR2 (10)	Operating Unit Affiliate		Derived from BPEL. Value = Blank		
CHARTFIELD1	VARCHAR2 (10)	ChartField 1		Derived from BPEL. Value = Blank		
CHARTFIELD2	VARCHAR2 (10)	ChartField 2		Derived from BPEL. Value = Blank		
CHARTFIELD3	VARCHAR2 (10)	ChartField 3		Derived from BPEL. Value = Blank		
DEPTID	VARCHAR2 (10)	Department		Derived from BPEL. Value = Blank		

Columns in PS_VCHR_LINE_STG	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Columns	Data Type	Remarks
PROJECT_ID	VARCHAR2 (15)	Project		Derived from BPEL. Value = Blank		
BUSINESS_UNIT_PC	VARCHAR2 (5)	PC Business Unit		Derived from BPEL. Value = Blank		
ACTIVITY_ID	VARCHAR2 (15)	Activity		Derived from BPEL. Value = Blank		
ANALYSIS_TYPE	VARCHAR2 (3)	Analysis Type		Derived from BPEL. Value = Blank		
RESOURCE_TYPE	VARCHAR2 (5)	Source Type		Derived from BPEL. Value = Blank		
RESOURCE_CATEGORY	VARCHAR2 (5)	Category		Derived from BPEL. Value = Blank		
RESOURCE_SUB_CAT	VARCHAR2 (5)	Subcategory		Derived from BPEL. Value = Blank		
ECQUEUEINSTANCE	NUMBER (38)	EC Queue Instance		Derived from BPEL. Value = 0		
ECTRANSID	VARCHAR2 (15)	EC Transaction ID		Derived from BPEL. Value = Blank		
TAX_DSCNT_FLG	VARCHAR2 (1)	Include Discount		Derived from BPEL. Value = Blank		
TAX_FRGHT_FLG	VARCHAR2 (1)	Include Freight		Derived from BPEL. Value = Blank		
TAX_MISC_FLG	VARCHAR2 (1)	Include Misc Charges		Derived from BPEL. Value = Blank		
TAX_VAT_FLG	VARCHAR2 (1)	Include VAT		Derived from BPEL. Value = Blank		
PHYSICAL_NATURE	VARCHAR2 (1)	Physical Nature		From Lookup Table. Value = S		
VAT_RCRD_INPT_FLG	VARCHAR2 (1)	Record Input VAT		Derived from BPEL. Value = Blank		
VAT_RCRD_OUTPT_FLG	VARCHAR2 (1)	Record Output VAT		Derived from BPEL. Value = Blank		
VAT_TREATMENT	VARCHAR2 (4)	VAT Treatment		Derived from BPEL. Value = Blank		
VAT_SVC_SUPPLY_FLG	VARCHAR2 (1)	VAT Place of Supply		Derived from BPEL. Value = Blank		
VAT_SERVICE_TYPE	VARCHAR2 (1)	VAT Service Type		Derived from BPEL. Value = Blank		
COUNTRY_LOC_BUYER	VARCHAR2 (3)	Buyer Location Country		Derived from BPEL. Value = Blank		

Columns in PS_VCHR_LINE_STG	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Columns	Data Type	Remarks
STATE_LOC_BUYER	VARCHAR2 (6)	Buyer Location State		Derived from BPEL. Value = Blank		
COUNTRY_LOC_SELLER	VARCHAR2 (3)	Seller Location Country		Derived from BPEL. Value = Blank		
STATE_LOC_SELLER	VARCHAR2 (6)	Seller Location State		Derived from BPEL. Value = Blank		
COUNTRY_VAT_SUPPLY	VARCHAR2 (3)	VAT Place of Supply Country		Derived from BPEL. Value = Blank		
STATE_VAT_SUPPLY	VARCHAR2 (6)	VAT Place of Supply State		Derived from BPEL. Value = Blank		
COUNTRY_VAT_PERFRM	VARCHAR2 (3)	Service Performed Country		Derived from BPEL. Value = Blank		
STATE_VAT_PERFRM	VARCHAR2 (6)	Service Performed State		Derived from BPEL. Value = Blank		
STATE_SHIP_FROM	VARCHAR2 (6)	Ship From State		Derived from BPEL. Value = Blank		
STATE_VAT_DEFAULT	VARCHAR2 (6)	Defaulting State		Derived from BPEL. Value = Blank		
REQUESTOR_ID	VARCHAR2 (30)	Requester		Derived from BPEL. Value = Blank		
VAT_ENTRD_AMT	NUMBER (26,3)	Entered VAT Amount		Derived from BPEL. Value = 0		
VAT_RECEIPT	VARCHAR2 (1)	No VAT Receipt		Derived from BPEL. Value = Blank		
VAT_RGSTRN_SELLER	VARCHAR2 (12)	Seller VAT Registration		Derived from BPEL. Value = Blank		
IST_TXN_FLG	VARCHAR2 (1)	Intrastat Transaction Flag		Derived from BPEL. Value = Blank		
TRANS_DT	DATE	Transaction Date		Derived from BPEL. Value = Null		
WTHD_SW	VARCHAR2 (1)	Withholding Applicable		Derived from BPEL. Value = Blank		
WTHD_CD	VARCHAR2 (5)	Withholding Code		Derived from BPEL. Value = Blank		
MFG_ID	VARCHAR2 (50)	Manufacturer ID		Derived from BPEL. Value = Blank		
USER_VCHR_CHAR1	VARCHAR2 (1)	User Character Field		Derived from BPEL. Value = Blank		

