Oracle Utilities Customer Cloud Service Integration to Oracle ERP Financial Cloud for General Ledger and Accounts Payable

Configuration Guide

Release 23C

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Oracle Utilities Customer Cloud Service Integration to Oracle ERP Financial Cloud for General Ledger and Accounts Payable Configuration Guide

Contents

Preface

Welcome to the Oracle Utilities Customer Cloud Service Integration to Oracle ERP Financial Cloud for General Ledger and Accounts Payable Configuration Guide for release 23C.

The preface includes the following:

- Audience
- Documentation and Resources
- Updates to Documentation
- Documentation Accessibility
- Conventions
- Acronyms

Preface - i

Oracle Utilities Customer Cloud Service Integration to Oracle ERP Financial Cloud for General Ledger and Accounts Payable Configuration Guide

Audience

This document is intended for anyone implementing the integration of the following products with Oracle Application Cloud - ERP Financial Cloud (General Ledger and Account Payable).

- Oracle Utilities Customer Cloud Service
- Oracle Utilities Customer Care and Billing
- Oracle ERP Financial Cloud

Documentation and Resources

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

Product Documentation

Topic	Location
Oracle Utilities Customer Cloud Service Integration to Oracle ERP Financial Cloud for General Ledger and Accounts Payable documentation	https://docs.oracle.com/en/industries/energy-water/integrations-index.html
Oracle Utilities Customer Cloud Service documentation	https://docs.oracle.com/en/industries/energy-water/customer-cloud-service/index.html
Oracle Utilities Customer Care and Billing documentation	https://docs.oracle.com/en/industries/energy-water/ccb/
Oracle ERP Financial Cloud documentation	https://docs.oracle.com/en/cloud/saas/index.html

Additional Documentation

Resource	Location
Oracle Integration Cloud Service documentation	Refer to the OIC documentation at: https://docs.oracle.com/en/cloud/paas/integration-cloud/index.html
Oracle Support	Visit My Oracle Support at https://support.oracle.com regularly to stay informed about updates and patches. Refer to the *Certification Matrix for Oracle Utilities Products (Doc ID 1454143.1)* on My Oracle Support to determine if support for newer versions of the listed products is included. For more information, refer to the Oracle Utilities Integrations page at http://my.oracle.com/site/tugbu/productsindustry/productinfo/utilities/integration/index.htm

Resource	Location
Oracle Technology Network (OTN) latest versions of documents	http://www.oracle.com/technetwork/index.html
Oracle University for training opportunities	http://education.oracle.com/

Updates to Documentation

The complete Oracle Utilities Customer Cloud Service Integration to Oracle ERP Financial Cloud for General Ledger and Accounts Payable documentation set is available from Oracle Help Center at https://docs.oracle.com/en/industries/energy-water/index.html.

Visit My Oracle Support for additional and updated information about the product.

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.

Access to Oracle Support

Oracle customers have access to electronic support for the hearing impaired. Visit: http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs

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.

Acronyms

The following terms are used in this document:

Term	Expanded Form
ERP	Oracle Application Cloud
FIN	Financial
UCM	Universal Content Management
AP DATA	Account Payable Data
AP Request	Account Payable One-time Payment request from CCS
OUCCS/CCS	Oracle Utilities Customer Cloud Service
OUCCB/CCB	Oracle Utilities Customer Care and Billing
GL	General Ledger

Chapter 1

Overview

This chapter provides an overview about Oracle Utilities Customer Cloud Service Integration to Oracle ERP Financial Cloud for General Ledger and Accounts Payable using Oracle Integration Cloud. It focuses on software requirements, Oracle Integration Cloud, and business standpoint of the integration.

It includes the following:

- Overview of the Integration
- About Oracle Utilities Customer Cloud Service
- About Oracle ERP Financial Cloud
- About Oracle Integration Cloud
- Software Requirements

Overview of the Integration

Oracle Utilities Customer Cloud Service Integration to Oracle ERP Financial Cloud for General Ledger and Accounts Payable helps to facilitate the transfer of refund and ledger information between the two applications.

This integration supports three key functionalities:

- Sends General Ledger information for bills, payments, adjustments, and cancellations from Oracle Utilities Customer Cloud Service to Oracle ERP Financial Cloud for journal creation.

- Sends payable refund payment request from Oracle Utilities Customer Cloud Service to Oracle ERP Financial Cloud for invoice creation.

- Once the payable request has been paid or void in Oracle ERP Financial Cloud, the payment status and information are sent back to Oracle Utilities Customer Cloud Service.
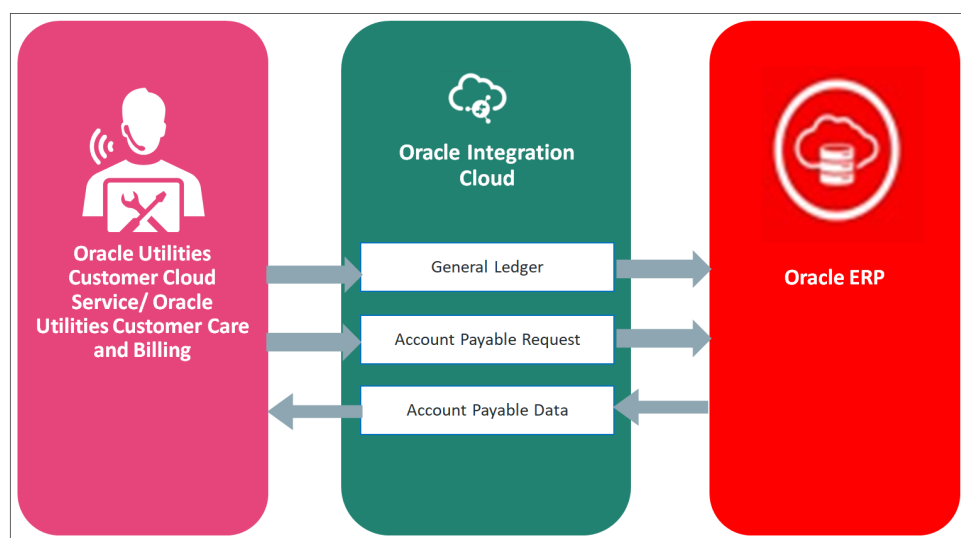
General Ledger Integration

The objective of General Ledger interface is to integrate the General Ledger transactions originating in Oracle Utilities Customer Cloud Service/Oracle Utilities Customer Care and Billing with Oracle Financial Cloud - General Ledger. As Oracle Utilities Customer Cloud Service/Oracle Utilities Customer Care and Billing users take actions within the application that necessitates sending the accounting entries to Oracle ERP Financial, this interface extracts the General Ledger transaction data from Oracle Utilities Customer Cloud Service/Oracle Utilities Customer Care and Billing, translate it and move it to cloud as Journal voucher transactions in the General Ledger.

This integration includes:

- Oracle Utilities Customer Cloud Service/Oracle Utilities Customer Care and Billing **Initiated**: Batch process "GLASSIGN" is mandatory to run for this integration that helps to populate GL account of the financial transaction of General Ledger.

- Batch "GLS" is processed after assigning the General Ledger account that moves the appropriate General Ledger transactions to staging table in Oracle Utilities Customer Cloud Service/Oracle Utilities Customer Care and Billing.

- Batch process "C1-GLFCX" in Oracle Utilities Customer Cloud Service extracts all General Ledger transaction and load the zip file to Object storage.

- Batch process "C1-GLFCX" in Oracle Utilities Customer Care and Billing extracts all General Ledger transactions and loads the zip file to file path location for on premises.

- **ERP Flow**: Batch process "Load to Interface" to pick up the transaction data from the UCM interface, insert the information into an ERP interface table and invoke a journal import data into ERP Financial Cloud application.

- Financial interface procedure(s) to pick up transaction information from the interface table and import the data into Financial General Ledger.

- The data imported into ERP Financial will be posted by submitting the Posting Journal Program as per the business process.

- Verification of data can be done in ERP before making the posting.

- All the transaction are based on the existing code combinations interfaced by ERP system. Any correction or changes in the transaction would be new transaction to adjust the values (if needed).

Benefits of General Ledger Integration

The benefits of General Ledger integration are:

- Reporting Center for Oracle Utility to ERP Financial for Account Payable and Receivable.

- Central repository for accounting data transferred from all sub ledgers such as accounts payable, accounts receivable, cash management, fixed assets, purchasing and projects.

- Import Journal FBDI process is used to import ledger lines. For this integration a batch in created in Oracle Utilities Customer Cloud Service using the FBDI template.
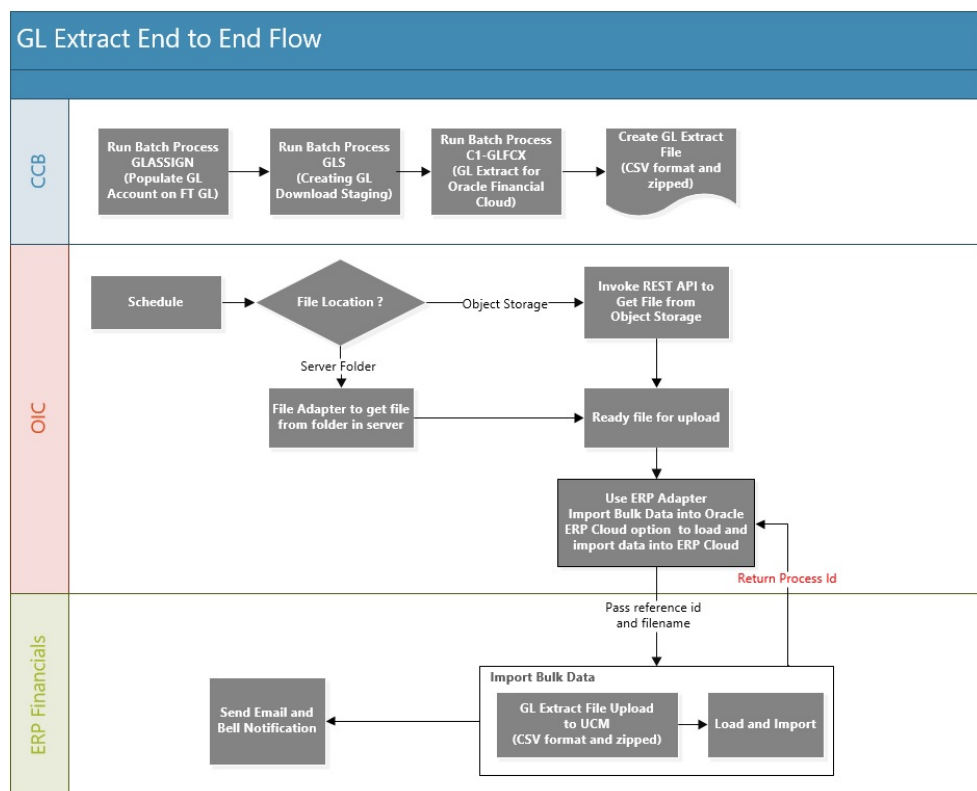
Account Payable (Request)

- Oracle ERP Financial Account Payable receives requests from internal or external sources to disburse funds to payees that are not defined as suppliers. Payables records these requests as payment requests.

- Payment requests from external sources can be imported using the File Based Data Import (FBDI) spreadsheet for making One Time Payments. The payees, parties, and bank accounts are created automatically when the transactions are imported into the application.

- Objective of the payees, parties, and bank accounts are created automatically when transactions are imported into the application. The transactions are validated automatically after they are imported. This eliminates the need for manual intervention.

One Time Payments are:

- Bulk processing of payment requests to payees in Oracle ERP Cloud Payables, without the need to create Suppliers, Supplier Addresses, Sites, Site Assignments.

- Typically, these payment requests originate from external systems.

- Refunds to customers from an external billing system which is integrated with Oracle through Accounting Hub or General Ledger, and not through Oracle Receivables.

This integration includes:

- Oracle Utilities Customer Cloud Service Initiated: For the integration to work, batch process "C1-APFCX" is required to run in Oracle Utilities Customer Cloud Service that extracts all appropriate Adjustment transaction requests for refund from Oracle Utilities Customer Cloud Service.

- The above batch process in Oracle Utilities Customer Cloud Service extracts the AP request in CSV format and loads the zip file to Object storage.

- The "C1-APFCX" batch process in Oracle Utilities Customer Care and Billing extracts the AP request in CSV format and loads the zip file to File Path for On-Premise.

- **ERP Flow**: Batch process "Load to Interface**"** to pick up the transaction data from the UCM interface, insert the information into an ERP interface table and invoke invoice creation data into ERP Financial Cloud application.

- Financial interface procedure(s) to pick up transaction information from the interface table and import the data into payment request table.

- The data imported into ERP Financial creates Invoice with header and line details.

- Verification of data is done in ERP before making the payment.
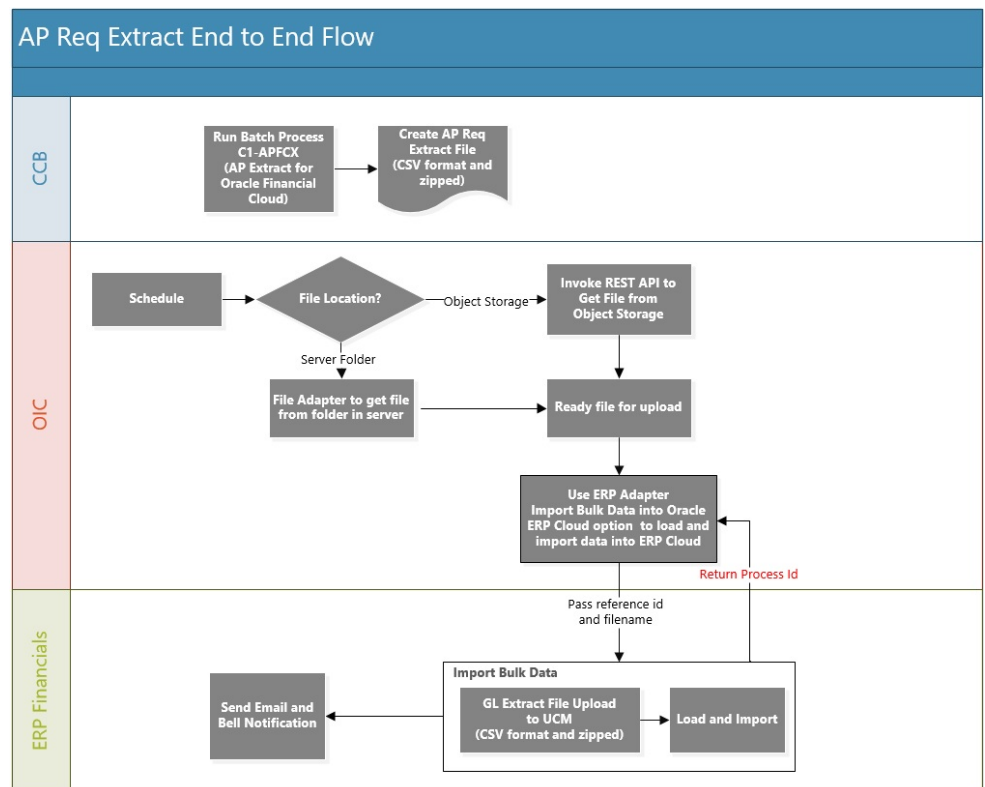
Account Payable (Data)

Single Payment/Void Payment Process

- For the refund request invoice created, the payment details are sent from Oracle ERP Financial Account Payable to Oracle Utilities Customer Cloud Service/ Oracle Utilities Customer Care and Billing.

