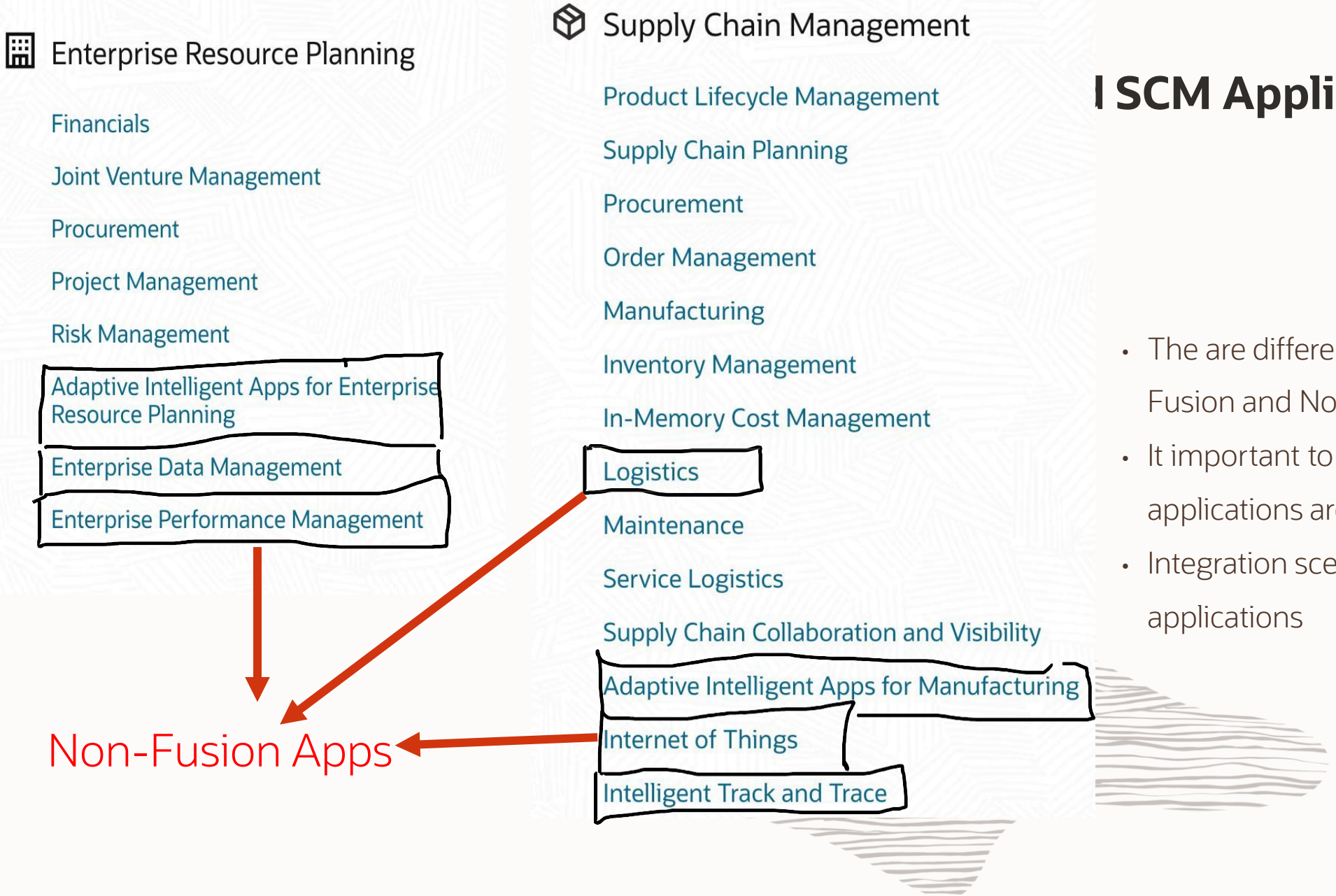
ORACLE

Overview of ERP Cloud Integration using OIC

Copyright © 2020, Oracle and/or its affiliates. All rights reserved.