Columns in PS_VCHR_LINE_STG	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Columns	Data Type	Remarks
USER_VCHR_CHAR2	VARCHAR2 (1)	User Character Field 2		Derived from BPEL. Value = Blank		
USER_VCHR_DEC	NUMBER (26,3)	User Amount Field		Derived from BPEL. Value = 0		
USER_VCHR_DATE	DATE	User Date		Derived from BPEL. Value = Null		
USER_VCHR_NUM1	NUMBER (38)	User Number field		Derived from BPEL. Value = 0		
USER_LINE_CHAR1	VARCHAR2 (1)	Line User Field		Derived from BPEL. Value = Blank		
CUSTOM_C100_B1	VARCHAR2 (100)	Custom Field		Derived from BPEL. Value = Blank		
CUSTOM_C100_B2	VARCHAR2 (100)	Custom Field		Derived from BPEL. Value = Blank		
CUSTOM_C100_B3	VARCHAR2 (100)	Custom Field		Derived from BPEL. Value = Blank		
CUSTOM_C100_B4	VARCHAR2 (100)	Custom Field		Derived from BPEL. Value = Blank		
CUSTOM_DATE_B	DATE	Custom Date Field		Null		
CUSTOM_C1_B	VARCHAR2 (1)	Custom Field		Derived from BPEL. Value = Blank		
CUSTOM_C100_C1	VARCHAR2 (100)	Custom Field		Derived from BPEL. Value = Blank		
CUSTOM_C100_C2	VARCHAR2 (100)	Custom Field		Derived from BPEL. Value = Blank		
CUSTOM_C100_C3	VARCHAR2 (100)	Custom Field		Derived from BPEL. Value = Blank		
CUSTOM_DATE_C1	DATE	Custom Date Field		Null		
CUSTOM_DATE_C2	DATE	Custom Date Field		Null		
CUSTOM_C1_C	VARCHAR2 (1)	Custom Field		Derived from BPEL. Value = Blank		
PACKSLIP_NO	VARCHAR2 (22)	Pack Slip Number		Derived from BPEL. Value = Blank		
BUSINESS_UNIT_BI	VARCHAR2 (5)	Business Unit BI		Derived from BPEL. Value = Blank		
BI_INVOICE	VARCHAR2 (22)	BI Invoice		Derived from BPEL. Value = Blank		

Columns in PS_VCHR_LINE_ STG	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Columns	Data Type	Remarks
LINE_SEQ_NUM	NUMBER	Line Sequence Number		Derived from BPEL. Value = 0		
CATEGORY_ID	VARCHAR2 (5)	Category ID		Derived from BPEL. Value = Blank		
USER_SCHED_CHAR1	VARCHAR2 (1)	Schedule User Field		Derived from BPEL. Value = Blank		
VAT_RVRSE_CHG_GDS	VARCHAR2 (1)	Domestic Reverse Charge Goods		Derived from BPEL. Value = Blank		