- Payables sends an event occurrence signal when the event has happened using a user interface or by a REST API.

- Gets the details of paid invoice through REST API and transforms into Oracle Utilities Customer Cloud Service load.

- Updates payment information and payment status for the adjustment in Oracle Utilities Customer Cloud Service.

- Passes the payment or void information and payment status for the account payment request from Oracle ERP Financial Cloud to Oracle Utilities Customer Cloud Service.

- For configuration to be performed in Oracle Utilities Customer Cloud Service and Oracle ERP Financial Cloud for the integration are listed in Configuring Oracle Utilities Customer Cloud Service and Configuring Oracle ERP Product Hub Cloud respectively.

- Integration updates the following payment information for each Adjustment AP Request record using a business event:

  - A/P Request ID (Primary Key)

  - Payment Status

  - Payment Date

  - Payment Method and Number

  - Payment Amount and Currency

For Oracle Payments Cloud business events, Payments sends an event occurrence signal when the event occurred. This table describes the business event supported by Payments.

Supported Business Event	Description	Enable By Using	First Release Available	Event Initiation
Payment File Created	Signals when a payment file is created	IBY: Enable Business Events profile option at the site level	18C	Upon completion of payment file

This integration includes:

- Subscribing to the business event in Oracle Integration Cloud creates an event based on trigger for the below event.

Supported Business Event	Description	Enable By Using	First Release Available
Payables Payment Created	Signals when a single payment is created.	AP: Enable Business Events profile option at the site level	19A
Payables Payment Voided	Signals when a payment is voided.	AP: Enable Business Events profile option at the site level	19A
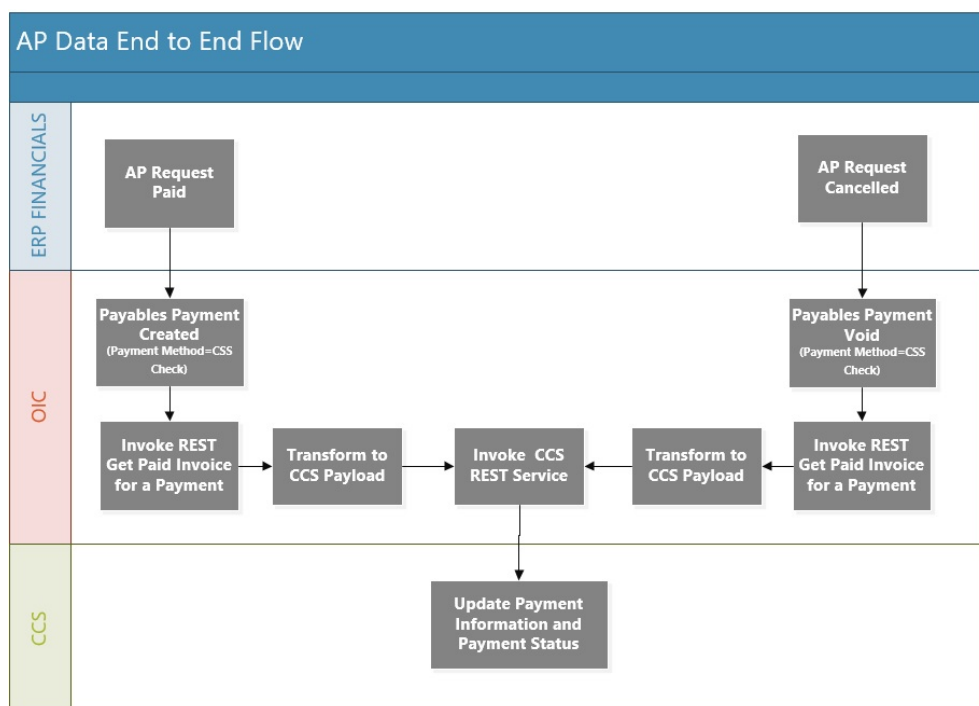
Batch Payment Process

- For the refund request invoices created, payment details are sent from Oracle ERP Financial Account Payable to Oracle Utilities Customer Cloud Service/ Oracle Utilities Customer Care and Billing.

- Payables sends the Payment File Created event when a Submit Payment Process Request is created in Oracle ERP Financial Cloud.

- Gets the details of all paid invoices through a BI Report using the Payment File Reference Number that is extracted from the event data.

- For each invoice:

  - Transforms into Oracle Utilities Customer Cloud Service load.

- • Updates the payment information and payment status for adjustment in Oracle Utilities Customer Cloud Service.

- • For instructions to configure Oracle Utilities Customer Cloud Service and Oracle ERP Financial Cloud in the integration, refer to the Configuring Oracle Utilities Customer Cloud Service and Configuring Oracle ERP Product Hub Cloud chapters.

- • The integration updates the following payment information for each Adjustment AP Request record using a business event:

  - • A/P Request ID (Primary Key)

  - • Payment Status

  - • Payment Date

  - • Payment Method and Number

  - • Payment Amount and Currency

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This integration includes:

- • Subscribing to the business event in Oracle Integration Cloud creates an event based on trigger for the below event.

Supported Business Event	Description	Enable By Using	First Release Available
Payables Payment Created	Signals when a payment is created.	AP: Enable Business Events profile option at the site level	19A

Batch Void Payment Process

- For the refund request invoices created, void payment details are sent from Oracle ERP Financial Account Payable to Oracle Utilities Customer Cloud Service/Oracle Utilities Customer Care and Billing.

- Payables voided the list of invoices using Manage Payment File in Oracle ERP Financial Cloud.

- The integration runs on schedule basis and gets the details of all voided invoices through a BI Report.

- For each invoice:

  - Transforms into Oracle Utilities Customer Cloud Service load.

  - Updates payment information and payment status for the adjustment in Oracle Utilities Customer Cloud Service.

- For instructions to configure Oracle Utilities Customer Cloud Service and Oracle ERP Financial Cloud in the integration, refer to the Configuring Oracle Utilities Customer Cloud Service and Configuring Oracle ERP Product Hub Cloud chapters.

- Integration updates the following payment information for each Adjustment AP Request record using a business event:

  - A/P Request ID (Primary Key)

  - Payment Status
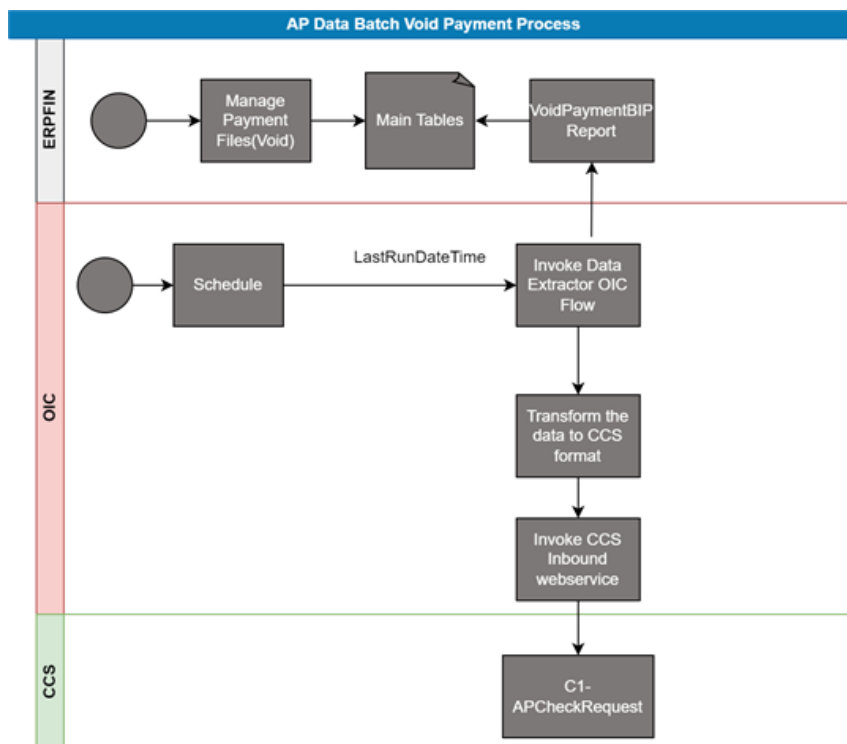
Batch Data Extractor Process

- The batch of payments or void payment details will be retrived from Oracle ERP Financial Account Payable by invoking BI Report.

- Integration is invoked from AP Batch Payment Process and AP Batch Void Payment Process.

  - If the "ReportType" Value is "Payment" then it will invoke Payment BI Report and send the data back to main integration.

  - If the "ReportType" Value is "VoidPayment" then it will invoke Void Payment BI Report and send the data back to main integration.
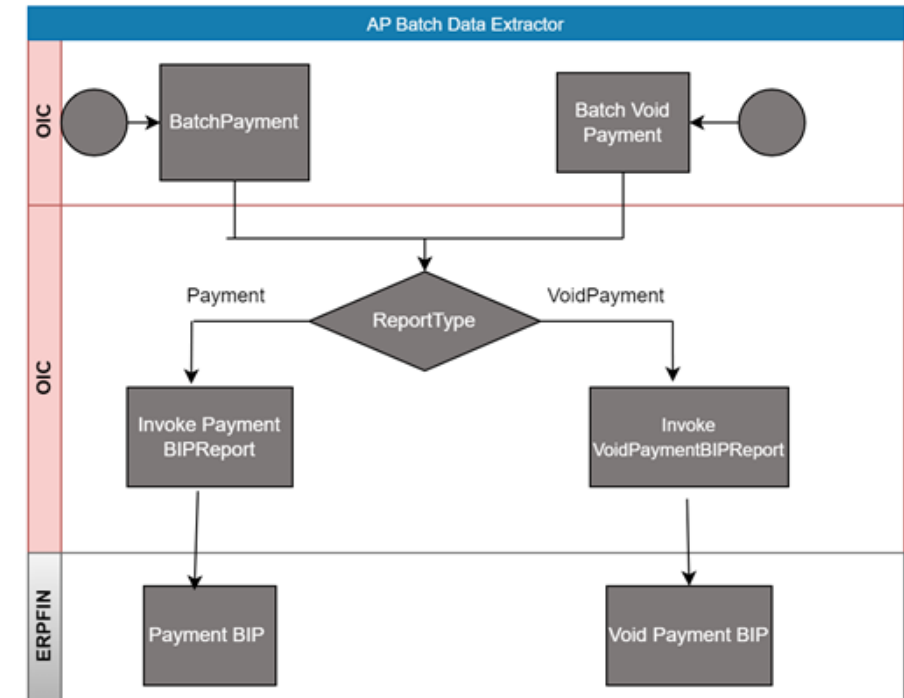
About Oracle Utilities Customer Cloud Service

Oracle Utilities Customer Cloud Service is a customer care, service order, metering and billing solution for traditional scalar devices and billing processes. The solution is designed to cater for utilities of all sizes, supports one to many utility service types, and handles the complexities associated with a utility's processes.

Oracle Utilities Customer Cloud Service includes:

- Customer information and customer lifecycle processing including:

  - Sales and marketing management

  - Customer information management for various types of customers, starting and stopping service, and supporting inbound and outbound customer care interactions.

  - Financial management including rating, billing, payment, and collections activities.

- Meter data management functionality, including:

  - Device and measurement data management including validating, editing, and estimating incoming data for traditional scalar devices.

  - Usage management for calculating billable usage or billing determinants to support traditional scalar billing processes.

- Service order management for orchestrating service order activities for traditional scalar device.

- Operational device management functionality, including:

  - Asset management, including location management and tracking of individual devices throughout their lifecycle, capturing device configurations and settings, and managing configuration between devices and components.

  - Oracle Utilities Cloud Service Foundation: Tools used to orchestrate and automate infrastructure related processes and migrate data from legacy applications into the cloud service.

  - Oracle Utilities Analytics Visualization: A suite of analytics applications that provides access to real-time data for self-service exploration, discovery, visualization, and analysis. It includes rich pre-built analytical data models, metrics, and key performance indicators that allow you to derive strategic insights from your data.

About Oracle ERP Financial Cloud

The most comprehensive, integrated, and scalable financial management solution available, Oracle ERP Financial Cloud offers extensive support for global companies in a wide variety of industries. Whether challenge is streamlining accounting and general ledgers, complying with new revenue recognition guidelines, automating expense processing, or reporting on new KPIs, Oracle ERP Financial Cloud module can handle these requirements.

Used by businesses of all sizes, Oracle ERP Financial Cloud offers comprehensive modern financial management applications and tools that easily integrate and scale as your business grows. Designed for collaboration and real-time access to the latest data, Oracle ERP Financial Cloud gives companies insights faster to help minimize costs and increase productivity.

An important benefit of Oracle ERP Financial Cloud is the delivery of a deep and versatile internal control system, highlighting critical information and messages for prioritization. Built on open standards, Oracle ERP Financial Cloud readily extends into legacy systems, third-party applications, and Oracle Cloud Marketplace partner offerings to deliver custom integrated solutions for business.

- General Ledger and Accounting

  - Multi-Dimensional Reporting Platform: Analyze account balances by any dimension in real time.

  - Self-Service Reporting: Monitor and address your top concerns with mobile capabilities.

  - Collaborative Close: Improve visibility with a collaborative close process.

  - Visualization Capabilities: Interact with account balances and view them from different perspectives.

  - Agile Accounting: Create accounting for disparate source systems and easily adapt rules as accounting policies change.

  - Control: Centralize accounting rules for your subledgers to ensure accounting policies are consistently applied.

  - Analysis Across the Enterprise: Expand business insight by using supporting references to analyze results by multiple dimensions.

- Audit and Reconciliation: Utilize real-time, multi-dimensional reporting with drill down to subledger details for quick access to supporting information.

- Payable and Asset

  - Invoices and Payments: Control supplier balances, invoices, and payments.

  - Integrated Imaging: Automate imaging with optical character recognition (OCR) and reduce errors.

  - Assets: Track and account fixed assets.

  - Cash Management: Manage bank accounts, cash positions, and cash forecasts.

About Oracle Integration Cloud

Oracle Integration Cloud is a unified platform to integrate the applications, automate processes, and create applications.

Using the Process Builder the business processes can be rapidly designed, automated, and managed in the cloud. Using integrations connect the applications into a continuous business flow. The integrations can be quickly developed and activated between both the applications that live in the cloud; and the applications still live on premises. The lookups help to match application specific codes between the two applications.

Integration Insights and Stream Analytics helps to simplify and extract business metrics and create custom dashboards.

Software Requirements

For information about the application supported versions, refer to the *Oracle Utilities Customer Cloud Service Integration to Oracle ERP Financial Cloud for General Ledger and Accounts Payable Release Notes* included in this release.