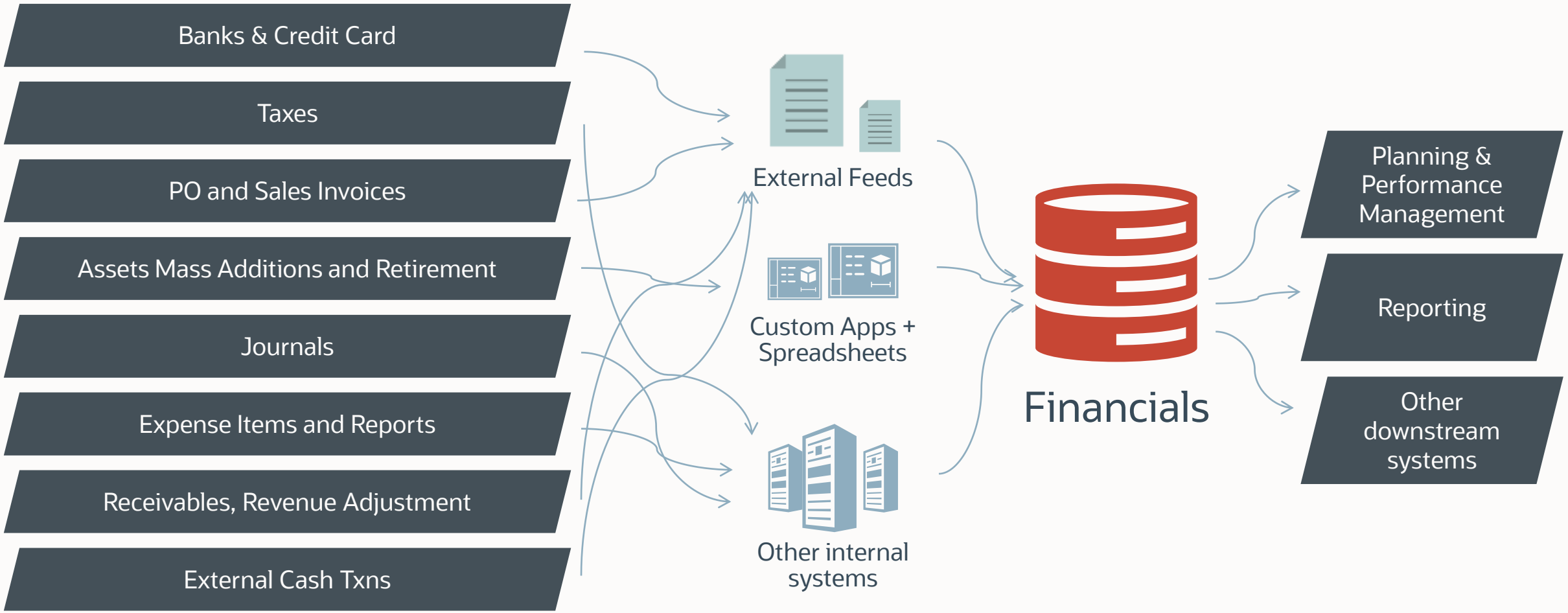
l SCM Applications



- The are differences between integrating Fusion and Non- Fusion applications
- It important to understand what applications are implemented
- Integration scenarios differ for different applications

Copyright © 2019 Oracle and/or its affiliates.

Typical Integration Points for Financials



Copyright © 2020, Oracle and/or its affiliates. All rights reserved.

ERP Integration Services

Financials

Transactional Services

SOAP | REST | Business Events

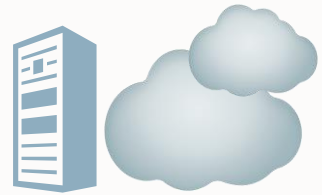
Bulk Services

FBDI | BI Publisher | OTBI

Setup Services

Transfer files | Submit Jobs | Monitor Job Status

End-to-End Orchestration



Apps Unlimited and 3rd Party

Copyright © 2020, Oracle and/or its affiliates. All rights reserved.

Oracle Integration: Adapter Support for ERP Cloud

Automating ERP/SCM Connectivity

Direction	Category	ERP Cloud Mechanism	Connectivity via Oracle Integration
Trigger (into Oracle Integration (OIC))	Events	Events	◆ Through ERP Cloud Adapter
Invoke (from Oracle Integration (OIC))	Real-Time API	SOAP APIs	◆ Through ERP Cloud Adapter
		REST APIs	◆ Through ERP Cloud Adapter
	Bulk Data / Batch Operations	File-based Data Import (FBDI)	◆ Through ERP Cloud Adapter
		Data Extracts	◆ Through Technology Adapter (File/FTP and SOAP adapter)

Copyright © 2020, Oracle and/or its affiliates. All rights reserved.