PS_VCHR_DIST_STG

Columns in PS_VCHR_DIST_STG	Date Type	Description	Oracle Utilities Customer Care and Billing Table	Columns	Data Type	Remarks
BUSINESS_UNIT	VARCHAR2 (5)	Business Unit	CI_CIS_DIV_CHAR	CHAR_VAL	CHAR (16)	
VCHR_BLD_KEY_C1	VARCHAR2 (25)	Voucher Build Key Char 1	CI_SA	CIS_DIVISION	CHAR (5)	
VCHR_BLD_KEY_C2	VARCHAR2 (25)	Voucher Build Key Char 1	CI_ADJ_APREQ	AP_REQ_ID	CHAR (12)	
VCHR_BLD_KEY_N1	NUMBER (10)	Voucher Build Key Num 1		From Lookup Table. Value = 0		
VCHR_BLD_KEY_N2	NUMBER (10)	Voucher Build Key Num 2		From Lookup Table. Value = 0		
VOUCHER_ID	VARCHAR2 (8)	Voucher ID		Derived from BPEL. Value = NEXT		
VOUCHER_LINE_NUM	NUMBER (38)	Voucher Line Number		Derived from BPEL. Value = 0		
DISTRIB_LINE_NUM	NUMBER (38)	Distribution Line		Derived from BPEL. Value = 0		
BUSINESS_UNIT_GL	VARCHAR2 (5)	GL Business Unit		If Single GL BusinessUnit Flag= true, value from Lookup Table. Else, from CI_FT. GL_DIVISION		
ACCOUNT	VARCHAR2 (10)	Account	CI_DST_CODE_EFF	GL_ACCT (Position 1)	VARCHAR2 (254)	

Columns in PS_VCHR_DIST_STG	Date Type	Description	Oracle Utilities Customer Care and Billing Table	Columns	Data Type	Remarks
ALTACCT	VARCHAR2 (10)	Alternate Account		Derived from BPEL. Value = Blank		
DEPTID	VARCHAR2 (10)	Department		Derived from BPEL. Value = Blank		
STATISTICS_CODE	VARCHAR2 (3)	Statistics Code		Derived from BPEL. Value = Blank		
STATISTIC_AMOUNT	NUMBER (15,2)	Statistic Amount		Derived from BPEL. Value = 0		
QTY_VCHR	NUMBER (15,4)	Quantity Vouchered		Derived from BPEL. Value = 0		
DESCR	VARCHAR2 (30)	Description		Derived from BPEL. Value = Blank		
MERCHANDISE_AMT	NUMBER (26,3)	Merchandise Amt	CI_ADJ	ADJ_AMT	NUMBER (15,2)	
BUSINESS_UNIT_PO	VARCHAR2 (5)	PO Business Unit		Derived from BPEL. Value = Blank		
PO_ID	VARCHAR2 (10)	PO Number		Derived from BPEL. Value = Blank		
LINE_NBR	NUMBER (38)	Line Number		Derived from BPEL. Value = 0		
SCHED_NBR	NUMBER (38)	Schedule Number		Derived from BPEL. Value = 0		
PO_DIST_LINE_NUM	NUMBER (38)	PO Distribution Line Number		Derived from BPEL. Value = 0		
BUSINESS_UNIT_PC	VARCHAR2 (5)	PC Business Unit		Derived from BPEL. Value = Blank		
ACTIVITY_ID	VARCHAR2 (15)	Activity		Derived from BPEL. Value = Blank		
ANALYSIS_TYPE	VARCHAR2 (3)	Analysis Type		Derived from BPEL. Value = Blank		
RESOURCE_TYPE	VARCHAR2 (5)	Source Type		Derived from BPEL. Value = Blank		
RESOURCE_CATEGORY	VARCHAR2 (5)	Category		Derived from BPEL. Value = Blank		
RESOURCE_SUB_CAT	VARCHAR2 (5)	Subcategory		Derived from BPEL. Value = Blank		
ASSET_FLG	VARCHAR2 (1)	Assets Applicable		Derived from BPEL. Value = N		
BUSINESS_UNIT_AM	VARCHAR2 (5)	AM Business Unit		Derived from BPEL. Value = Blank		
ASSET_ID	VARCHAR2 (12)	Asset Identification		Derived from BPEL. Value = Blank		
PROFILE_ID	VARCHAR2 (10)	Asset Profile Id		Derived from BPEL. Value = Blank		
COST_TYPE	VARCHAR2 (1)	Cost Type		Derived from BPEL. Value = Blank		
VAT_TXN_TYPE_CD	VARCHAR2 (4)	VAT Transaction Type		Derived from BPEL. Value = Blank		
BUSINESS_UNIT_RECV	VARCHAR2 (5)	Receiving Business Unit		Derived from BPEL. Value = Blank		