The documentation is available on Oracle Help Center at: https://docs.oracle.com/en/industries/energy-water/integrations-index.html

Chapter 2

Solution Architecture

This chapter provides an overview of the application architecture used by the integration, including:

- Solution Overview
- Business Flows

Oracle Utilities Customer Cloud Service Integration to Oracle ERP Financial Cloud for General Ledger and Accounts Payable Configuration Guide

Solution Overview

The technical aspects involved in Oracle Utilities Customer Cloud Service Integration to Oracle ERP Financial Cloud for General Ledger and Accounts Payable are:

- The integration layer is made up of integration processes deployed on Oracle Integration Cloud.

- The integration processes uses Oracle ERP Cloud Adapter to integrate with Oracle Enterprise Resource Planning (ERP) applications.

  - Some processes uses the import bulk data into Oracle Cloud action to perform FBDI-compliant bulk operations like Journal Entries and Payables Payment Requests.

  - Some processes subscribes to business events raised by the financial modules in Oracle ERP Cloud application. These events are Payables Payment Created and Payables Payment Void.

- It uses REST APIs to communicate with Object Storage, Oracle Financial Cloud and Customer Cloud Service application.

- The integration pattern used for the solution are:

  - One-way asynchronous for all flows.

Refer to the Business Flows section for more information on each integration process.

Business Flows

The integration scope supports the following business processes:

- General Ledger Extract Process (Oracle Utilities Customer Cloud Service Initiated)

- General Ledger Extract Process (Oracle Utilities Customer Care and Billing Initiated)

- Account Payable Request Extract Process (Oracle Utilities Customer Cloud Service Initiated)

- Account Payable Request Extract Process (Oracle Utilities Customer Care and Billing Initiated)

- Account Payable Data Payment Update Process (Oracle ERP Financial Cloud Initiated)

- Account Payable Data Payment Void Process (Oracle ERP Financial Cloud Initiated)

- Account Payable Data Batch Payment Update Process (Oracle ERP Financial Cloud Initiated)

- Account Payable Data Batch Void Payments Process (Oracle ERP Financial Cloud Initiated)

- Account Payable Data Extractor Process (Oracle ERP Financial Cloud Initiated)

General Ledger Extract Process (Oracle Utilities Customer Cloud Service Initiated)

This integration process is used to transfer all approved General Ledger transaction from Oracle Utilities Customer Cloud Service to Oracle ERP Financial Cloud for General Ledger for journal creation.

It is an asynchronous flow that is triggered by a schedule. Oracle Utilities Customer Cloud Service creates a GL Extract file which is picked up by the integration process and uploaded to ERP Financial Cloud. This is just a file pass through and no transformation will be done by the integration.

Make sure the GL related batch processes (GLASSIGN, GLS, C1-GLFCX) in Oracle Utilities Customer Cloud Service are run before this integration process is run.

The following diagram shows a graphical representation of the General Ledger Extract integration process.

Business Processing

This asynchronous integration process is deployed on Oracle Integration Cloud and does the following activities:

1. If the extract file is in Object Storage, it invokes the Object Storage - List Objects REST API to get the list of files to be processed. Only files that starts with the string entered in property name **gl.extract.filename.prefix** in the CCSERPFIN_ConfigProps Lookup are returned. Most of the time this will only be one file.

2. If there is only one file to process, the following steps are performed. Else, the steps for each file to be processed are repeated.

a. Invokes the Object Storage: Gets Object REST API to get the actual file to process.

b. Prepares the file to be uploaded to ERP Financial Cloud.

c. Use ERP Adapter Import Bulk data option with operation Journal Import to load and import the GL data into ERP Financial Cloud.

   Note: Bell and email notifications are enabled for any case in the ERP Cloud Adapter. This means when the load and import process are done, bell and email notification are sent out as long as these notifications are setup in the ERP.

3. After the file is processed by the integration, it invokes the Object Storage - Rename Object REST API to rename the file just processed in Object Storage by adding a prefix to the filename. This prefix is obtained from the property name **os.prefixtag.fileuploaded** in the CCSERPFIN_ConfigProps Lookup.

4. Error Handling for this process.

   Any errors encountered are handled by the global fault handler.

   Retry Option: Rerun from Oracle Integration Cloud.

5. An optional email notification with error details are sent to the users configured in the CCSERPFIN_Email_Id lookup. Property name **email.flag** in the CCSERPFIN_ConfigProps Lookup must be set to 'true' to receive email notification when errors are encountered.

Technical Details

The following table describes the integration processes and the respective Oracle Utilities Customer Cloud Service and Oracle ERP Financial Cloud artifacts used in this integration process.

Artifacts	Value
Integration Process Name	Oracle Utilities CCS ERPFIN OS GL Extract Upl
Integration Package Name	outl.ba.ccs_erp_fin.1_0_0
Object Storage REST APIs	Object Storage Service API Endpoint https://{OSLocation_host_name} To get the list of files: Method: GET URI: /n/{namespaceName}/b/{bucketName}/o Query Parameters: prefix To get the file: Method: GET URI: /n/{namespaceName}/b/{bucketName}/o/{objectName} To rename the file: Method: POST URI: /n/{namespaceName}/b/{bucketName}/actions/renameObject

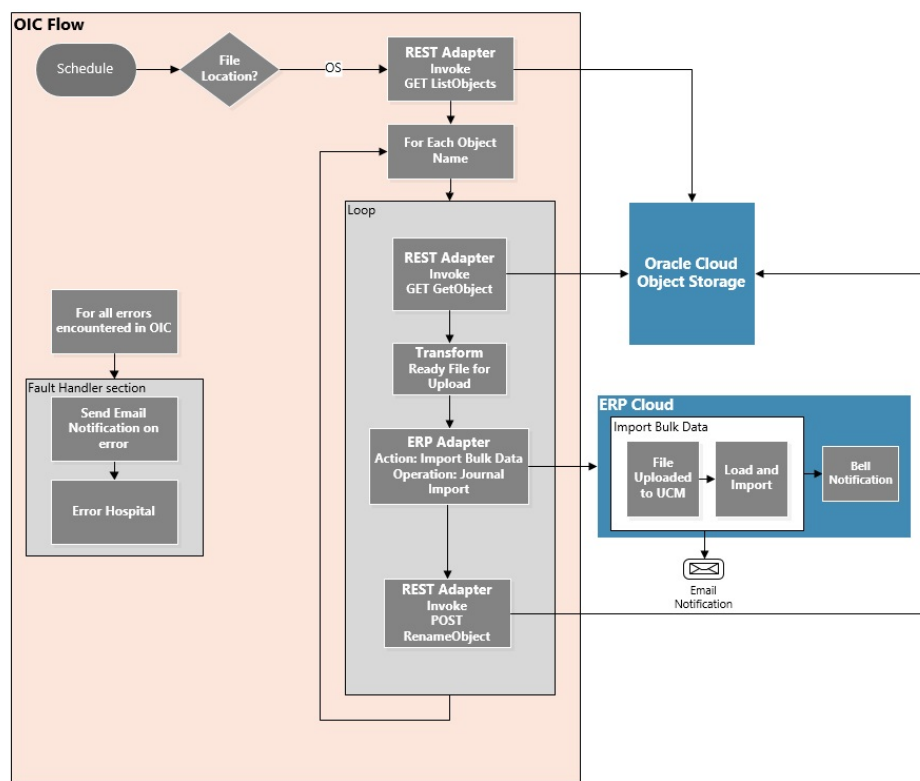| Artifacts	Value
ERP Cloud Adapter	Bulk Import Data
	Action: Import Bulk Data into Oracle ERP Financial Cloud Operation: Import Journals

General Ledger Extract Process (Oracle Utilities Customer Care and Billing Initiated)

This integration process is used to transfer all approved General Ledger transactions from Oracle Utilities Customer Care and Billing to Oracle ERP Financial Cloud for journal creation.

It is an asynchronous flow triggered by a schedule. Oracle Utilities Customer Cloud Service creates a GL Extract file which is picked up by the integration process and uploaded to Oracle ERP Financial Cloud. It is just a file pass through and no transformation will be done by the integration.

Make sure the GL related batch processes (GLASSIGN, GLS, C1-GLFCX) in Oracle Utilities Customer Cloud Service are run before this integration process is run.

The following diagram shows a graphical representation of the General Ledger Extract integration process.
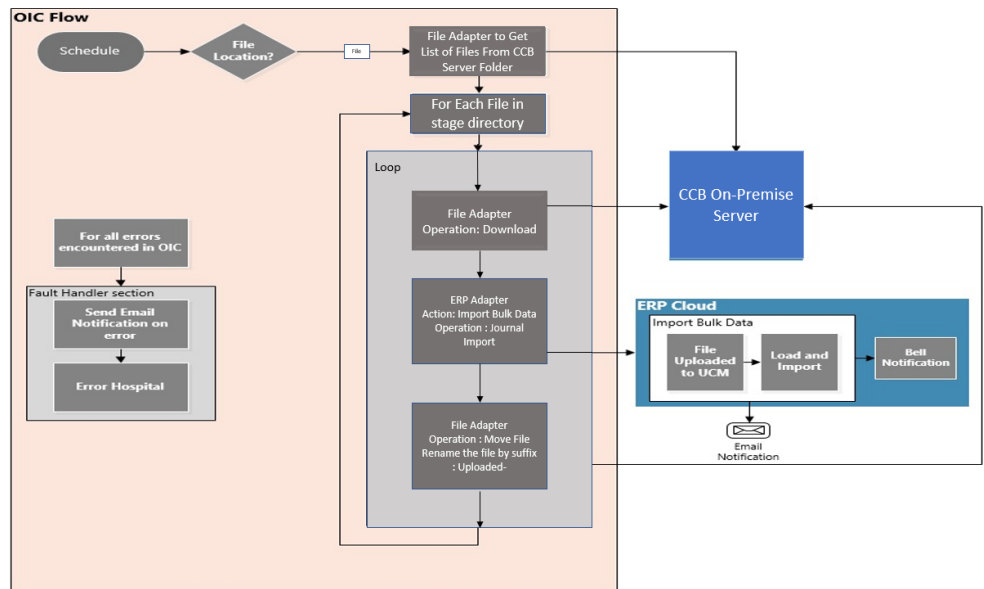
Business Processing

This asynchronous integration process is deployed on Oracle Integration Cloud and does the following activities:

1. If the extract file is in 'On' status, it invokes the FTP Adapter to get the list of files to be processed. Only files that starts with the string entered in property name gl.extract.filename.prefix in the CCSERPFIN_ConfigProps Lookup are returned. Most of the time this will only be one file.

2. If there is only one file to process, the following steps are performed. Else, the steps for each file to be processed are repeated.

    a. Invokes the FTP Adapter to download the file to stage directory. Stage action is used to get the actual file to process.

    b. Prepares the file to be uploaded to Oracle ERP Financial Cloud.

    c. Use ERP Adapter Import Bulk data option with operation Journal Import to load and import the GL data into Oracle ERP Financial Cloud.

        Note: Bell and email notifications are enabled for any case in the ERP Cloud Adapter. This means when the load and import process are done, bell and email notification are sent out as long as these notifications are setup in the ERP.

3. After the file is processed by the integration, it invokes the FTP Adapter - Move operation to rename the file just processed in Object Storage by adding a prefix to the filename. This prefix is obtained from the property name os.prefixtag.fileuploaded in the CCSERPFIN_ConfigProps Lookup.

4. Error Handling for this process.

    Any errors encountered are handled by the global fault handler. Retry Option: Rerun from Oracle Integration Cloud.

5. An optional email notification with error details are sent to the users configured in the CCSERPFIN_Email_Id lookup. Property name email.flag in the CCSERPFIN_ConfigProps Lookup must be set to 'true' to receive email notification when errors are encountered.

Technical Details

The following table describes the integration process and the respective Oracle Utilities Customer Cloud Service and Oracle ERP Financial Cloud artifacts used in this integration process.

Artifacts	Value
Integration Process Name	Oracle Utilities CCS ERPFIN FTP GL Extract Upl
Integration Package Name	outl.ba.ccs_erp_fin.1_0_0
ERP Cloud Adapter	Bulk Import Data
	Action: Import Bulk Data into Oracle ERP Financial Cloud Operation: Import Journals

# Account Payable Request Extract Process (Oracle Utilities Customer Cloud Service Initiated)

This integration process is used to transfer payable refund payment request from Oracle Utilities Customer Cloud Service to Oracle ERP Financial Cloud for one-time payment creation.

It is an asynchronous flow that is triggered by a schedule. Oracle Utilities Customer Cloud Service creates an AP Request Extract file which is picked up by the integration

process and uploaded to Oracle ERP Financial Cloud. This is just a file pass through and no transformation will be done by the integration.

> **Note**: Make sure the C1-APFCX batch process in Oracle Customer Cloud have been run before this integration process is run.

The following diagram shows a graphical representation of the AP Request Extract integration process.
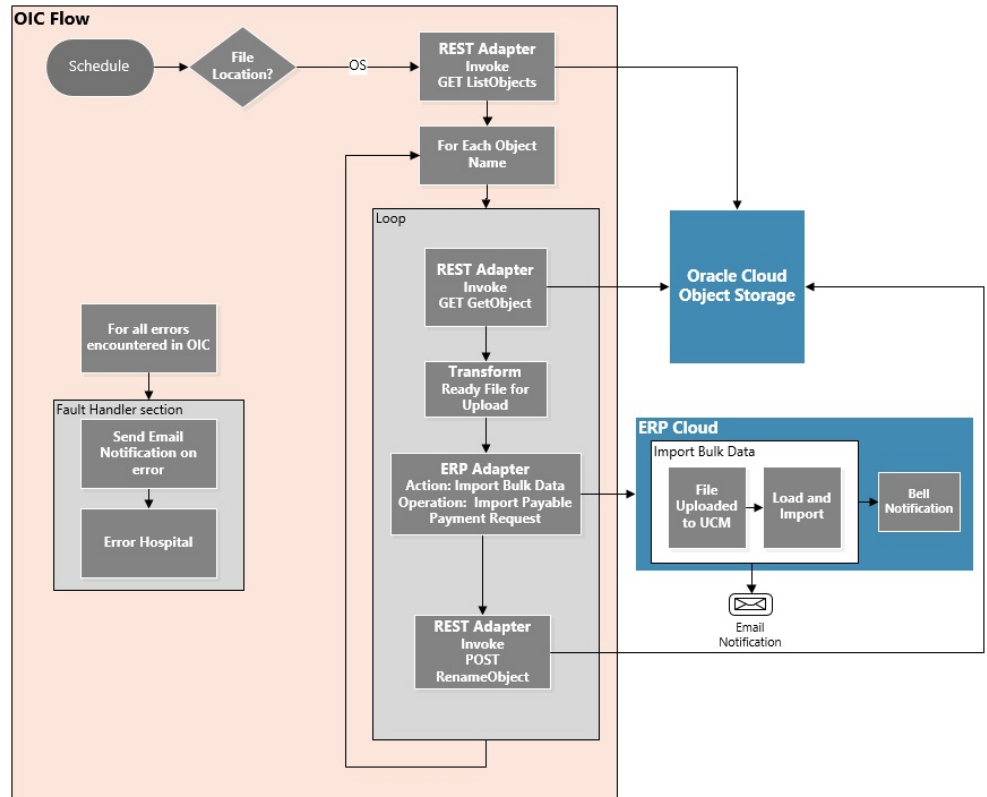
Business Processing

This asynchronous integration process is deployed on Oracle Integration Cloud and does the following activities:

1. If the extract file is in Object Storage, it invokes the Object Storage - List Objects REST API to get the list of files to be processed. Only files that starts with the string entered in property name **apreq.extract.filename.prefix** in CCSERPFIN_ConfigProps Lookup file are returned. Most of the time this will only be one file.