Integration Made Simple

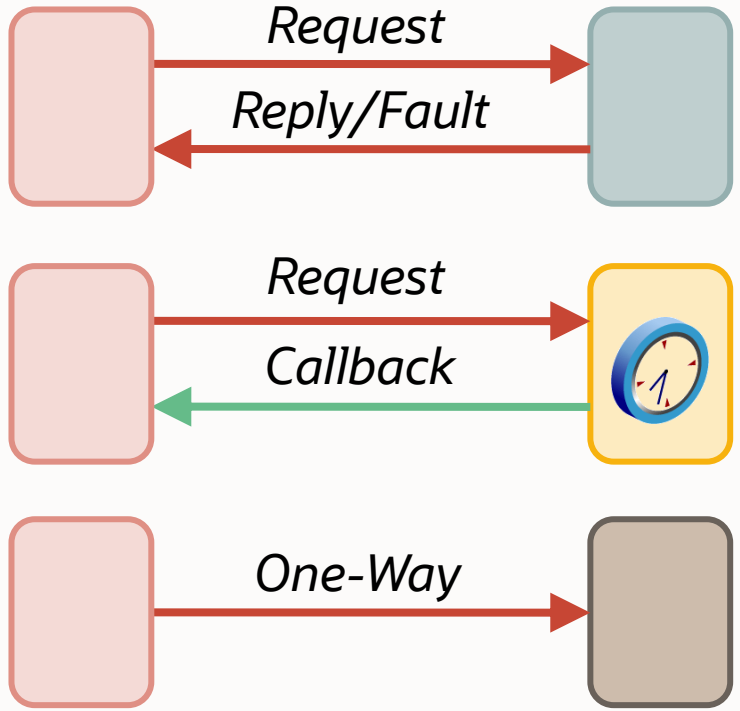
- ✓ Friendly view of business objects, services and operations from SaaS
- ✓ Single standard interface to connect SaaS
- ✓ Upgrades with SaaS
- ✓ Handle security for SaaS connectivity
- ✓ Handle SaaS events
- ✓ Handle callbacks, retries and errors, all in one place

Oracle ERP Cloud Adapter (Trigger Role)

The Oracle ERP Cloud Adapter enables you to create an integration with Oracle Enterprise Resource Planning (ERP) applications.

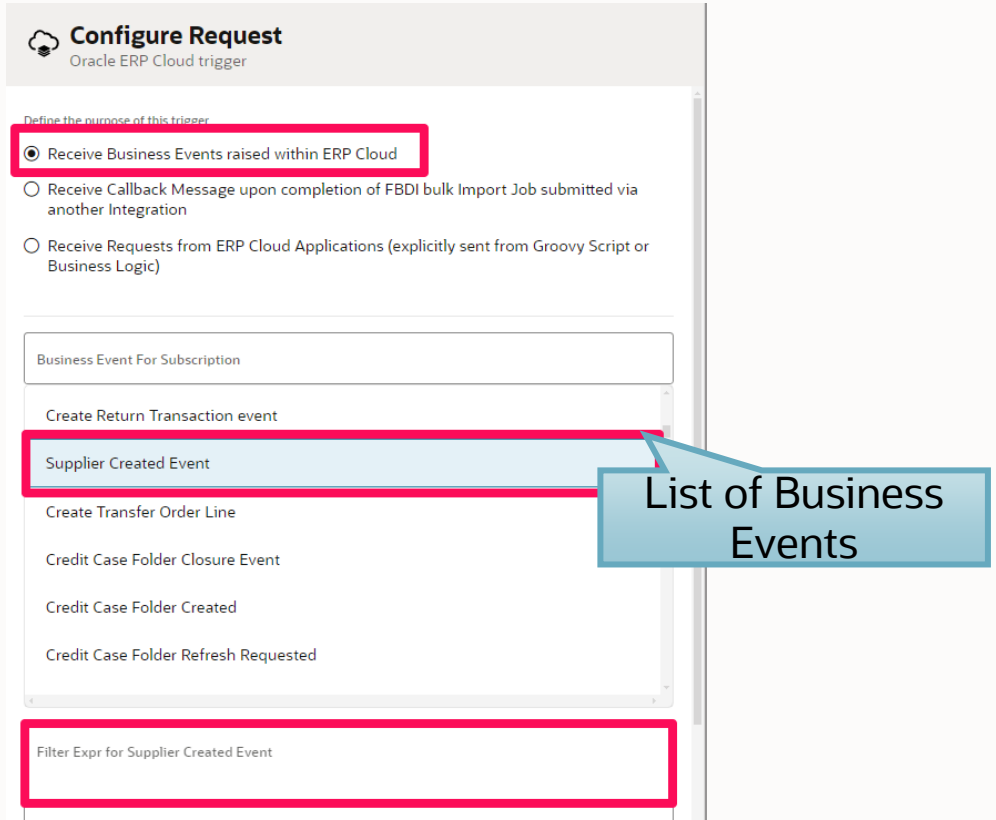
Trigger connections can be configured to define one of the following use cases and patterns:

- **Receive Business Events** *(raised within ERP Cloud)*
  - Asynchronous (one-way)
  - Asynchronous w/ callbacks
- **Receive Callback** *(from FBDI bulk Import Job)*
  - Asynchronous (one-way)
- **Receive Requests** *(ERP business objects)*
  - Asynchronous (one-way)



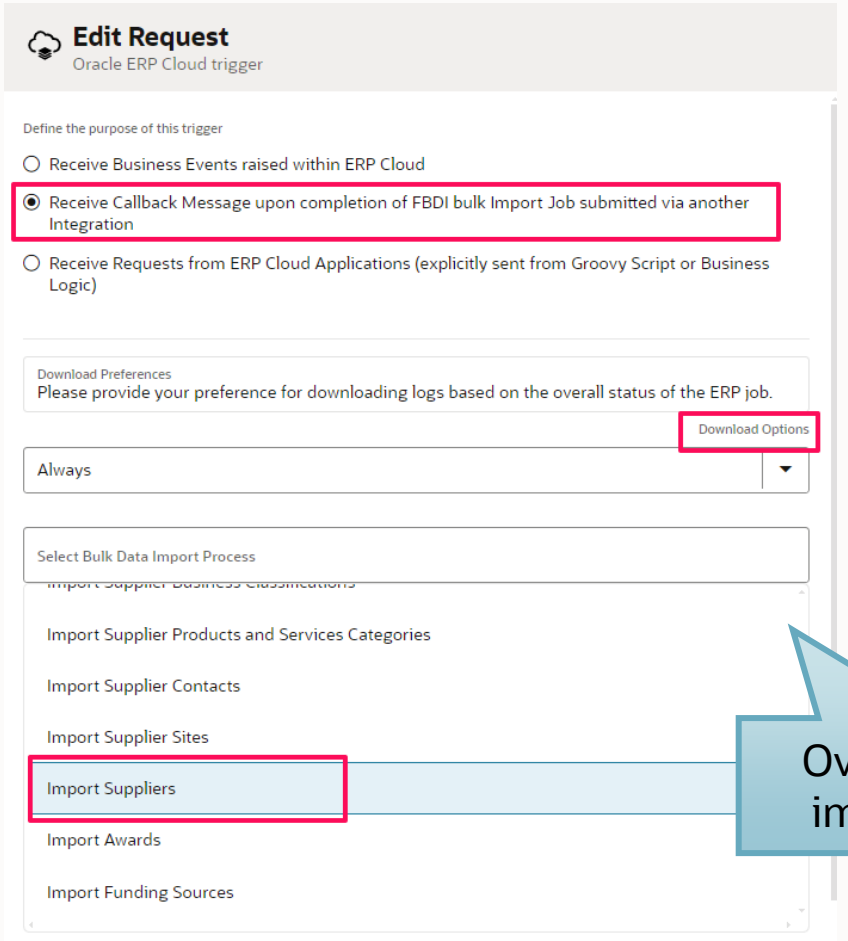
Request and Response Pages: Business Events (Trigger Role)

- Select to receive an event subscription raised by the Oracle ERP Cloud application as a request from Oracle ERP Cloud. This selection invokes the integration.
  - Select the business event and define a filter expression as required.



Request Page: FBDI Callback (Trigger Role)

Select to configure a callback notification response to send upon completion of the FBDI data import from another integration into the Oracle ERP Cloud application.



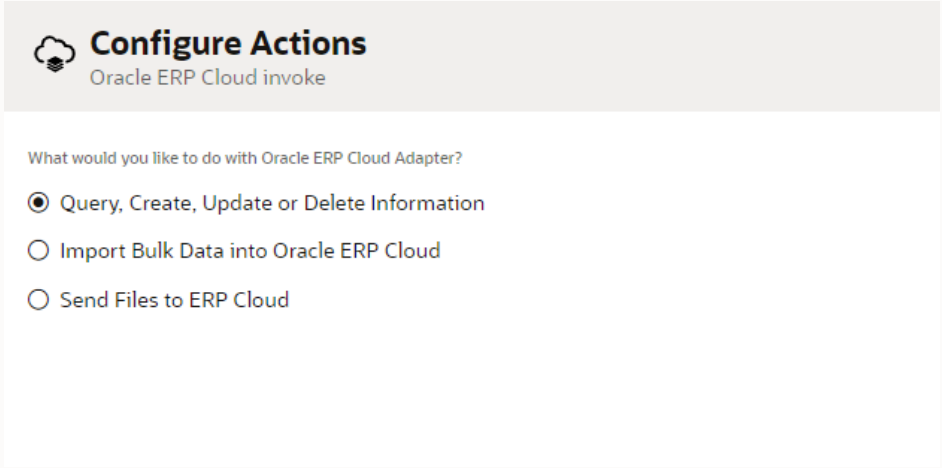
Over 125 bulk data import processes

- Select the bulk import job process that was initiated by another integration.
- Specify preference for downloading logs.