Columns in PS_VCHR_DIST_STG	Date Type	Description	Oracle Utilities Customer Care and Billing Table	Columns	Data Type	Remarks
RECEIVER_ID	VARCHAR2 (10)	Receipt Number		Derived from BPEL. Value = Blank		
RECV_LN_NBR	NUMBER (38)	Receipt Line		Derived from BPEL. Value = 0		
RECV_SHIP_SEQ_NBR	NUMBER (38)	Receiver Shipping Sequence		Derived from BPEL. Value = 0		
RECV_DIST_LINE_NUM	NUMBER (38)	Receiver Distribution Line		Derived from BPEL. Value = 0		
OPERATING_UNIT	VARCHAR2 (8)	Operating Unit		Derived from BPEL. Value = Blank		
PRODUCT	VARCHAR2 (6)	Product		Derived from BPEL. Value = Blank		
FUND_CODE	VARCHAR2 (5)	Fund Code		Derived from BPEL. Value = Blank		
CLASS_FLD	VARCHAR2 (5)	Class Field		Derived from BPEL. Value = Blank		
PROGRAM_CODE	VARCHAR2 (5)	Program Code		Derived from BPEL. Value = Blank		
BUDGET_REF	VARCHAR2 (8)	Budget Reference		Derived from BPEL. Value = Blank		
AFFILIATE	VARCHAR2 (5)	Affiliate		Derived from BPEL. Value = Blank		
AFFILIATE_INTRA1	VARCHAR2 (10)	Fund Affiliate		Derived from BPEL. Value = Blank		
AFFILIATE_INTRA2	VARCHAR2 (10)	Operating Unit Affiliate		Derived from BPEL. Value = Blank		
CHARTFIELD1	VARCHAR2 (10)	ChartField 1		Derived from BPEL. Value = Blank		
CHARTFIELD2	VARCHAR2 (10)	ChartField 2		Derived from BPEL. Value = Blank		
CHARTFIELD3	VARCHAR2 (10)	ChartField 3		Derived from BPEL. Value = Blank		
PROJECT_ID	VARCHAR2 (15)	Project		Derived from BPEL. Value = Blank		
BUDGET_DT	DATE	Budget Date		Value = Null		
ENTRY_EVENT	VARCHAR2 (10)	Entry Event		Derived from BPEL. Value = Blank		
ECQUEUEINSTANCE	NUMBER (38)	EC Queue Instance		Derived from BPEL. Value = 0		
ECTRANSID	VARCHAR2 (15)	EC Transaction ID		Derived from BPEL. Value = Blank		
JRNL_LN_REF	VARCHAR2 (10)	Journal Line Reference		Derived from BPEL. Value = Blank		
VAT_APORT_CNTRL	VARCHAR2 (1)	VAT Apportionment Control		Derived from BPEL. Value = Blank		
USER_VCHR_CHAR1	VARCHAR2 (1)	User Character Field		Derived from BPEL. Value = Blank		
USER_VCHR_CHAR2	VARCHAR2 (1)	User Character Field 2		Derived from BPEL. Value = Blank		