2. If there is only one file to process, it performs the following steps. Else, the steps for each file to be processed are repeated.

   a. Invokes the Object Storage: Gets Object REST API to get the actual file to process.

   b. Prepares the file to be uploaded to Oracle ERP Financial Cloud.

   c. Uses ERP Adapter Import Bulk data option with operation Import Payables Payment Requests to load and import the AP refund request data into Oracle ERP Financial Cloud.

Note: Bell and email notifications are enabled for any case in the ERP Cloud Adapter. This means when the load and import process are done, bell and email notification are sent out as long as these notifications are setup in the Oracle ERP Financial Cloud.

3. After the file is processed by the integration, it invokes the Object Storage. Rename Object REST API to rename the file just processed in Object Storage by adding a prefix to the filename. This prefix is obtained from the property name **os.prefixtag.fileuploaded** in the CCSERPFIN_ConfigProps Lookup.

4. Error Handling for this process. Any errors encountered are handled by the global fault handler.

   Retry Option: Re-run from Oracle Integration Cloud.

5. An optional email notification with error details is sent to the users configured in the CCSERPFIN_Email_Id lookup. Property name **email.flag** in the CCSERPFIN_ConfigProps Lookup must be set to 'true' to receive email notification when errors are encountered.

Technical Details

The following table describes the integration process and the respective Oracle Utilities Customer Cloud Service and Oracle ERP Financial Cloud artifacts used in this integration process.

Artifacts	Value
Integration Process Name	Oracle Utilities CCS ERPFIN OS AP Req Extr Upl
Integration Package Name	outl.ba.ccs_erp_fin.1_0_0
Object Storage REST APIs	Object Storage Service API Endpoint https://{OSLocation_host_name} To get list of files: Method: GET URI: /n/{namespaceName}/b/{bucketName}/o Query Parameters: prefix To get file: Method: GET URI: /n/{namespaceName}/b/{bucketName}/o/{objectName} To rename file: Method: POST URI: /n/{namespaceName}/b/{bucketName}/actions/renameObject
ERP Cloud Adapter	Bulk Import Data Action: Import Bulk Data into Oracle ERP Cloud Operation: Import Payables Payment Requests

# Account Payable Request Extract Process (Oracle Utilities Customer Care and Billing Initiated)

This integration process is used to transfer payable refund payment request from Oracle Utilities Customer Care and Billing to Oracle ERP Financial Cloud for one-time payment creation.

It is an asynchronous flow that is triggered by a schedule. Oracle Utilities Customer Care and Billing creates an AP Request Extract file which is picked up by the integration process and uploaded to Oracle ERP Financial Cloud. This is just a file pass through and no transformation will be done by the integration.

> **Note**: Make sure the C1-APFCX batch process in Oracle Customer Care and Billing have been run before this integration process is run.

The following diagram shows a graphical representation of the AP Request Extract integration process.
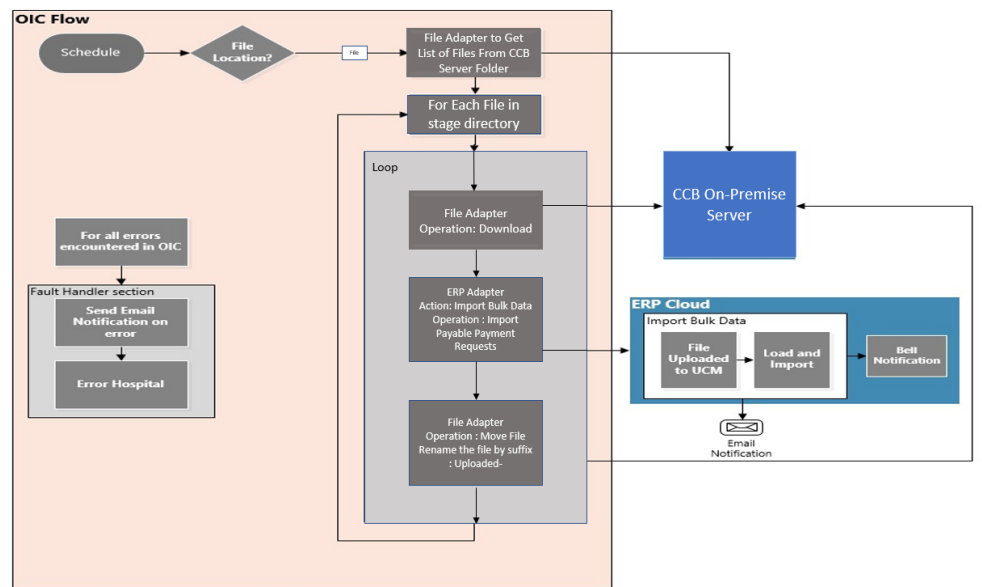
Business Processing

This asynchronous integration process is deployed on Oracle Integration Cloud and does the following activities:

1. If the extract file is in 'On-Premise', it invokes the FTP adapter to return the list of files to be processed. Only files that starts with the string entered in property name apreq.extract.filename.prefix in the CCSERPFIN_ConfigProps lookup file are returned. Most of the time this will only be one file.

2. If there is only one file to process, it performs the following steps. Else, the steps for each file to be processed are repeated.

   a. Invokes the FTP Adapter: Download Operation to get the actual file to process.

   b. Prepares the file to be uploaded to Oracle ERP Financial Cloud.

   c. Uses ERP Adapter Import Bulk data option with operation Import Payables Payment Requests to load and import the AP refund request data into Oracle ERP Financial Cloud.

> **Note**: Bell and email notifications are enabled for any case in the ERP Cloud Adapter. This means when the load and import process are done, bell and email notification are sent out as long as these notifications are setup in the Oracle ERP Financial Cloud.

    d.   After the file is processed by the integration, it invokes the FTP Adapter. : Move operation to rename the file just processed in CCB file path by adding a prefix to the filename. This prefix is obtained from the property name os.prefixtag.fileuploaded in the CCSERPFIN_ConfigProps Lookup.

3.   Error Handling for this process. Any errors encountered are handled by the global fault handler.

    Retry Option: Re-run from Oracle Integration Cloud

4.   An optional email notification with error details is sent to the users configured in the CCSERPFIN_Email_Id lookup. Property name email.flag in the CCSERPFIN_ConfigProps Lookup must be set to 'true' to receive email notification when errors are encountered.

Technical Details

The following table describes the integration process and the respective Oracle Utilities Customer Cloud Service and Oracle ERP Financial Cloud artifacts used in this integration process.

Artifacts	Value
Integration Process Name	Oracle Utilities CCS ERPFIN FTP AP Req Extr Upl
Integration Package Name	outl.ba.ccs_erp_fin.1_0_0
ERP Cloud Adapter	Bulk Import Data Action: Import Bulk Data into Oracle ERP Cloud Operation: Import Payables Payment Requests

# Account Payable Data Payment Update Process (Oracle ERP Financial Cloud Initiated)

This integration process is used to send AP refund request payment information from Oracle ERP Financial Cloud to Oracle Utilities Customer Cloud Service.

The payment information for system-generated checks to customers is generated and processed in Oracle ERP Financial Cloud and then sent to Oracle Utilities Customer Cloud Service. Only payment information that corresponds to the AP refund requests originally generated in Oracle Utilities Customer Cloud Service are sent back. The integration process updates the original AP Request in Oracle Utilities Customer Cloud Service with the details of the payment including the payment status, check number and date.

The following diagram shows a graphical representation of the AP Data Payment Update integration process.
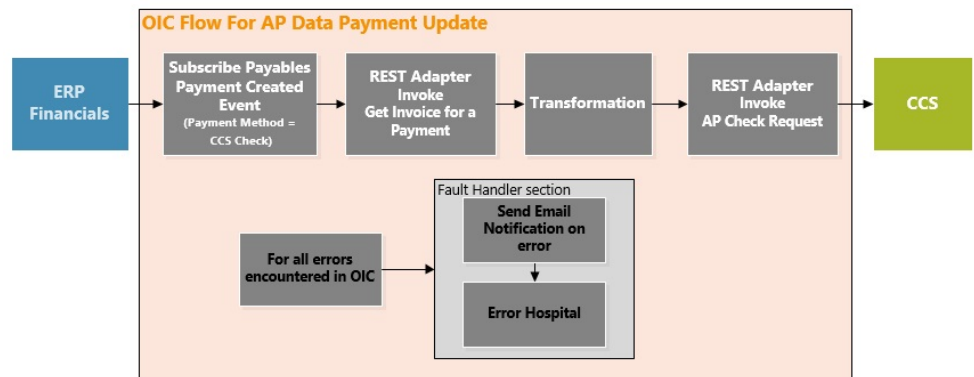
Business Processing

This synchronous integration process is deployed on Oracle Integration Cloud and does the following activities:

1. Subscribe to the **Payables Payment Created** event. Oracle ERP Financial Cloud sends a signal, along with the Account payable (AP) payment information when a payment is created in the application. The integration process will only accept payments with Payment Method = 'CHECK_CCB'. This criteria is used to identify payments made to CCS specific payables.

   Note: The filtering criteria for *Payment Method* is hardcoded to the 'CHECK_CCB' value. This payment method must exist in Oracle ERP Financial Cloud. When sending AP Request from Oracle Utilities Customer Cloud Service, the payment method of the Payables record must be 'CHECK_CCB'.

2. The payment information received from the business event does not return the paid invoice number. Invoke the Oracle ERP Financial Cloud REST API - Get Payment - Related Invoice to get the invoice number, which corresponds to the Oracle Utilities Customer Cloud Service AP Request ID.

3. Transform the Payment information payload from Oracle ERP Financial Cloud format to Oracle Utilities Customer Cloud Service format.

4. Invoke the Oracle Utilities Customer Cloud Service REST API - AP Check Request to pass the payment information to Oracle Utilities Customer Cloud Service.

5. Error Handling for this process.

   Any errors encountered are handled by the global fault handler.

   Retry Option: Re-run from Oracle Integration Cloud.

6. An optional email notification with error details are sent to the users configured in the CCSERPFIN_Email_Id lookup. Property name *email.flag* in the CCSERPFIN_ConfigProps Lookup must be set to 'true' to receive email notification when errors are encountered.

Technical Details

The following table describes the integration process and the respective Oracle Utilities Customer Cloud Service and Oracle ERP Financial Cloud artifacts used in this integration process.

Artifacts	Value
Integration Process Name	Oracle Utilities ERPFIN CCS AP Payment Info Update
Integration Package Name	outl.ba.ccs_erp_fin.1_0_0
CCS REST IWS	C1-APCheckRequest Allows an external system to update the check-related information on an existing A/P Check Request record after the check has been cut. If the A/P Check Request is being canceled, this service also cancels the related adjustment. Computed URL: https://{host}:{port}/{tenant}/{domain}/rest/apis/customer/financials/apCheckRequest Method: PUT URI: /{apRequestId}
Oracle Financial Cloud REST API	Get a paid invoice for a payment Method: GET URI: /fscmRestApi/resources/11.13.18.05/payablesPayments/{CheckId}/child/relatedInvoices

Account Payable Data Payment Void Process (Oracle ERP Financial Cloud Initiated)

This integration process is used to update Oracle Utilities Customer Cloud Service AP refund request payment status to canceled status when a payment is voided in Oracle ERP Financial Cloud.

Only voided payments that corresponds to the AP refund requests originally generated in Oracle Utilities Customer Cloud Service are sent back. The integration process updates the original AP Request in Oracle Utilities Customer Cloud Service with the canceled status.

The following diagram shows a graphical representation of the AP Data Payment Void integration process.
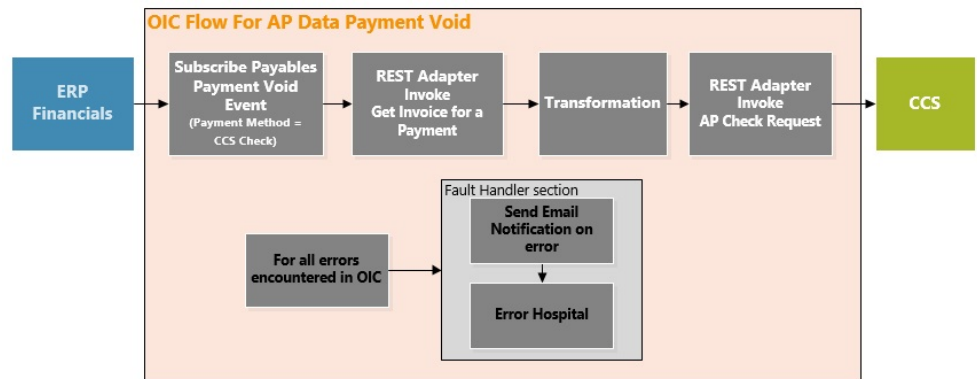
Business Processing

This asynchronous integration process is deployed on Oracle Integration Cloud and does the following activities:

1. Subscribe to the **Payables Payment Void** event. Oracle ERP Financial Cloud sends a signal, along with the Account payable (AP) payment information when a payment is voided in the application. The integration process will only accept void payments with *Payment Method* = 'CHECK_CCB'. This criteria is used to identify payments made to Oracle Utilities Customer Cloud Service specific payables.

    Note: The filtering criteria for Payment Method is hardcoded to the value of 'CHECK_CCB'. This payment method must exist in ERP. When sending AP Request from Oracle Utilities Customer Cloud Service, the payment method of the Payables record must be 'CHECK_CCB'.

2. The payment information received from the business event does not return the void payment invoice number. Invoke the Oracle ERP Financial Cloud REST API - Get Payment - Related Invoice to get the invoice number, which corresponds to the Oracle Utilities Customer Cloud Service AP Request ID.

3. Transform the Payment information payload from Oracle ERP Financial Cloud format to Oracle Utilities Customer Cloud Service format.

4. Invoke the Oracle Utilities Customer Cloud Service REST API - AP Check Request to change the status of the AP request to canceled status in Oracle Utilities Customer Cloud Service.

5. Error Handling for this process.

    Any errors encountered are handled by the global fault handler.

    Retry Option: rerun from Oracle integration Cloud.

6. An optional email notification with error details are sent to the users configured in the CCSERPFIN_Email_Id lookup. Property name email.flag in the CCSERPFIN_ConfigProps Lookup must be set to 'true' to receive email notification when errors are encountered.

Technical Details

The following table describes the integration process and the respective Oracle Utilities Customer Cloud Service and Oracle ERP Financial Cloud artifacts used in this integration process.