No Response page – *this is a one-way asynchronous message from ERP*

Oracle ERP Cloud Adapter (Invoke Role)

- The Oracle ERP Cloud Adapter enables you to invoke operations or perform FBDI-compliant bulk operations in Oracle Enterprise Resource Planning (ERP) applications.
- Start by selecting from one of the three following options on the Invoke **Actions** page:
  - **Query, Create, Update, or Delete Information** (default)
  - **Import Bulk Data into Oracle ERP Cloud**
  - **Send Files to ERP Cloud**

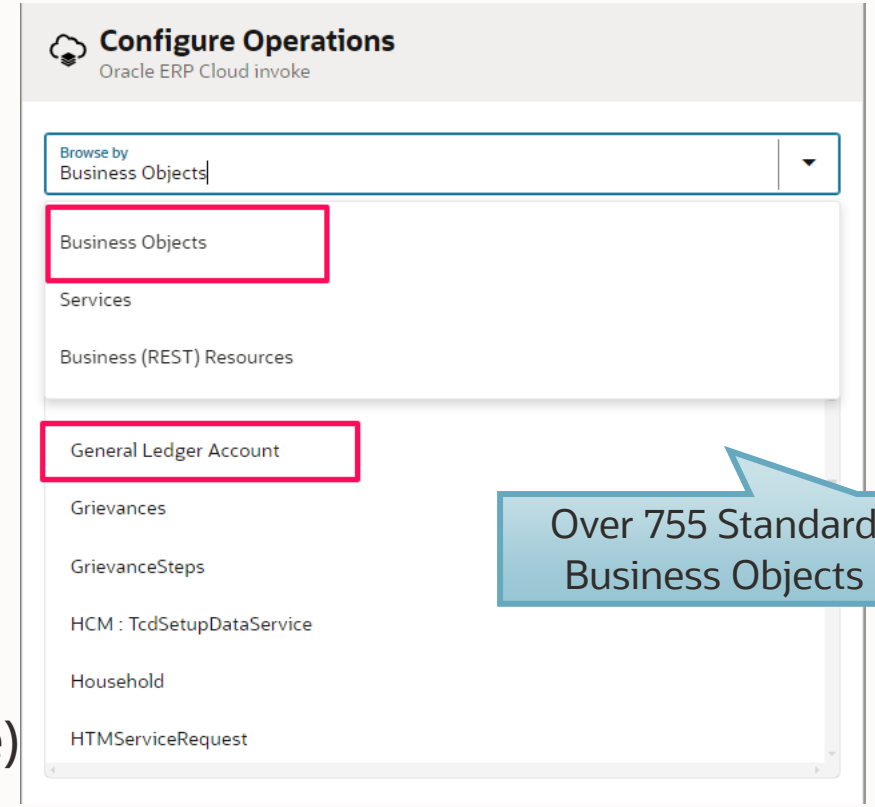


Query, Create, Update or Delete Information

Selecting this option provides common Fusion Application CRUD choices.

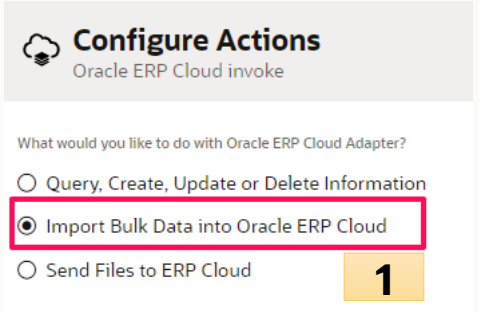
Choose an operation by browsing for:

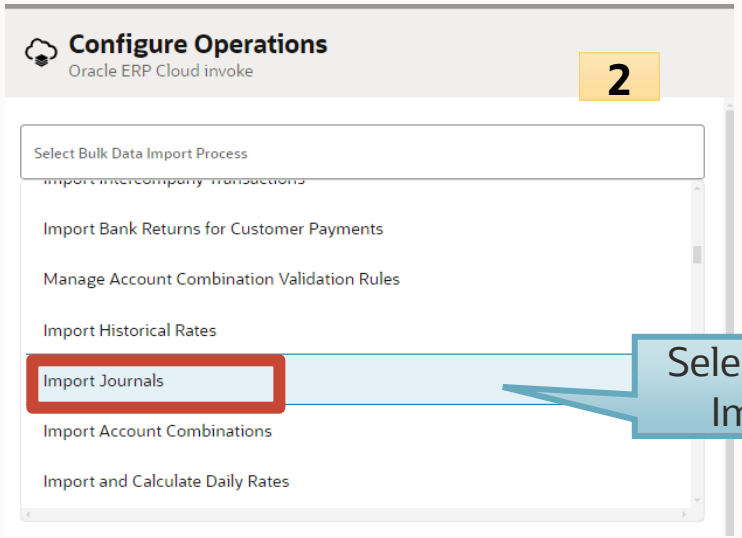
- **Business Objects**
  - Choose an available business object
  - Select an available operation on that object
- **Services**
  - Choose an available service
  - Select an available service operation
- **Business (REST) Resources**
  - Select a service application
  - Choose an available business resource (or child resource)
  - Select an available resource operation



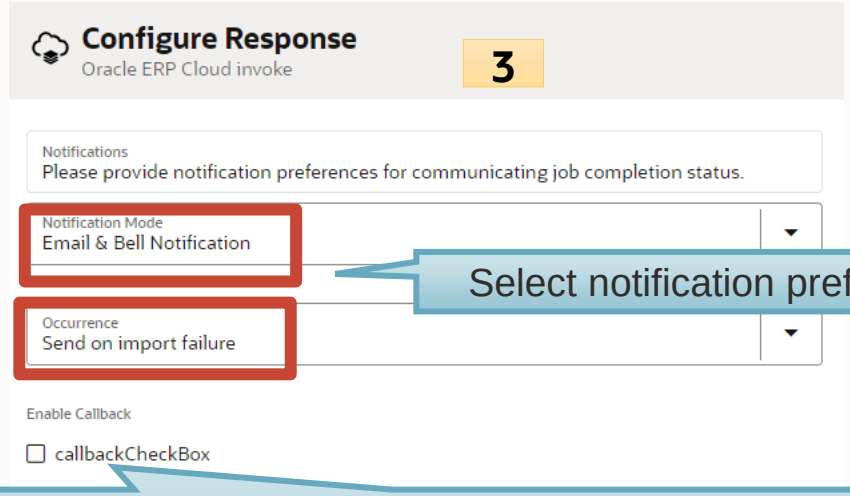
Import Bulk Data into ERP Cloud

Select this option to perform an FBDI-compliant bulk operation.