Columns in PS_VCHR_DIST_STG	Date Type	Description	Oracle Utilities Customer Care and Billing Table	Columns	Data Type	Remarks
USER_VCHR_DEC	NUMBER (26,3)	User Amount Field		Derived from BPEL. Value = 0		
USER_VCHR_DATE	DATE	User Date		Value = Null		
USER_VCHR_NUM1	NUMBER (38)	User Number field		Derived from BPEL. Value = 0		
USER_DIST_CHAR1	VARCHAR2 (1)	Distribution User Field		Derived from BPEL. Value = Blank		
CUSTOM_C100_D1	VARCHAR2 (100)	Custom Field		Derived from BPEL. Value = Blank		
CUSTOM_C100_D2	VARCHAR2 (100)	Custom Field		Derived from BPEL. Value = Blank		
CUSTOM_C100_D3	VARCHAR2 (100)	Custom Field		Derived from BPEL. Value = Blank		
CUSTOM_C100_D4	VARCHAR2 (100)	Custom Field		Derived from BPEL. Value = Blank		
CUSTOM_DATE_D	Date	Custom Date Field		Value = Null		
CUSTOM_C1_D	VARCHAR2 (1)	Custom Field		Derived from BPEL. Value = Blank		
OPEN_ITEM_KEY	VARCHAR2 (30)	Open Item Key		Derived from BPEL. Value = Blank		
VAT_RECOVERY_PCT	NUMBER (5,2)	VAT Recovery Percent		Derived from BPEL. Value = 0		
VAT_REBATE_PCT	NUMBER (5,2)	VAT Rebate Percent		Derived from BPEL. Value = 0		
VAT_CALC_AMT	NUMBER (26,3)	VAT Calculated Amount		Derived from BPEL. Value = 0		
VAT_BASIS_AMT	NUMBER (26,3)	VAT Basis Amt		Derived from BPEL. Value = 0		
VAT_RCVRY_AMT	NUMBER (26,3)	VAT Recovery Amt		Derived from BPEL. Value = 0		
VAT_NRCVR_AMT	NUMBER (26,3)	VAT Non Recoverable		Derived from BPEL. Value = 0		
VAT_REBATE_AMT	NUMBER (26,3)	VAT Rebate Amt		Derived from BPEL. Value = 0		
VAT_TRANS_AMT	NUMBER (26,3)	VAT Transaction Amount		Derived from BPEL. Value = 0		
TAX_CD_VAT_PCT	NUMBER (7,4)	VAT Tax Code Aggregate Pct		Derived from BPEL. Value = 0		
VAT_INV_AMT	NUMBER (26,3)	VAT Invoice Amount		Derived from BPEL. Value = 0		
VAT_NONINV_AMT	NUMBER (26,3)	VAT Non-Invoice Amount		Derived from BPEL. Value = 0		
BUSINESS_UNIT_WO	VARCHAR2 (5)	Business Unit		Derived from BPEL. Value = Blank		
WO_ID	VARCHAR2 (10)	Work Order ID		Derived from BPEL. Value = Blank		
WO_TASK_ID	NUMBER (38)	Task Number		Derived from BPEL. Value = 0		

Columns in PS_VCHR_DIST_STG	Date Type	Description	Oracle Utilities Customer Care and Billing Table	Columns	Data Type	Remarks
RSRC_TYPE	VARCHAR2 (1)	Resource Type		Derived from BPEL. Value = Blank		
RES_LN_NBR	NUMBER (38)	Resource Line No.		Derived from BPEL. Value = 0		

PS_VCHR_PYMT_STG

Columns in PS_VCHR_PYMT_STG	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Columns	Data Type	Remarks
BUSINESS_UNIT	VARCHAR2 (5)	Business Unit	CI_CIS_DIV_CHAR	CHAR_VAL	CHAR (16)	
VCHR_BLD_KEY_C1	VARCHAR2 (25)	Voucher Build Key Char 1	CI_SA	CIS_DIVISION	CHAR (5)	
VCHR_BLD_KEY_C2	VARCHAR2 (25)	Voucher Build Key Char 1	CI_ADJ_APREQ	AP_REQ_ID	CHAR (12)	
VCHR_BLD_KEY_N1	NUMBER (10)	Voucher Build Key Num 1		From Lookup Table. Value = 0		
VCHR_BLD_KEY_N2	NUMBER (10)	Vchr Build Key Num 2		From Lookup Table. Value = 0		
VOUCHER_ID	VARCHAR2 (8)	Voucher ID		Derived from BPEL. Value = NEXT		
PYMNT_CNT	NUMBER (38)	Payments		Derived from BPEL. Value = 1		
BANK_CD	VARCHAR2 (5)	Bank Code		From Lookup Table. Value = USBNK		
BANK_ACCT_KEY	VARCHAR2 (4)	Bank Account		From Lookup Table. Value = CHCK		
PYMNT_METHOD	VARCHAR2 (3)	Payment Method		From Lookup Table. Value = CHK		
PYMNT_MESSAGE	VARCHAR2 (70)	Payment Message	CI_ADJ_APREQ	AP_REQ_ID	CHAR (12)	CI_ADJ_APREQ
PYMNT_VCHR_PCT	NUMBER (31,15)	Payment Voucher Ratio		Derived from BPEL. Value = 0		
PYMNT_HANDLING_CD	VARCHAR2 (2)	Payment Handling		From Lookup Table. Value = RE		
PYMNT_HOLD	VARCHAR2 (1)	Hold Payment		Derived from BPEL. Value = Blank		
PYMNT_HOLD_REASON	VARCHAR2 (3)	Hold Reason		Derived from BPEL. Value = Blank		
MESSAGE_CD	VARCHAR2 (6)	Message Code		Derived from BPEL. Value = Blank		
PYMNT_GROSS_AMT	NUMBER (26,3)	Gross Payment Amount	CI_ADJ	ADJ_AMT	NUMBER (15,2)	
PYMNT_SEPARATE	VARCHAR2 (1)	Separate Payment		Derived from BPEL. Value = N		This is retrieved from the configurable property CCB.PS.AP.PYMNT_SEPARATE.
SCHEDULED_PAY_DT	DATE	Scheduled to Pay	CI_ADJ_APREQ	SCHEDULED_PAY_DT	DATE	
PYMNT_ACTION	VARCHAR2 (1)	Payment Action		Derived from BPEL. Value = S		