Artifacts	Value
Integration Process Name	Oracle Utilities ERPFIN CSS AP VoidPay Info Update
Integration Package Name	outl.ba.ccs_erp_fin.1_0_0
CCS REST IWS	C1-APCheckRequest Allows an external system to update the check-related information on an existing A/P Check Request record after the check has been cut. If the A/P Check Request is being canceled, this service also cancels the related adjustment. Computed URL: https://{host}:{port}/{tenant}/{domain}/rest/apis/customer/financials/apCheckRequest Method: PUT URI: /{apRequestId}
Oracle Financial Cloud REST API	Get a paid invoice for a payment Method: GET URI: /fscmRestApi/resources/11.13.18.05/payablesPayments/{CheckId}/child/relatedInvoices

Account Payable Data Batch Payment Update Process (Oracle ERP Financial Cloud Initiated)

This integration process is used to send the Batch of AP refund request payments information from Oracle ERP Financial Cloud to Oracle Utilities Customer Cloud Service.

The Batch of Payments information for system-generated checks to customers is generated when the submit payment process request is processed in Oracle ERP Financial Cloud and then sent to Oracle Utilities Customer Cloud Service. Only payments information that corresponds to the AP refund requests originally generated in Oracle Utilities Customer Cloud Service are sent back. The integration process updates

the original AP Request in Oracle Utilities Customer Cloud Service with the details of the payment including the payment status, check number and date.

The following diagram shows a graphical representation of the AP Data Batch Payment Update integration process.
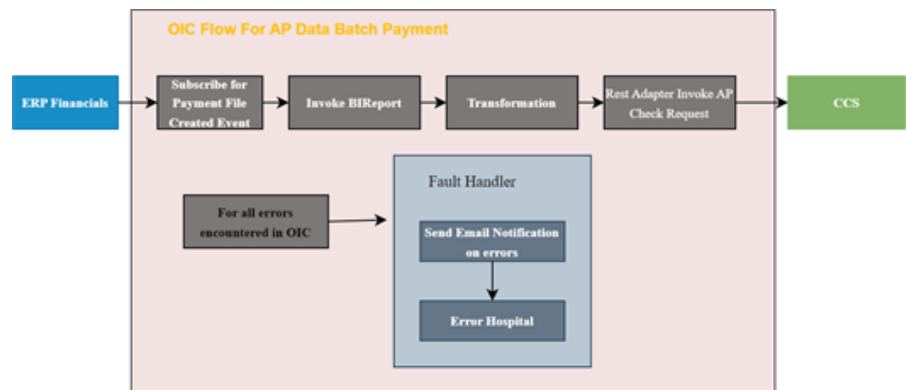
Business Processing

This asynchronous integration process is deployed on Oracle Integration Cloud and does the following activities:

1. Subscribe to the **Payables Payment File Created** event. Oracle ERP Financial Cloud sends a signal, along with the Account Payable (AP) payment information when Submit Payment Process Request is created in the application. The integration process will only accept payments with *Payment Method* = 'CHECK_CCB'. This criteria is used to identify payments made to Oracle Utilities Customer Cloud Service specific payables.

    Note: This payment method must exist in Oracle ERP Financial Cloud. When sending AP Request from Oracle Utilities Customer Cloud Service, the payment method of the Payables record must be 'CHECK_CCB'.

2. The Payment File Reference Number received from the business event does not return the paid invoice number. Invoke the Oracle ERP Financial Cloud BI Report to get the all the paid invoices details.

3. For each Invoice Payment:

    a. Transform the payment information payload from Oracle ERP Financial Cloud format to the Oracle Utilities Customer Cloud Service format.

    b. Invoke the Oracle Utilities Customer Cloud Service REST API - AP Check Request to pass the payment information to Oracle Utilities Customer Cloud Service.

4. Error Handling for this process.

    Any errors encountered are handled by the global fault handler.

    Note: Retry Option rerun from Oracle integration Cloud.

5. An optional email notification with error details are sent to the users configured in the CCSERPFIN_Email_Id lookup. Property name *email.flag* in the CCSERPFIN_ConfigProps Lookup must be set to 'true' to receive email notification when errors are encountered.

Technical Details

The following table describes the integration process and the respective Oracle Utilities Customer Cloud Service and Oracle ERP Financial Cloud artifacts used in this integration process.

| Artifacts	Value
Integration Process Name	Oracle Utilities ERPFIN CCS Batch Payments
Integration Package Name	outl.ba.ccs_erp_fin.1_23_3000
CCS REST IWS	C1-APCheckRequest Allows an external system to update the check-related information on an existing A/P Check Request record after the check has been cut. If the A/P Check Request is being canceled, this service also cancels the related adjustment. Computed URL: https://{host}:{port}/{tenant}/{domain}/rest/apis/customer/financials/apCheckRequest Method: PUT URI: /{apRequestId}

Account Payable Data Batch Void Payments Process (Oracle ERP Financial Cloud Initiated)

This integration process is used to update the Oracle Utilities Customer Cloud Service AP refund request payment status to 'canceled' status when a batch of payments are voided in Oracle ERP Financial Cloud using Manage Payment Files.

Only voided payments that correspond to the AP refund requests originally generated in Oracle Utilities Customer Cloud Service are sent back. The integration process updates the original AP Request in Oracle Utilities Customer Cloud Service with the canceled status.

The following diagram shows a graphical representation of the AP Data Batch Void Payments integration process:
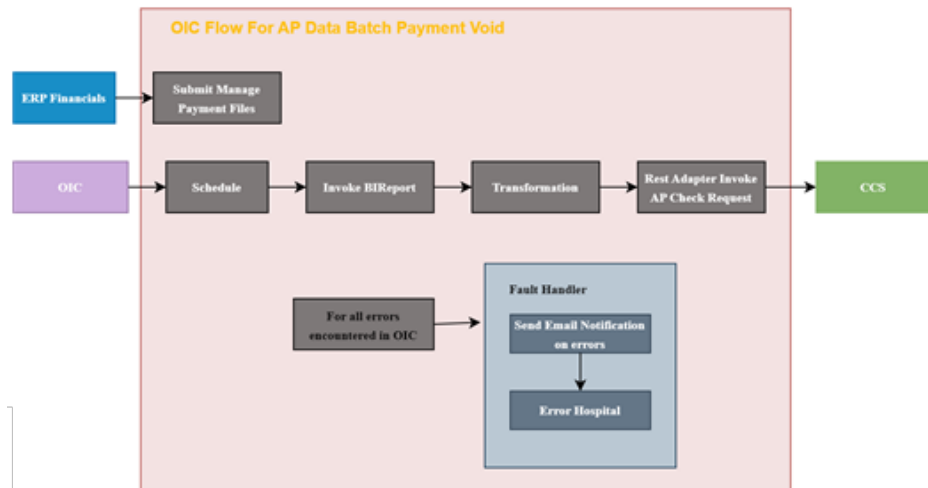
Business Processing

This asynchronous integration process is deployed on Oracle Integration Cloud and does the following activities:

1. Payables payments are voided in Oracle ERP Financial Cloud with the Account Payable Manage Payment File. The integration process will only accept void payments with *Payment Method* = 'CHECK_CCB'. This criteria is used to identify payments made to Oracle Utilities Customer Cloud Service specific payables.

   Note: This payment method must exist in Oracle ERP Financial Cloud. When sending AP Request from Oracle Utilities Customer Cloud Service, the payment method of the Payables record must be 'CHECK_CCB'.

2. The integration runs on schedule basis which will invoke the BI Report with the LastRunDateTime.

3. BI Reports returns all the voided invoice details with the UpdatedDateTime > LastRundateTime.

4. For each Invoice Payment:

   a. Transform the Payment Data from Oracle ERP Financial Cloud to the Oracle Utilities Customer Cloud Service format.

   b. Invoke the Oracle Utilities Customer Cloud Service REST API - AP Check Request to change the status of the AP request to 'canceled' status in Oracle Utilities Customer Cloud Service.

5. Error Handling for this process.

   Any errors encountered are handled by the global fault handler.

   Note: Retry Option gets the previous LastRunDateTime and re-run the Oracle Integration Cloud flow from Oracle Integration cloud.

6. An optional email notification with error details are sent to the users configured in the CCSERPFIN_Email_Id lookup. Property name *email.flag* in the CCSERPFIN_ConfigProps Lookup must be set to 'true' to receive email notification when errors are encountered.

Technical Details

The following table describes the integration process and the respective Oracle Utilities Customer Cloud Service and Oracle ERP Financial Cloud artifacts used in this integration process.

Artifacts	Value
Integration Process Name	Oracle Utilities ERPFIN CSS Batch Void Payments
Integration Package Name	outl.ba.ccs_erp_fin.1_23_3000
CCS REST IWS	C1-APCheckRequest
	Allows an external system to update the check-related information on an existing A/P Check Request record after the check has been cut. If the A/P Check Request is being canceled, this service also cancels the related adjustment.
	Computed URL: https://{host}:{port}/{tenant}/ {domain}/rest/apis/ customer/financials/ apCheckRequest
	Method: PUT
	URI: /{apRequestId}

Account Payable Data Extractor Process (Oracle ERP Financial Cloud Initiated)

This integration process is used in Account Payable Batch Payment Process and Account Payables Batch Void Payment Process. It is used as an abstract process to invoke ERP Financials BI Reports.

The following diagram shows a graphical representation of the AP Data Extractor integration process:
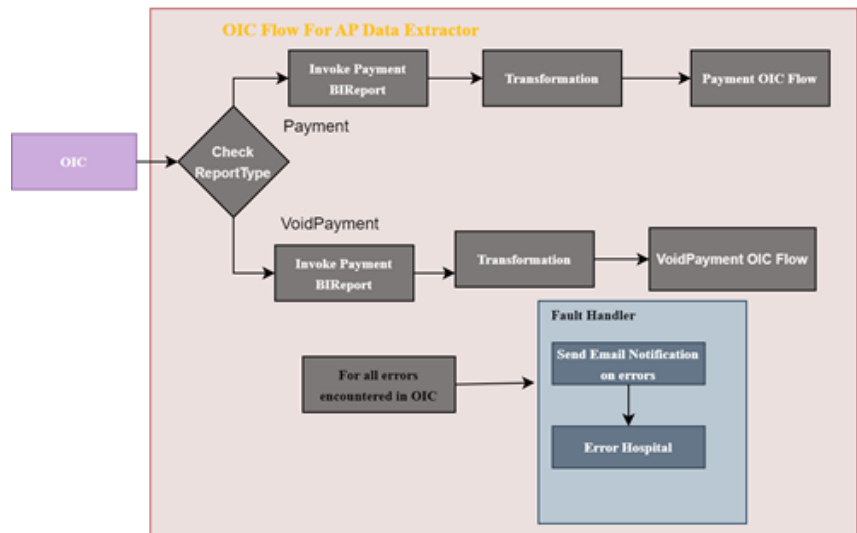
Business Processing

This synchronous integration process is deployed on Oracle Integration Cloud and does the following activities:

1. Payables Payments Paid or Voided in Oracle ERP Financial Cloud. The integration process will only accept payments/void payments with *Payment Method* = 'CHECK_CCB'. This criteria is used to identify payments made to Oracle Utilities Customer Cloud Service specific payables.

   Note: This payment method must exist in ERP. When sending AP Request from Oracle Utilities Customer Cloud Service, the payment method of the Payables record must be 'CHECK_CCB'.

2. The integration is invoked from AP Data Batch Payment/AP Data Batch Void Payment integrations.

3. It will invoke the Payment or Void Payment BI Reports based on the ReportType Parameter.

   • If the Input ReportType value is "Payment", it will invoke the Payment Report.

   • If the Input ReportType value is "VoidPayment", it will invoke the Void Payment Report.

4. Process the BI Report data and send back to the corresponding called integration.

5. Error Handling for this process.

   Any errors encountered are handled by the global fault handler.

6. An optional email notification with error details are sent to the users configured in the CCSERPFIN_Email_Id lookup. Property name *email.flag* in the CCSERPFIN_ConfigProps lookup must be set to 'true' to receive email notification when errors are encountered.


Technical Details

The following table describes the integration process and the respective Oracle Utilities Customer Cloud Service and Oracle ERP Financial Cloud artifacts used in this integration process.

Artifacts	Value
Integration Process Name	Oracle Utilities ERPFIN CSS Batch Data Extractor
Integration Package Name	outl.ba.ccs_erp_fin.1_23_3000
SOAP Service	ExternalReportWSSService
	Allows an external system to invoke ERP BI Reports.
	Computed URL: https://{host}:{port xmlpserver/ services/ExternalReportWSSService?wsdl

Chapter 3

Configuring Oracle Utilities Customer Cloud Service

This chapter elaborates about the configuration of about various data, messages and catalog for the integration used by Oracle Utilities Customer Cloud Service. It includes the following sections:

- One-Time Configuration Setup
- Configuring Admin Data
- Scheduling the Batch Process
- Managing Catalog Services

Configuring Oracle Utilities Customer Cloud Service 3 - 1

Oracle Utilities Customer Cloud Service Integration to Oracle ERP Financial Cloud for General Ledger and Accounts Payable Configuration Guide

One-Time Configuration Setup

Certain one-time configuration settings must be coordinated manually to ensure proper flow of data between the two applications.

General Ledger Configuration

Oracle ERP Financial Cloud for General Ledger and Accounts Payable is the source of truth for all General Ledger information. Oracle Utilities Customer Cloud Service/Oracle 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 Cloud Service uses distribution codes to map sub-ledger transactions to the General Ledger accounts. As part of the Oracle Utilities Customer Cloud Service set up, it is assumed that the distribution codes are properly mapped to the Oracle ERP Financial Cloud General Ledger chart of accounts.

Configuring Admin Data

To configure Oracle Utilities Customer Cloud Service admin data setup for the integration:

1. Login to Oracle Utilities Customer Cloud Service.

2. Define the Journal Categories in algorithm C1EXGLFCREC to be used for the GL Extract. Refer to the Algorithm section for details.

3. Define the Characteristic Values to be used for GL and AP Extracts. Refer to the Characteristic Values section for details.

4. Define the Characteristics in CIS Division to be used for GL and AP Extracts. Refer to the CIS Division section for details.

5. Update Financial Transaction Options. Refer to the Feature Configuration section for details.

Algorithm

Define the Journal Categories in Algorithm **C1EXGLFCREC**. The parameter values for the different journal categories must be a valid value in **Manage Journal Categories Setup Task** page in Oracle ERP Financial Cloud.

Characteristic Values

To define the Characteristic Values for the following Characteristic Types:

- For General Ledger Characteristic Type: Define the Ledger ID for the journal entries data to be used for the GL Extract integration. The Ledger ID provided must be a valid value in **Manage Primary Ledgers** page in Oracle ERP Financial Cloud.

  Characteristic Type: **GLEDGER**

  Characteristic Value: Valid Ledger ID in Oracle ERP Financial Cloud

- For Journal Source Characteristic Type: Define the Journal Entry Source Name to be used for the GL Extract integration. The Journal Entry Source provided must be a valid value in the **Manage Journal Sources Setup Task** page in Oracle ERP Financial Cloud.