Select the Bulk Data Import Process

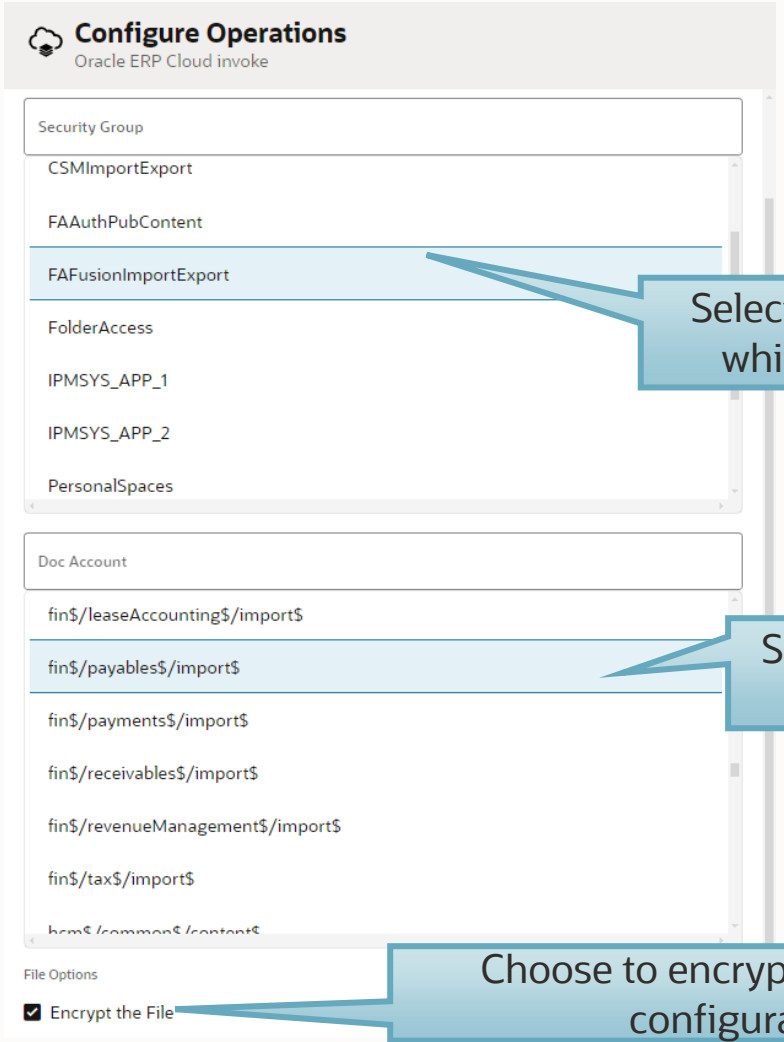


Select notification preferences.

Selecting this option will enable the ability to create an event trigger in another callback integration.

Send Files to ERP Cloud

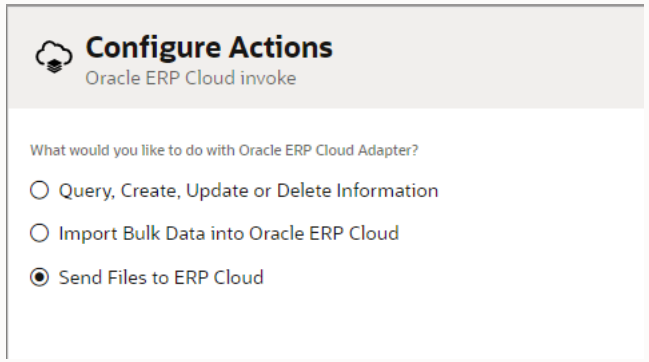
Select this option to upload a file to UCM.



Select the security group in which to upload the file.

Select the document account to assign to the file.

Choose to encrypt the file (requires PGP Public Key configuration on the Connection).



Use this option only when you cannot use the Import Bulk Data option.

Otherwise, you will need to invoke the appropriate scheduled process or API in ERP Cloud to process the file in a separate action.

ERP Cloud Integration Patterns with OIC

- Real time
- Bulk Import
- Bulk Extract

Copyright © 2020, Oracle and/or its affiliates. All rights reserved.