Columns in PS_VCHR_PYMT_STG	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Columns	Data Type	Remarks
PYMNT_ID_REF	VARCHAR2 (20)	Payment Reference		Derived from BPEL. Value = Blank		
PYMNT_GROUP_CD	VARCHAR2 (2)	Pay Group Code		Derived from BPEL. Value = Blank		
EFT_LAYOUT_CD	VARCHAR2 (10)	EFT Layout Code		Derived from BPEL. Value = Blank		

PS_VCHR_VNDR_STG

Columns in PS_VCHR_VNDR_STG	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Columns	Data Type	Remarks
BUSINESS_UNIT	VARCHAR2 (5)	Business Unit	CI_CIS_DIV_CHAR	CHAR_VAL	CHAR (16)	
VCHR_BLD_KEY_C1	VARCHAR2 (25)	Voucher Build Key Char 1	CI_SA	CIS_DIVISION	CHAR (5)	
VCHR_BLD_KEY_C2	VARCHAR2 (25)	Voucher Build Key Char 1	CI_ADJ_APREQ	AP_REQ_ID	CHAR (12)	
VCHR_BLD_KEY_N1	NUMBER (10)	Voucher Build Key Num 1		From Lookup Table. Value = 0		
VCHR_BLD_KEY_N2	NUMBER (10)	Vchr Build Key Num 2		From Lookup Table. Value = 0		
VOUCHER_ID	VARCHAR2 (8)	Voucher ID		Derived from BPEL. Value = NEXT		
NAME1	VARCHAR2 (40)	Name 1	CI_ADJ_APREQ	ENTITY_NAME	VARCHAR2 (64)	
NAME2	VARCHAR2 (40)	Name 2		Derived from BPEL. Value = Blank		
EMAILID	VARCHAR2 (70)	Email ID		Derived from BPEL. Value = Blank		
COUNTRY	VARCHAR2 (3)	Country	CI_ADJ_APREQ	COUNTRY	CHAR (3)	
ADDRESS1	VARCHAR2 (55)	Address Line 1	CI_ADJ_APREQ	ADDRESS1	VARCHAR2 (64)	
ADDRESS2	VARCHAR2 (55)	Address Line 2	CI_ADJ_APREQ	ADDRESS2	VARCHAR2 (64)	
ADDRESS3	VARCHAR2 (55)	Address Line 3	CI_ADJ_APREQ	ADDRESS3	VARCHAR2 (64)	
ADDRESS4	VARCHAR2 (55)	Address Line 4	CI_ADJ_APREQ	ADDRESS4	VARCHAR2 (64)	
CITY	VARCHAR2 (30)	City	CI_ADJ_APREQ	CITY	VARCHAR2 (30)	
NUM1	VARCHAR2 (6)	Number 1		Derived from BPEL. Value = Blank		
NUM2	VARCHAR2 (4)	Number 2		Derived from BPEL. Value = Blank		
HOUSE_TYPE	VARCHAR2 (2)	House Type		Derived from BPEL. Value = Blank		
ADDR_FIELD1	VARCHAR2 (2)	Address Field 1		Derived from BPEL. Value = Blank		
ADDR_FIELD2	VARCHAR2 (4)	Address Field 2		Derived from BPEL. Value = Blank		
ADDR_FIELD3	VARCHAR2 (4)	Address Field 3		Derived from BPEL. Value = Blank		
COUNTY	VARCHAR2 (30)	County	CI_ADJ_APREQ	COUNTY	VARCHAR2 (30)	
STATE	VARCHAR2 (6)	State	CI_ADJ_APREQ	STATE	CHAR (6)	