  Characteristic Type: **C1-JNLSC**

  Characteristic Value: Valid Journal Entry Source Name in Oracle ERP Financial Cloud

- For Business Unit Characteristic Type: Define the Business Unit to be used for the AP Extract integration. The Business Unit provided must be a valid value in Oracle ERP Financial Cloud.

  Characteristic Type: **EBSORGID**

  Characteristic Value: Valid Business Unit in Oracle ERP Financial Cloud

CIS Division

Create a new CIS Division or use an existing CIS Division for the business. Define the following characteristics needed for this integration:

- General Ledger Characteristic Type, Characteristic Value: Valid Journal Entry Source Name in Oracle ERP Financial Cloud

- Journal Source Characteristic Type, Characteristic Value: Valid Journal Entry Source Name in Oracle ERP Financial Cloud

- Business Unit Characteristic Type, Characteristic Value: Valid Business Unit in Oracle ERP Financial Cloud

Feature Configuration

Create a new feature configuration for Feature Type Financial Transaction Options. If one already exists, update the existing feature by adding the option type mentioned below.

To create a new feature configuration:

1. Navigate to the **Feature Configuration** page from the **Admin** menu or from the **Search** menu.

2. Enter a unique **feature name** and **description**.

   For example: **Name** = FINCONF, **Description** = Financial Transaction Options

3. Set the **Feature Type** field to **Financial Transaction Options**.

4. In the **Options Collection** field, add:

- Option Type = Adjustment Cancel Reason For A/P Request Cancellation

- Sequence = 1

- Value = Valid Adjustment Cancel Reason Code

  Note: When sending an adjustment cancellation to Oracle Utilities Customer Cloud Service and the adjustment cancel reason is not provided, it will get the default from this option.

Scheduling the Batch Process

Run the following Oracle Utilities Customer Cloud Service Batch Processes to create the extracts:

- GL Extract For Oracle ERP Financial Cloud Batch Process
- Accounts Payable Extract for Oracle ERP Financial Cloud Batch Process

GL Extract For Oracle ERP Financial Cloud Batch Process

- 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 Cloud Service and all information that has not been posted to the General Ledger, making them ready for extract.

- After both GLASSIGN and GLS processes have run successfully, schedule the C1-GLFCX batch process to create the GL extract file. Some of the batch parameters are already defaulted. Make sure these parameters are defined.

  - **fileName**: Name of the GL extract file.

  Note: The extract file name defined here should be defined in the property name gl.extract.filename.prefix of the CCSERPFIN_ConfigProps in Oracle Integration Cloud.

  Example file name: GLEXTRACTFILE_{BC}_{BN}.csv. Only the GLEXTRACTFILE part is defined in gl.extract.filename.prefix property name in OIC. The system variables {BC} - Batch Code and {BN}- Batch Number are not needed.

  - **filePath**: Give the path name to the object storage where the file will be stored.

    Example Path: file-storage://OS-APP/Int-Export

    Refer to the Object Storage Setup Guide 19B at https://docs.oracle.com/cd/F20155_01/index.htm.

  Note: When these processes are scheduled to run automatically at a preset time, make sure to have coordinated this timing with the timing of other actions done by Oracle ERP Financial Cloud for General Ledger and Accounts Payable and the integration product. Alternatively, use the standard user interface within Oracle Utilities Customer Cloud Service to run these batch processes manually.

Accounts Payable Extract for Oracle ERP Financial Cloud Batch Process

- Schedule the C1-APFCX batch processes to create the AP extract file. Some of the batch parameters are already defaulted. Make sure these parameters are defined:

  - **source**: Indicates the source of the accounts payable request. This value must be a valid value in Payables Lookup, Type= Source in Oracle ERP Financial Cloud. Each external system should be defined as a source in Oracle ERP Financial Cloud.

    Example: CCS

- **paymentMethod**: The value should always be CCB_CHECK. This value is used in the AP Data integration processes as a filtering criteria to determine the AP request came from Oracle Utilities Customer Cloud Service.

- **fileName**: Name of the AP extract file.

Note: The extract file name defined here should be defined in the property name apreq.extract.filename.prefix of the CCSERPFIN_ConfigProps in Oracle Integration Cloud.

Example filename: APEXTRACTFILE_{BC}_{BN}.csv. Only the APEXTRACTFILE part is defined in apreq.extract.filename.prefix property name in Oracle Integration Cloud. The system variables {BC} - Batch Code and {BN}- Batch Number are not needed.

- **filePath**: Give the path name to the object storage where the file will be stored.

  Example path: file-storage://OS-APP/Int-Export

  Refer to the Object Storage Setup Guide 19B at https://docs.oracle.com/cd/F20155_01/index.htm.

Note: When these processes are scheduled to run automatically at a preset time, make sure to have coordinated this timing with the timing of other actions done by Oracle ERP Financial Cloud for General Ledger and Accounts Payable and the integration product. Alternatively, use the standard user interface within Oracle Utilities Customer Cloud Service to run these batch processes manually.

Run the following Oracle Utilities Customer Care and Billing batch processes to create the extracts:

- GL Extract For Oracle ERP Financial Cloud Batch Process
- Accounts Payable Extract for Oracle ERP Financial Cloud Batch Process

GL Extract For Oracle ERP Financial Cloud Batch Process

- 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 that has not been posted to the General Ledger, making them ready for extract.

- After both GLASSIGN and GLS processes have run successfully, schedule the C1-GLFCX batch process to create the GL extract file. Some of the batch parameters are already defaulted. Make sure these parameters are defined.

  - **fileName**: Name of the GL extract file

Note: The extract file name defined here should be defined in the property name gl.extract.filename.prefix of the CCSERPFIN_ConfigProps in Oracle Integration Cloud.

Example file name: GLEXTRACTFILE_{RDT}.csv. Only the GLEXTRACTFILE part is defined in gl.extract.filename.prefix property name in OIC. The system variables {RDT} - appends the date time to file name is not needed.

  - **filePath**: Give the path name to the file storage where the file will be stored.

    Example Path: file-storage://file-APP/GLSFileDirectory

When these processes are scheduled to run automatically at a preset time, make sure to have coordinated this timing with the timing of other actions done by Oracle ERP Financial Cloud for General Ledger and Accounts Payable and the integration product. Alternatively, use the standard user interface within Oracle Utilities Customer Cloud Service to run these batch processes manually.

Accounts Payable Extract for Oracle ERP Financial Cloud Batch Process

- Schedule the C1-APFCX batch processes to create the AP extract file. Some of the batch parameters are already defaulted. Make sure these parameters are defined:

  - **source**: Indicates the source of the accounts payable request. This value must be a valid value in Payables Lookup, Type= Source in Oracle ERP Financial Cloud. Each external system should be defined as a source in Oracle ERP Financial Cloud.

    Example: CCS

  - **paymentMethod**: The value should always be CCB_CHECK. This value is used in the AP Data integration processes as a filtering criteria to determine the AP request came from Oracle Utilities Customer Cloud Service.

  - **fileName**: Name of the AP extract file

  Note: The extract file name defined here should be defined in the property name apreq.extract.filename.prefix of the CCSERPFIN_ConfigProps in Oracle Integration Cloud.

  Example filename: APEXTRACTFILE_{RDT}.csv. Only the APEXTRACTFILE part is defined in apreq.extract.filename.prefix property name in Oracle Integration Cloud. The system variables {RDT} is not needed.

  - **filePath**: Give the path name to the file storage where the file will be stored.

    Example path: file-storage://file-APP/APFileDirectory

When these processes are scheduled to run automatically at a preset time, make sure to have coordinated this timing with the timing of other actions done by Oracle ERP Financial Cloud for General Ledger and Accounts Payable and the integration product. Alternatively, use the standard user interface within Oracle Utilities Customer Cloud Service to run these batch processes manually.

Managing Catalog Services

The catalog service is used by Oracle Integration Cloud to communicate with the respective application. It is configured in Catalog URL in the Oracle Integration Cloud connection.

To configure the catalog service in Oracle Utilities Customer Cloud Service:

1. Login to Oracle Utilities Customer Cloud Service.

2. Navigate to the **Web Service Catalog** page either from the **Admin** menu or the **Search** menu.

3. Select **REST Web Service Class**.

4. Add the REST inbound web services mentioned below to the catalog.

Service Type	Service Name	Device Verification
Inbound Web Service	C1-APCheckRequest	AP Check Request

For more information about configuration, refer to the Oracle Utilities Customer Cloud Service documentation.

Configuring Oracle Utilities Customer Cloud Service 3 - 7

Oracle Utilities Customer Cloud Service Integration to Oracle ERP Financial Cloud for General Ledger and Accounts Payable Configuration Guide

Chapter 4

Configuring Oracle ERP Product Hub Cloud

This chapter describes the configurations required to integrate Oracle ERP Product Hub Cloud and Oracle Utilities Customer Cloud Service.

- ERP Configuration for General Ledger
- ERP Configuration for Account Payable Request
- ERP Configuration for Account Payable Data
- ERP Configuration for BI Reports

ERP Configuration for General Ledger

This section focuses on the configuration requirements for Journal Integration between Oracle ERP Financial Cloud and Oracle Utilities Customer Cloud Service. The General Accounting module under the Finance umbrella in ERP can handle journals, period close, and general accounting. The process starts with Oracle Utilities Customer Cloud Service running the batch to collect all journals on financial transactions. Oracle Integration Cloud processes to get the General Ledger extract file created in Oracle Utilities Customer Cloud Service and load the file into the Oracle ERP Financial Cloud through "import bulk data integration" (FBDI).

Oracle Utilities Customer Cloud Service generates a data file based on the Journal Import Template in a comma-separated value (CSV) format. Oracle Utilities Customer Care and Billing on premise places the generated file on the server and Oracle Utilities Customer Cloud Service to Object Storage. Oracle Integration Cloud flow picks file from Object Storage or server and places in UCM.

The file is scheduled within ERP from the UCM folder. The following figure shows the process to load the data to the GL_Interface table.

UCM account: fin/generalLedger/import
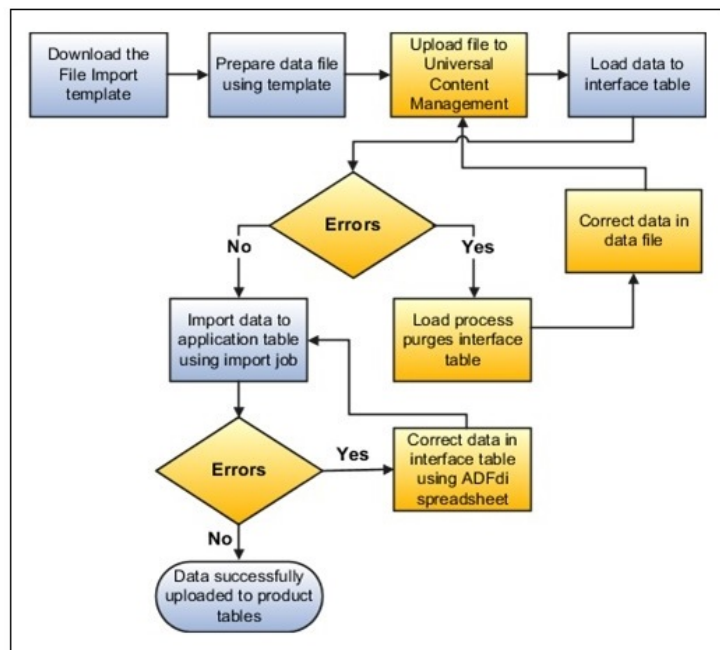
This section includes the following:

- Configuration Overview for General Ledger
- Scheduling the Import Journal
- Configuration Overview for AP
- Configuration Overview of AP Data

Configuration Overview for General Ledger

In addition to the set up to run General Ledger in ERP, to import journals with a specific source, create a reference source in ERP.

Journal import creates journal entries from accounting data imported from Oracle and non-Oracle feeder systems. It supports multiple charts of accounts, as well as foreign currency, intercompany, statistical, budget, and encumbrance journals. It creates journal entries from data in the GL_INTERFACE table.

Defining Journal Sources

Journal sources identify the origin of the journal entries. General Ledger supplies a number of predefined journal sources. In addition, define one journal source for Oracle Utilities Customer Care and Billing, non-Oracle feeder systems to help track imported journal entries.

If journal approval is enabled in the system for set of books, set up journals with a specific journal source approved by higher management levels before the journal can be posted. This will follow the usual setup defined in ERP.

To create a new journal source:

1. Login to the system.

2. Navigate to the **Journal Sources** window.

3. Enter a unique **Name** and **Description** for the journal entry source. The source name cannot be deleted after saving the work.

4. Choose whether to **Import Journal References** from the feeder systems to maintain a mapping of summarized transactions. This information is stored in the GL_IMPORT_REFERENCES table.

5. Check whether to **Freeze Journals** for this journal entry source.

   If the checkbox is selected, journals from this source cannot be changed in the **Enter Journals** window. If it is not selected, changes can be made to journals from this source.

6. Check whether to **Require Journal Approval** for this journal source.

7. If journal approval is enabled for the set of books and a journal is entered whose journal source requires journal approval, the batch must be approved before it can be posted.

8. (Average Balance Processing only) From the list, select an **Effective Date Rule** for the journal source.

   Note that the **Effective Date Rule** field does not appear unless the average balance processing is enabled for at least one set of books.

   • **Fail**: Journal Import rejects transactions when the effective date is not a valid business day. Posting does not take place.

   • **Leave Alone**: Journal import accepts all transactions regardless of the effective date.

   • **Roll Date**: Journal import accepts the transaction, but roll the effective date back to the nearest valid business day within the same period. If there is no prior valid business day within the same period, the effective date is rolled forward.

9. Save the work.

To manage a journal source:

1. Login to the ERP environment.

2. Navigate to **Others** > **Set up and Maintenance** > **Financials** > **General Ledger** > **Manage Journal Source**.
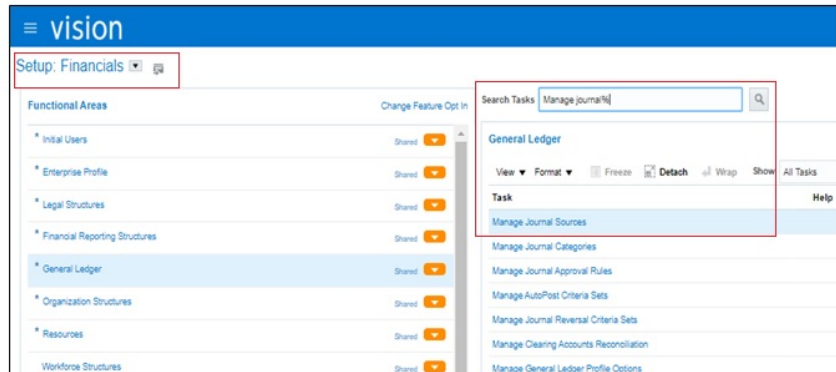
3. Click "+" to add the source.
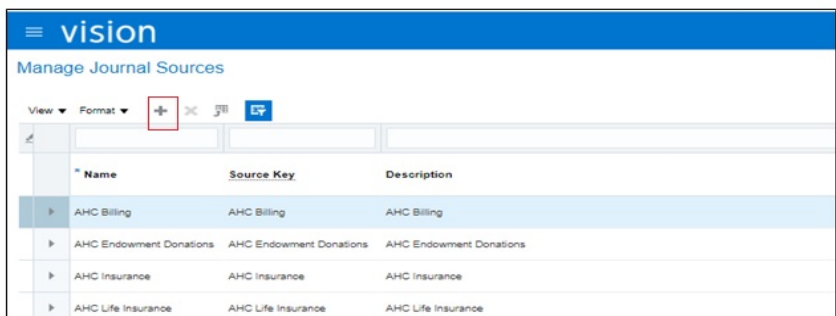
4. Add the following details:

   Name: CCS Transfer

   Source Key: CCS Coexistence

   Description: CCS Suite Coexistence

   Other details on the task needs to be configured based on the business. (Approval is not needed as they are already approved in Oracle Utilities Customer Cloud Service)
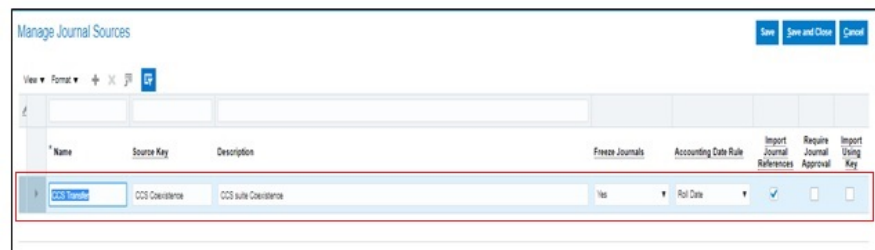
5. Click **Save and Close**.