Columns in PS_VCHR_VNDR_STG	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Columns	Data Type	Remarks
POSTAL	VARCHAR2 (12)	Postal Code	CI_ADJ_APREQ	POSTAL	CHAR (12)	
GEO_CODE	VARCHAR2 (11)	Tax Vendor Geographical Code	CI_ADJ_APREQ	GEO_CODE	CHAR (11)	
IN_CITY_LIMIT	VARCHAR2 (1)	In City Limit	CI_ADJ_APREQ	IN_CITY_LIMIT	VARCHAR (1)	

PS_VCHR_BANK_STG

PS_VCHR_BANK_STG	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Column	Data Type	Remarks
BUSINESS_UNIT	VARCHAR2(5)	Business Unit	CI_CIS_DIV_CHAR	CHAR_VAL		
VCHR_BLD_KEY_C1	VARCHAR2(25)	Voucher Build Key Char 1	CI_SA	CIS_DIVISION		
VCHR_BLD_KEY_C2	VARCHAR2(25)	Voucher Build Key Char 1	CI_ADJ_APREQ	AP_REQ_ID		
VCHR_BLD_KEY_N1	NUMBER(10)	Voucher Build Key Num 1		From Lookup Table. Value = 0		
VCHR_BLD_KEY_N2	NUMBER(10)	Vchr Build Key Num 2		From Lookup Table. Value = 0		
VOUCHER_ID	VARCHAR2(8)	Voucher ID		Derived from BPEL. Value = NEXT		
BANK_ID_QUAL	VARCHAR2(3)	Bank ID Qualifier		Derived from BPEL. Value = Blank		
BNK_ID_NBR	VARCHAR2(20)	Bank ID Number		Derived from BPEL. Value = Blank		
BRANCH_ID	VARCHAR2(10)	Branch ID		Derived from BPEL. Value = Blank		

PS_VCHR_BANK_STG	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Column	Data Type	Remarks
BANK_ACCT_TYPE	VARCHAR2(2)	Bank Account Type		Derived from BPEL. Value = Blank		
BANK_ACCOUNT_NUM	VARCHAR2(35)	Bank Account Number		Derived from BPEL. Value = Blank		
CHECK_DIGIT	VARCHAR2(2)	Check Digit		Derived from BPEL. Value = Blank		
DFI_ID_QUAL	VARCHAR2(2)	DFI Qualifier		Derived from BPEL. Value = Blank		
DFI_ID_NUM	VARCHAR2(12)	DFI ID		Derived from BPEL. Value = Blank		
BENEFICIARY_BANK	VARCHAR2(30)	Beneficiary Bank		Derived from BPEL. Value = Blank		
BENEFICIARY_BNK_AC	VARCHAR2(30)	Beneficiary Bank Alt Char Set		Derived from BPEL. Value = Blank		
BENEF_BRANCH	VARCHAR2(30)	Beneficiary Branch		Derived from BPEL. Value = Blank		
BENEF_BRANCH_AC	VARCHAR2(30)	Beneficiary Branch Alt Char		Derived from BPEL. Value = Blank		
COUNTRY	VARCHAR2(3)	Country	CI_ADJ_APREQ	COUNTRY	CHAR (3)	
ADDRESS1	VARCHAR2(55)	Address Line 1	CI_ADJ_APREQ	ADDRESS1	VARCHAR2 (64)	
ADDRESS2	VARCHAR2(55)	Address Line 2	CI_ADJ_APREQ	ADDRESS2	VARCHAR2 (64)	
ADDRESS3	VARCHAR2(55)	Address Line 3	CI_ADJ_APREQ	ADDRESS3	VARCHAR2 (64)	
ADDRESS4	VARCHAR2(55)	Address Line 4	CI_ADJ_APREQ	ADDRESS4	VARCHAR2 (64)	
CITY	VARCHAR2(30)	City	CI_ADJ_APREQ	CITY	VARCHAR2 (30)	
NUM1	VARCHAR2(6)	Number1		Derived from BPEL. Value = Blank		
NUM2	VARCHAR2(4)	Number1		Derived from BPEL. Value = Blank		