Scheduling the Import Journal

The file selected from UCM loads the records into the interface table. For the records to transfer to journal, ERP needs to run the Import Journal Process.

To schedule this batch to run over time as per the business requirement:

1. Login to the system.

2. Navigate to **Tools** > **Scheduled Processes**.

3. From the Name list, select **Import Journals**. Click **OK**.

4. Enter the **Source** created in **Define Journal Source**.

5. Click **Advance** > **Schedule**.

6. Enter the **Schedule** details.

7. Select the **Frequency** and **Start Date**.

8. Click **Submit**.

ERP Configuration for Account Payable Request

This section focuses on the import of the Payment request that come as a part of refund that needs to be made for Oracle Utilities Customer Cloud Service. Oracle ERP Financial Cloud provides functionality for importing all the payment line into the Accounts payable module. One Time Payment (OTP) is a method of entering vouchers and payments for a supplier that you do not need to add to the Address Book system.

Oracle Utilities Customer Cloud Service generates a data file based on the Payment request template in a comma-separated value (CSV) format. Oracle Utilities Customer Care and Billing on premise places the generated file on the server and Oracle Utilities Customer Cloud Service to Object Storage. The Oracle Integration Cloud flow picks file from Object Storage or server and places it in UCM.

- The file scheduled within Oracle ERP Financial Cloud from the UCM folder. This schedule process loads the data to AP_PAYMENT_REQUESTS_INT table.

- UCM account: fin/payables/import

Configuration Overview for AP

In addition to the setups to run Accounts Payable request in Oracle ERP Financial Cloud, for importing request with a specific source, we need to create a reference Source in Oracle ERP Financial Cloud.

AP Payment process request creates payment request data from payment data imported from Oracle and non-Oracle feeder systems. Once the records are stored in AP_PAYMENT_REQUESTS_INT, Importing Invoice program is schedule that creates the Invoice from above mentioned table.

One Time Payment feature

For one-time payment where supplier does not exist in the system, Oracle ERP Financial Cloud should be enabled for the feature.

1. Login to the system.

2. Navigate to **Others** > **Setup and Maintenance** > **Financial**.

3. Select **Financial** > **Change Feature Opt In**.

4. Click the Edit icon (pencil icon) against Payables.

5. Select the One Time Payment checkbox.

Payables Lookup Type

To identify payment request from the Source system, create the source in Oracle ERP Financial Cloud. This value is passed in CSV. A lookup is a way to provide validation (using list of values) for a user input field in a user interface. A typical example could be a field on UI form say Gender which might only allow values like 'Male' or 'Female'. The application would not allow any other value apart from the ones listed in the drop down list attached to the form field.

The different lookup types based on this classification are:

- **Common Lookups**: These are migrated from the Legacy Systems as is (they belonged to the Common Lookups Category in other ERP systems) and are provided to ensure backward compatibility is maintained. They are defined in the Common Lookup View.

- **Standard Lookups**: Standard lookups are the simplest form of lookup types consisting only of codes and their translated meaning. They are defined in the Standard Lookup View.

- **Set-Enabled Lookups**: Set enabled lookup types store lookup codes that are enabled for reference data sharing. At runtime, a set-enabled lookup code is visible because the value of the determinant identifies a reference data set in which the lookup code is present.

To create a payable lookup type:

1. Navigate to **Others** > **Set up and Maintenance** > **Financial**.

2. Select **Financials** > **Payables** > **Manage Payables Lookups**.

3. In the **Lookup Type** field enter "Source" and click **Search**.

4. Click "+". Enter the Oracle Customer Care and Billing values.

5. Click **Save and Close.**

Manage Trading Community Source System

The existing Source lookup will link with the trading community system.

To manage trading community source system:

1. Navigate to **Financials** > **Payables** > **Manage Trading Community Source System**.

2. Click **+** to enter the following details.

   Code: CCB

Name: CCB One time payment

Description: CCB One time payment

Enable for Trading Community Members: YES

3. Click **Save and Close**.

Accounts Setup

For One time payments, Oracle ERP Financial Cloud uses Liability and Expense account. Generally, if left blank, value of this field will be defaulted from the setup.

Enter default Liability and Expense accounts in the **Manage Common Options for Payables and Procurement** option.

All business units for which GL is imported should have accounts defined.

To set up accounts:

1. Navigate to **Others** > **Set up and Maintenance** > **Financials** > **Payables** > **Manage Common Options for Payables and Procurement**.

2. Enter the valid Account combination in Liability and Expense account.

3. Click **Save and Close**.

Default Location Setup

For One-time payment, business unit used in the import template should have a default location in the **Manage Business Unit** setup.

To create the default location setup:

1. Navigate to **Others** > **Set up and Maintenance** > **Financials** > **Organization Structures** > **Manage Business Unit**.

2. Select the **Business Unit**.

3. Enter the **Location**.

4. Click **Save and Close**.

Scheduling the Payment Process Request

Select the file from UCM that loads the records to the interface table. For the records to transfer to journal, Oracle ERP Financial Cloud needs to run **Payment Process Request**.

To schedule to run over time as per business requirement:

1. Navigate to **Tools** > **Scheduled Processes**.

2. Select the report from the **Name** list. Select **Import Payables Payments Requests**.

3. Click **OK**.

4. Enter the **Source**.

5. Click **Advance** > **Schedule**.

6. Enter the **Schedule** details. Select the **Frequency** and **Start Date**. Click **Submit**.

ERP Configuration for Account Payable Data

This section focuses on the configuration for outbound message from Oracle ERP Financial Cloud to Oracle Utilities Customer Cloud Service. After the imported Invoice Refund Payment is made from the Oracle ERP Financial Cloud, Integration subscribes to business event which triggers in the payment creation. To enable the event, perform the following configuration in Oracle ERP Financial Cloud.

Configuration Overview of AP Data

Oracle Integration Cloud subscribes to AP events to receive the update about a payment.

Payables Payment Created	Signals when a single payment is created	AP: Enable Business Events profile option at the site level
Payables Payment Voided	Signals when a payment is voided	AP: Enable Business Events profile option at the site level

Profile Option

To allow the events to trigger enable the Profile option:

1. In the **Setup and Maintenance Work Area**, navigate to **Task** and search the **Manage Administrator Profile Values** task.

2. Set **Profile Value** to **Yes**.
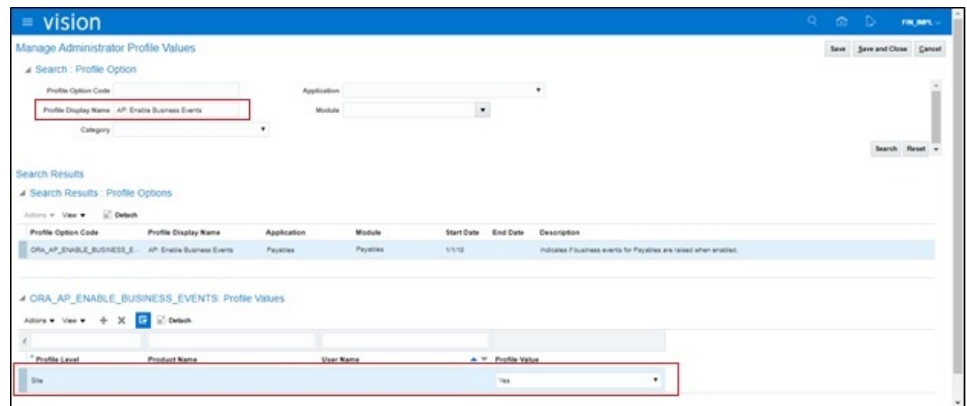
3. Click **Save and Close**.

Payment Method

When the event is received from Oracle ERP Financial Cloud to filter out only the records particular to Oracle Utilities Customer Cloud Service. In this filter, criteria Payment method will be used to identify the Oracle Utilities Customer Cloud Service records.

To create a payment method:

1. Navigate to **Setup and Maintenance** > **Finance** > **Manage Payment Methods**.

2. Click "+" and enter the necessary details.

3. Click **Save and Close**.

ERP Configuration for BI Reports

Payment /VoidPayment Reports

To configure BI Reports in Oracle ERP Financial Cloud:

1. Login to Oracle ERP Financial Cloud.

2. Navigate to **Navigator** > **Tools** > **Reports & Analytics**.

3. Click **Browse Catalog**.

4. On the left pane, navigate to the **/Custom/CCS/Financials** folder. make sure it is accessible to the user configured in Oracle Integration Cloud.
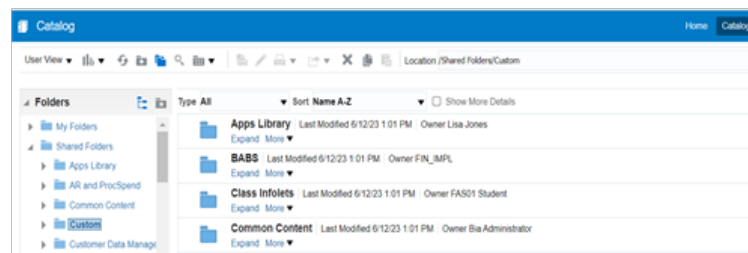
5. Select **Unarchive** from the **Tasks** related to that folder.
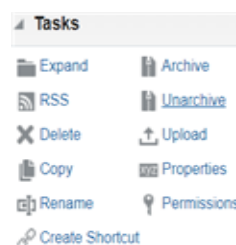
6. Click **Browse** to browse and select the archive file.

7. Select the "FIN_CCS_VOIDPAYMENTS_EXTRACT_RPT.xdo.catalog" file. Retain the remaining fields as shown in the figure.

8. Repeat the steps 5 through 7 to unarchive the "FIN_CCS_PAYMENTS_EXTRACT_RPT.xdo.catalog" file.

9. Make sure the selected catalog files can be imported.

10. Repeat the steps 5 through 7 to unarchive the following Datamodel files to the **/ Custom/CCS/Finanacials/Data Models/** folder.

    • FIN_CCS_PAYMENTS_EXTRACT_DM.xdm.catalog

    • FIN_CCS_VOIDPAYMENTS_EXTRACT_DM.xdm.catalog

11. Make sure the selected catalog files can be imported.

Chapter 5

Importing, Configuring, and Testing Integration Connections

This chapter explains in details the process for importing the connections, packages, and files needed for the integration and the configuration of these connections imported through the packages. After a successful import and configuration the chapter lists out steps to help test the connections. It includes the following sections:

- Importing the Oracle Integration Cloud Package from Oracle Cloud Marketplace

- Verifying the Package Import

- Configuring Connections in Oracle Integration Cloud

- Setting up Certificates for Security

Importing the Oracle Integration Cloud Package from Oracle Cloud Marketplace

All integration points are shipped as part of single package (.par) file.

To import a pre-built integration from Oracle Cloud Marketplace:

1. Launch the Oracle Cloud Marketplace portal.

   https://cloudmarketplace.oracle.com/marketplace/en_US/homePage.jspx

2. Click **Applications**.

3. Search for "Oracle Utilities Customer Cloud Service".

4. Browse through the list of applications and select the pre-built integration package to import.

5. Click **GetApp**.

6. Review and accept "Oracle Standard Terms and Restrictions".

7. Click **Next**. MyOracle Support portal opens.

8. Download the integration package from MyOracle Support.

9. When prompted, select the server where the pre-built integration file should be uploaded.

   The pre-built integration is imported as a package file that is visible on the **Packages** page in Oracle Integration Cloud.

10. On the **Integrations** page, the individual integrations of the imported package file that are designated with a BUILT BY ORACLE message are displayed.

    > **Important!** This note is applicable only for existing customers. Make sure to take a backup of the existing package and lookups, and perform the cleanup before proceeding with the new package import. The cleanup includes deactivating the existing flows in this package and deleting the package, connections, lookups and libraries used in the integration.

To import a package in Oracle Integration Cloud:

1. Login to Oracle Integration Cloud.

2. Navigate to **Integrations** > **Designer** > **Packages**.

3. Click **Import**.

4. Select the .par file downloaded from Oracle Cloud Marketplace.

5. Verify if the package is imported is successfully.

Verifying the Package Import

To verify the package import was successful:

1. Verify whether the following integrations are imported successfully.

   • Oracle Utilities CCS ERPFIN OS GL Extract Upl

   • Oracle Utilities CCS ERPFIN SFTP GL Extract Upl

- Oracle Utilities CCS ERPFIN OS AP Req Extr Upl
- Oracle Utilities CCS ERPFIN SFTP AP Req Extr Upl
- Oracle Utilities ERPFIN CCS AP Payment Info Update
- Oracle Utilities ERPFIN CSS AP VoidPay Info Update
- Oracle Utilities ERPFIN CCS Batch Payments
- Oracle Utilities ERPFIN CCS Batch Void Payments
- Oracle Utilities ERPFIN CCS Data Extractor

2. Verify if the following connections are in place.
   - Oracle Utilities REST CCS OS for CCS-ERPFIN
   - Oracle Utilities ERP FIN for CCS-ERPFIN
   - Oracle Utilities REST ERPFIN for CCS-ERPFIN
   - Oracle Utilities REST CCS for CCS-ERPFIN
   - Oracle Utilities FTP CCB for CCS-ERPFIN
   - Oracle Utilities BI ERP FIN for CCS-ERPFIN
   - Oracle Utilities REST Trigger for CCS-ERPFIN

3. Make sure that the following look ups are imported successfully.
   - CCSERPFIN_Email_ID
   - CCSERPFIN_ConfigProps
   - CCSERPFIN_PaymentMethod
   - CCSERPFIN_Currency

Configuring Connections in Oracle Integration Cloud

After the packages are imported and verified, the respective connections have to be configured.

This section describes the procedure to set up the following connections:

- Configuring Oracle Utilities REST CCS OS for CCS-ERPFIN Connection
- Configuring Oracle Utilities ERP FIN for CCS-ERPFIN Connection
- Configuring Oracle Utilities REST ERPFIN for CCS-ERPFIN Connection
- Configuring Oracle Utilities REST CCS for CCS-ERPFIN Connection
- Configuring Oracle Utilities FTP CCB for CCS-ERPFIN Connection
- Configuring Oracle Utilities BI ERP FIN for CCS-ERPFIN Connection
- Configuring Oracle Utilities REST Trigger for CCS-ERPFIN Connection

Configuring Oracle Utilities REST CCS OS for CCS-ERPFIN Connection

This connection is used to communicate with Oracle Cloud Object Storage using the REST adapter.

To configure the Oracle Utilities REST CCS OS for CCS-ERPFIN connection:

1. In the **Connection Properties** section, enter the object storage API endpoint use by Oracle Utilities Customer Cloud Service in the **Connection URL**.

    For information about API endpoints, refer to the Oracle Cloud Infrastructure Documentation for Object Storage Service API at https://docs.cloud.oracle.com/en-us/iaas/api/#/en/objectstorage/20160918/.

2. In the **Security** section:

    a. Select the **OCI Signature Version 1** security policy.

    b. Provide the following Object Storage information:

    - Tenancy OCID

    - User OCID

    - Upload the private key

    - Fingerprint (obtained from object storage after register the public key for the appropriate user)

        For more information, refer to the *Object Storage Setup Guide 19B* at https://docs.oracle.com/cd/F20155_01/index.htm.

3. On the **Connection** page, enter the user name and password. Click **Test**.

4. After the connection is tested successfully, click **Save**.

Configuring Oracle Utilities ERP FIN for CCS-ERPFIN Connection

This connection is used to communicate with Oracle ERP Financial Cloud applications using the Oracle ERP Financial Cloud Adapter.

To configure the Oracle Utilities ERP FIN for CCS-ERPFIN connection:

1. Enter the **ERP Host**.

    The ERP host follows this format: https://<ERP Cloud host>

2. In the **Security Policy** section, select **Username Password Token**.

3. Enter the **Username** and **Password** to connect to Oracle ERP Financial Cloud.

4. Click **Test**.

5. After the connection is tested successfully, click **Save**.

Configuring Oracle Utilities REST ERPFIN for CCS-ERPFIN Connection

This connection is used to communicate with Oracle ERP Financial Cloud REST API using the REST adapter.

To configure the Oracle Utilities REST ERPFIN for CCS-ERPFIN connection:

1. In the Connection Properties section define the following:

    a. From the **Connection Type** drop-down list, select **REST API Base URL**.

b. Enter the Oracle Financial Cloud TRST server URL in the **Connection URL**.

   Note: Typically, this is the URL of your Oracle Utilities Customer Cloud Service. Example: https://servername.fa.us2.oraclecloud.com

2. From the **Security Policy** drop-down list, select **Basic Authentication**.

3. On the **Connection** page, enter the user name and password.

4. Click **Test** at the upper-right corner.

5. After the connection is tested successfully, click **Save**.

   Note: You can find the REST Server URL, user name, and password in the welcome email sent to your Oracle Utilities Customer Cloud Service administrator.

Configuring Oracle Utilities REST CCS for CCS-ERPFIN Connection

This connection is used to communicate with Oracle Utilities Customer Cloud Service using the Oracle Utilities adapter. Configure the Oracle Utilities REST CCS for CCS-ERPFIN connection:

1. Enter the Oracle Utilities Customer Cloud Service **REST web catalog** in the **catalogURL** section.

   The REST Catalog URL follows this format:
   https://{host}:{port}/{tenant}/{domain}/{appName}/rest/openapi/iws/catalog

2. In the **Security policy** section, select **Basic Authentication**.

3. Enter **Username** and **Password** to connect to Oracle Utilities Customer Cloud Service.

4. Click **Test** at the upper-right corner.

5. After the connection is tested successfully, click **Save**.

Configuring Oracle Utilities FTP CCB for CCS-ERPFIN Connection

This connection is used to communicate with Oracle Utilities Customer Care and Billing using the FTP adapter. Configure the Oracle Utilities FTP CCB for CCS-ERPFIN connection:

1. Enter the Oracle Utilities Customer Care and Billing host address in the **FTP Server Host Address** section.

2. In the **FTP Server Port** section, enter the port.

   Example: 22

3. In the **SFTP Connection** section, select **true**.

4. In the **Security** section, select **FTP Public Key Authentication**. Enter the user name and provide the private key to connect to Oracle Utilities Customer Care and Billing.

5. Use the agent to connect to the on-premise server.

6. Click **Test** at the upper-right corner.

7. After the connection is tested successfully, click **Save**.

Configuring Oracle Utilities BI ERP FIN for CCS-ERPFIN Connection

This connection is used to communicate with Oracle ERP Financial Cloud External BI Report using the SOAP adapter.

To configure the Oracle Utilities BI ERP FIN for CCS-ERPFIN connection:

1. Provide the WSDL URL.

   Example: https://ERP-HOST/xmlpserver/services/ ExternalReportWSSService?wsdl

2. In the **Security** section, select the **Username Password Token**.

3. Provide the Oracle ERP Financial Cloud user and password details.

4. Click **Test** at the upper-right corner.

5. After the connection is tested successfully, click **Save**.

   > **Note**: You can find the REST Server URL, user name, and password in the welcome email sent to your Oracle Utilities Customer Cloud Service administrator.

Configuring Oracle Utilities REST Trigger for CCS-ERPFIN Connection

This connection is used to communicate with Oracle Integration Cloud local Integrations. Configure the Oracle Utilities REST Trigger for CCS- ERPFIN connection:

1. From the **Security Policy** drop-down list, select **OAuth2.0**.

2. Click **Test** at the upper-right corner.

3. After the connection is tested successfully, click **Save**.

Setting up Certificates for Security

> **Important!** Skip this section if there are valid CA certificates for the integration.

If there no valid certificates for this integration, download the Oracle Utilities Customer Cloud Service certificates and upload them to Oracle Integration Cloud to handshake with Oracle Utilities Customer Cloud Service.

To download the Oracle Utilities Customer Cloud Service certificate:

1. Login to Oracle Utilities Customer Cloud Service.

2. Click the URL on the top-left corner.

3. On the **Security** tab, click **View Certificate**.

4. On the **Details** tab, click **Export**.

5. Save the certificate.

To upload the certificate to Oracle Integration Cloud:

1. Login to Oracle Integration Cloud with Admin credentials.

2. Navigate to **Settings** > **Certificates**.

3. On the **Certificate** window, click **Upload**.

4. Select **Certificate Type** as **Trust Certificate**.

5. Provide the **Certificate Alias Name**.

6. Select the certificate to upload.

7. Click **Upload**.

Chapter 6

Configuring Lookups, Error Handling, and Email Notifications

This chapter focuses on the lookups configuration, handling business and technical errors, sending email notifications, and customizations in this integration. It includes the following sections:

- Configuring Lookups
- Error Handling
- Email Notifications

Configuring Lookups

The following table lists the lookups that are part of this integration.

The lookups are only used for Account Payable Data Sync (Oracle ERP Financial AP initiated).

DVM Name	Description
CCSERPFIN_Currency	Map Currency Code between Oracle Customer Cloud and Oracle Financial Cloud
CCSERPFIN_PaymentMethod	Map Payment Method between Oracle Customer Cloud and Oracle Financial Cloud

The following lookups are part of all three integration flows:

DVM Name	Description
CCSERPFIN_ConfigProps	Shared by all flows in this integration. Maps PropertyName column to the respective Value Column. Do not change the values in PropertyName column.
CCSERPFIN_Email_Id.dvm	Shared by all flows in this integration. Maps from and to recipient values to the mentioned email IDs.User can configure multiple emails by putting comma to separate the email IDs.

Editing Lookups

To edit a lookup:

1. Login to Oracle Integration for Cloud.
2. Navigate to **Integrations** > **Designer** > **Lookups**.
3. Select the look up to edit.
4. Make the necessary changes.
5. Click **Save** and **Close**.

Configuration Properties

CCSERPFIN_ConfigProps lookup contains the properties that can be defaulted in the integration. It also contains a flag to enable email notifications.

GL and AP Extract Integration Flows

Property Name	Sample Value	Description
os.namespace		The Object Storage namespace serves as a container for all your buckets and objects. Define the namespace where the buckets and objects the GL extract file resides. This is used when calling the Object Storage APIs. Shared property for all flows in this integration.
os.gl.bucketname		Bucket Name to where the objects or files are stored. Define the bucket name where the GL Extract file is stored. This is used when calling the Object Storage APIs.
gl.extract.filename.prefix		GL Extract file name prefix This should have the same value as the batch parameter filename in Batch Process C1-GLFCX.
os.apreq.bucketname		Bucket Name to where the objects or files are stored. Define the bucket name where the AP Req Extract file is stored. This is used when calling the Object Storage APIs.
apreq.extract.filename.prefix		The AP Req Extract file name prefix. This should have the same value as the batch parameter filename in Batch Process C1-APFCX.
os.prefixtag.fileuploaded	Uploaded	The text to append to the Ap Req Extract filename to mark the file as processed or uploaded in Object Storage. Shared property for all flows in this integration.
apreq.input.directory		Folder path in which AP Request file is generated for CCB on-prem scenario from which OIC picks and process file to ERP
gl.ftp.input.directory		Folder path in which GL Extract file is generated for CCB on-prem scenario, OIC picks and process file to ERP from this location
ftp.download.directory		Stage directory in OIC to process the files downloaded from CCB server folder

Property Name	Sample Value	Description
erp.ccs.adj.pay.status	P	Used to map payment status for BatchPayment.
erp.ccs.adj.voidpay.status	X	Used to map payment status for BatchVoidPay.
erp.ccspaymentmethod	CHECK_CCB	Used to map payment method from ERP to CCS

Error Handling

This section provides information about the different ways used to handle errors in the integration and also resubmitting the instances after rectifying the errors.

- Error Handling Ways
- Resubmitting the Error Instances in Oracle Integration Cloud

Error Handling Ways

In this integration, the errors are handled in different ways due to the limitation of Oracle Integration Cloud.

- Asynchronous Flow Error Handling

Asynchronous Flow Error Handling

Technical Fault
This fault occurs when there is a data mismatch or any Xpath related error. When this error occurs, the flow immediately goes to global fault handler and an optional email to the respective user is sent.

Remote Fault
This fault occurs when the target system is down. When this error occurs, the flow immediately goes to global fault handler and an optional email is sent to the respective user.

Business Fault
This fault occurs only when the business fault occurs in the target system due to invalid data. When this error occurs the flow immediately goes to global fault handler and an optional email is sent to the respective user.

Resubmitting the Error Instances in Oracle Integration Cloud

In this integration, the flows initiated by Oracle ERP Financial Cloud are asynchronous flows, and the resubmit option is available only for asynchronous flows.

To resubmit the error instances in Oracle ERP Financial Cloud:

1. Login to Oracle ERP Financial Cloud.

2. Navigate **Integrations** > **Monitoring** > **Errors**.

3. Select the integration to resubmit.

4. Click the **Resubmit** icon.

Email Notifications

This pre-built integration includes a configurable email notification.

To receive an email notification:

1. Login to Oracle Integration Cloud.

2. Navigate to **Integrations** > **Designer** > **Lookups**.

3. Edit the **CCSERPFIN_Email_Id.dvm** look up.

   a. In the **from** field, enter the email ID to receive an email from.

   b. In the **to** field, enter the email ID to send the email to.

   c. In the **Email_Id** field, provide the comma separated email IDs.

   Note: In the ERPWACS_Email_ID lookup, do not edit the values provided under the **Recipient** column.

Chapter 7

Activating and Testing the Integration Flows

This section provides an overview of how integration flows are activated and tested. It includes the following sections:

- Prerequisites
- Activating Integration Flows

Activating and Testing the Integration Flows 7 - 1

Oracle Utilities Customer Cloud Service Integration to Oracle ERP Financial Cloud for General Ledger and Accounts Payable Configuration Guide

Prerequisites

The prerequisites are:

- All lookups and DVMs are setup in the Oracle Integration Cloud.

- Oracle Utilities Customer Cloud Service mandatory setup required for AP Payment request is configured with the Oracle ERP Financial Cloud values.

- Scheduler process is set to schedule records for Source which runs files from Oracle Utilities Customer Cloud Service.

- Oracle Utilities Customer Care and Billing mandatory set up to be done for file path and directory of the path should be available in server.

Activating Integration Flows

To activate the integration flows:

1. Navigate to the integration to activate.

2. Drag the slider for that integration. When prompted to enable tracing, click **Yes** to view the instances.

3. Click **Activate**.

The integration takes time to get activated. The activated integration appears at the top of the integrations list.

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Chapter 8

Monitoring and Troubleshooting

This section provides information about monitoring and troubleshooting the integration. It includes the following:

- Oracle Utilities Customer Cloud Service
- Oracle Utilities Customer Care and Billing
- Oracle Integration Cloud

Oracle Utilities Customer Cloud Service

For more information about errors and notifications, see the Oracle Utilities Customer Cloud Service documentation.

Oracle Utilities Customer Care and Billing

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

Oracle Integration Cloud

This section focuses on the monitoring Oracle Integration Cloud and troubleshooting any issues that occur during the integration activation.

Monitoring Integration Flows

Integration flows are monitored using the following:

- Dashboard
- Cloud Logs

To monitor the integration flows from the Oracle Integration Cloud dashboard:

1. Login to Oracle Integration Cloud.
2. On the **Home** page, click **Monitoring**.
3. Select any of the following as required:
    - **Dashboards**: To monitor the complete dashboard of integration.
    - **Integrations**: To monitor each integration.
    - **Tracking**: To monitor instance and flow trace/activity stream of the integration.
    - **Error**: To monitor the integrations in 'error' state. Re-submit the asynchronous integration flows.

To monitor the integration flows using Oracle Integration Cloud logs:

1. Login to Oracle Integration Cloud.
2. On the **Home** page, click **Monitoring**.
3. On the navigation pane, click **Dashboards** to view the overall success/failure rate of the integration.
4. Navigate to the **Logs** menu.
5. In the right pane, click the link to show options for downloading the Oracle Integration Cloud logs or diagnostics logs.
6. In case of any issues, attach the diagnostic logs to a service request for help.

Troubleshooting

If an activation fails, the Integrations page displays an error message.

To troubleshoot the activation error:

1. Click **Download Diagnostic Logs** to download the logs for diagnosing the issue.

2. Select **Enable Tracing**.

   TRACE ENABLED is displayed next to ACTIVE.

Some of the sample cases are as follows:

- For any connectivity errors while activating the integration, make sure the trigger connection is successful. Test the connection and refresh the metadata, and then activate the integration.

- If the integration (Oracle Utilities Customer Care and Billing initiated flows) is activated for the first time, ensure the Oracle Utilities Customer Care and Billing catalog is configured accurately.