PS_VCHR_BANK_STG	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Column	Data Type	Remarks
HOUSE_TYPE	VARCHAR2(2)	House Type		Derived from BPEL. Value = Blank		
ADDR_FIELD1	VARCHAR2(2)	Address Field 1		Derived from BPEL. Value = Blank		
ADDR_FIELD2	VARCHAR2(4)	Address Field 2		Derived from BPEL. Value = Blank		
ADDR_FIELD3	VARCHAR2(4)	Address Field 3		Derived from BPEL. Value = Blank		
COUNTY	VARCHAR2(30)	County	CI_ADJ_APREQ	COUNTY	VARCHAR2 (30)	
STATE	VARCHAR2(6)	State	CI_ADJ_APREQ	STATE	CHAR (6)	
POSTAL	VARCHAR2(12)	Postal Code	CI_ADJ_APREQ	POSTAL	CHAR (12)	
GEO_CODE	VARCHAR2(11)	Tax Vendor Geographical Code	CI_ADJ_APREQ	GEO_CODE	CHAR (11)	
IN_CITY_LIMIT	VARCHAR2(1)	In City Limit	CI_ADJ_APREQ	IN_CITY_LIMIT	VARCHAR (1)	
COUNTRY_CODE	VARCHAR2(3)	Country Code		Derived from BPEL. Value = Blank		
PHONE	VARCHAR2(24)	Telephone		Derived from BPEL. Value = Blank		
EXTENSION	VARCHAR2(6)	Phone Extension		Derived from BPEL. Value = Blank		
FAX	VARCHAR2(24)	Fax Number		Derived from BPEL. Value = Blank		
IBAN_CHECK_DIGIT	VARCHAR2(2)	IBAN Check Digit		Derived from BPEL. Value = Blank		
IBAN_ID	VARCHAR2(34)	IBAN ID		Derived from BPEL. Value = Blank		
EFT_PYMNT_FMT_CD	VARCHAR2(3)	Payment Format		Derived from BPEL. Value = Blank		
EFT_TRANS_HANDLING	VARCHAR2(1)	Transaction Handling		Derived from BPEL. Value = Blank		

PS_VCHR_BANK_STG	Data Type	Description	Oracle Utilities Customer Care and Billing Table	Column	Data Type	Remarks
EFT_DOM_COSTS_CD	VARCHAR2(1)	Domestic Costs		Derived from BPEL. Value = Blank		
EFT_CORR_COSTS_CD	VARCHAR2(1)	Correspondent's Costs		Derived from BPEL. Value = Blank		
EFT_CHECK_DRAW_CD	VARCHAR2(1)	Bank Check Drawn On		Derived from BPEL. Value = Blank		
EFT_CHECK_FWRD_CD	VARCHAR2(1)	Check Forwarding		Derived from BPEL. Value = Blank		
EFT_PAY_INST_CD1	VARCHAR2(3)	Payment Instruction 1		Derived from BPEL. Value = Blank		

AP Data

Oracle PeopleSoft Financials for General Ledger and Accounts Payable AP Data Table Mapping to Oracle Utilities Customer Care and Billing

CI_ADJ_APREQ	Data Type	Description	Oracle PeopleSoft Financials for General Ledger and Accounts Payable Table	Columns	Data Type	Remarks
PAY_DOC_ID	VARCHAR2 (20)	Advice ID	PS_PAYMENT_TBL	PYMNT_ID_REF	VARCHAR2 (20)	
PAY_DOC_DT	DATE	Advice Date	PS_PAYMENT_TBL	PYMNT_DT	DATE	
PYMNT_ID	CHAR (10)	Payment Number	PS_PAYMENT_TBL	PYMNT_ID_REF	VARCHAR2 (10)	
PAID_AMT	NUMBER (15,2)	Paid Amount	PS_PAYMENT_TBL	PYMNT_AMT	NUMBER (26,3)	
PYMNT_SEL_STAT_FLG	CHAR (1)	Payment Selection Status	Derived from BPEL. Value = P			
AP_REQ_ID	CHAR (12)	A/P Request ID	PS_PYMNT_VCHR_XREF	PYMNT_MESSAGE	VARCHAR2 (70)	
PYMNT_SEL_STAT_FLG	CHAR (1)	Payment Selection Status	Derived from BPEL. When PS_PAYMENT_TBL.CANCEL_ACTION=R or H then Value=C When PS_PAYMENT_TBL.CANCEL_ACTION=C then Value=X			
CAN_RSN_CD	CHAR (4)	Cancel Reason Code				APVC