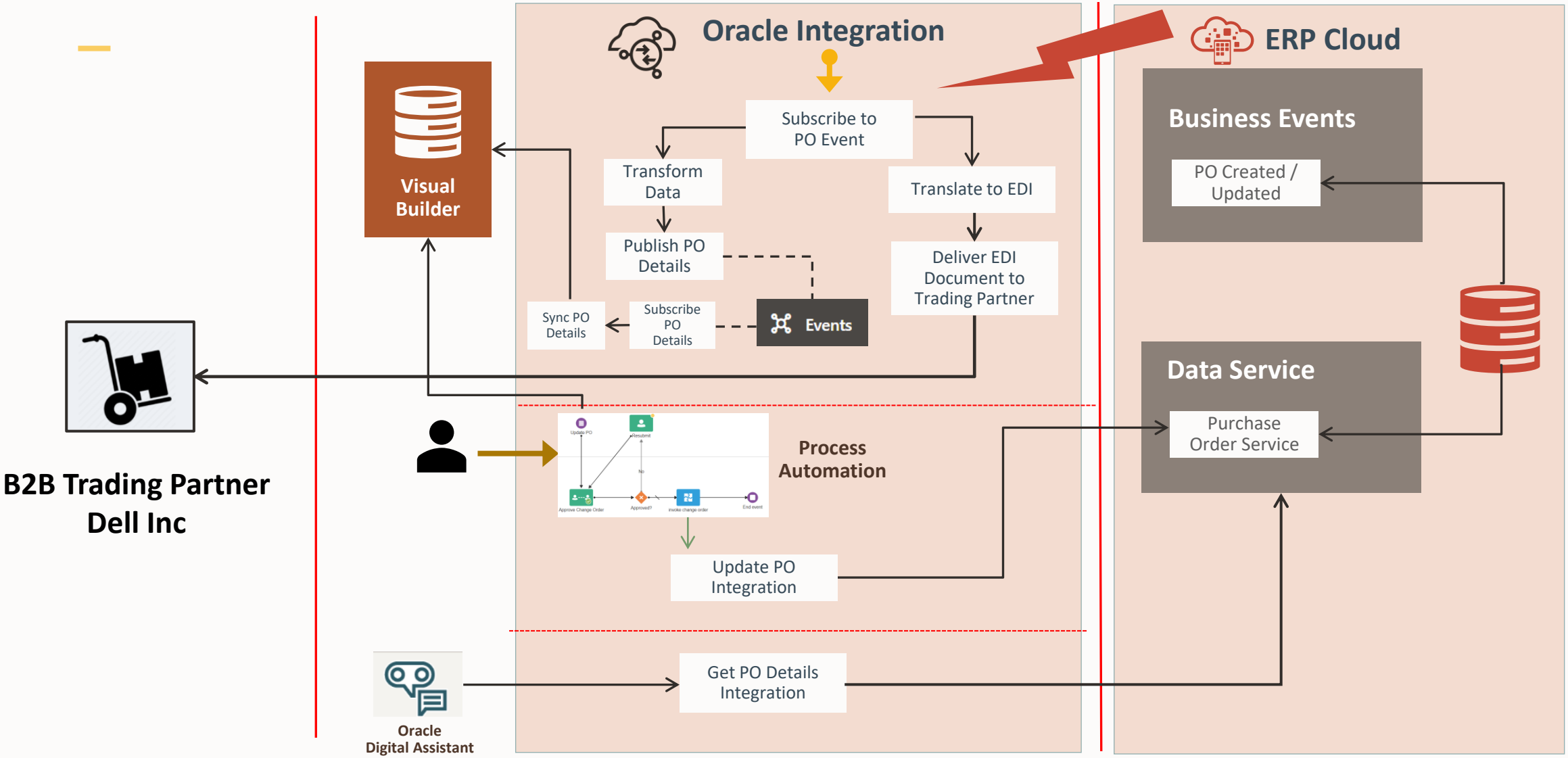
1. Real-Time Synchronization Pattern

Copyright © 2020, Oracle and/or its affiliates. All rights reserved.

Use case Background

- Vision Corporation wants to implement Oracle ERP Cloud (Procurement Module) and would like to have a Letter of Credit Management a custom extension application to issue a Letter of Credit to vendors for the procurement of specific items
  - Tracking of Letter of Credit issued to suppliers
  - Single place to view LOCs attached to Purchase Order
  - Back office Users send the changed orders for an approval
  - Send order documents to the Trading Partners
  - Query order status through a self service interface
- What is LOC? A letter of credit is a document issued by a financial institution, or a similar party, assuring payment to a seller of goods and/or services provided certain documents have been presented to the bank.

Usecase: ERP Cloud Integration with B2B Trading Partners



Real Time Event Capture

- User creates a Purchase Order (PO) in ERP Cloud and a PO event is raised
- Oracle Integration listens to the PO event, transforms and pushes the relevant information to a custom table (VBCS)
- Oracle Integration B2B component translates the PO payload to EDI 850 document using X12 Business Protocol. Delivers the 850 document to Trading Partner using FTP protocol as per the Trading Partner agreement

Approval Flow & Bi Directional Sync

- An ERP backend user starts a workflow application and selects the Order
- User then views the order details and attaches Letter of Credit (LOC) information to the PO record from the web form
- PO Record with Letter of credit Information is sent for Approval
- On Approval PO Record in ERP Cloud is updated with the LOC information for cross referencing

ODA Conversation Flow

- ODA starts a conversation by asking for Order Number
- Connects with Integration and fetches Order details

Copyright © 2020, Oracle and/or its affiliates. All rights reserved.

ERP Cloud Integration Patterns with OIC

- Real time
- **Bulk Import**
- Bulk Extract

Copyright © 2020, Oracle and/or its affiliates. All rights reserved.

2. ERP Cloud – Bulk Import Pattern

Copyright © 2020, Oracle and/or its affiliates. All rights reserved.

Usecases

- On-premises / PaaS based applications require to import recurring billing transactions into ERP Cloud
- On-premises insurance claim processing applications creates Payables Invoices for handling payments

Copyright © 2020, Oracle and/or its affiliates. All rights reserved.

Customer Use Case

- Customer has multiple business systems that they maintain for a variety of business activities each of which generates large volumes of financial transactions on a daily basis. Requirement is to have all of these externally generated transactions to be automatically integrated into Oracle Cloud ERP to post to the General Ledger providing a single consolidated view.
- And for this purpose, customer wanted an interface designed to integrate the daily GL journal transactions from the external systems to Oracle Cloud ERP via data files. And these transactions should be processed every day scheduled at specific times and the whole integration process needs to be automated

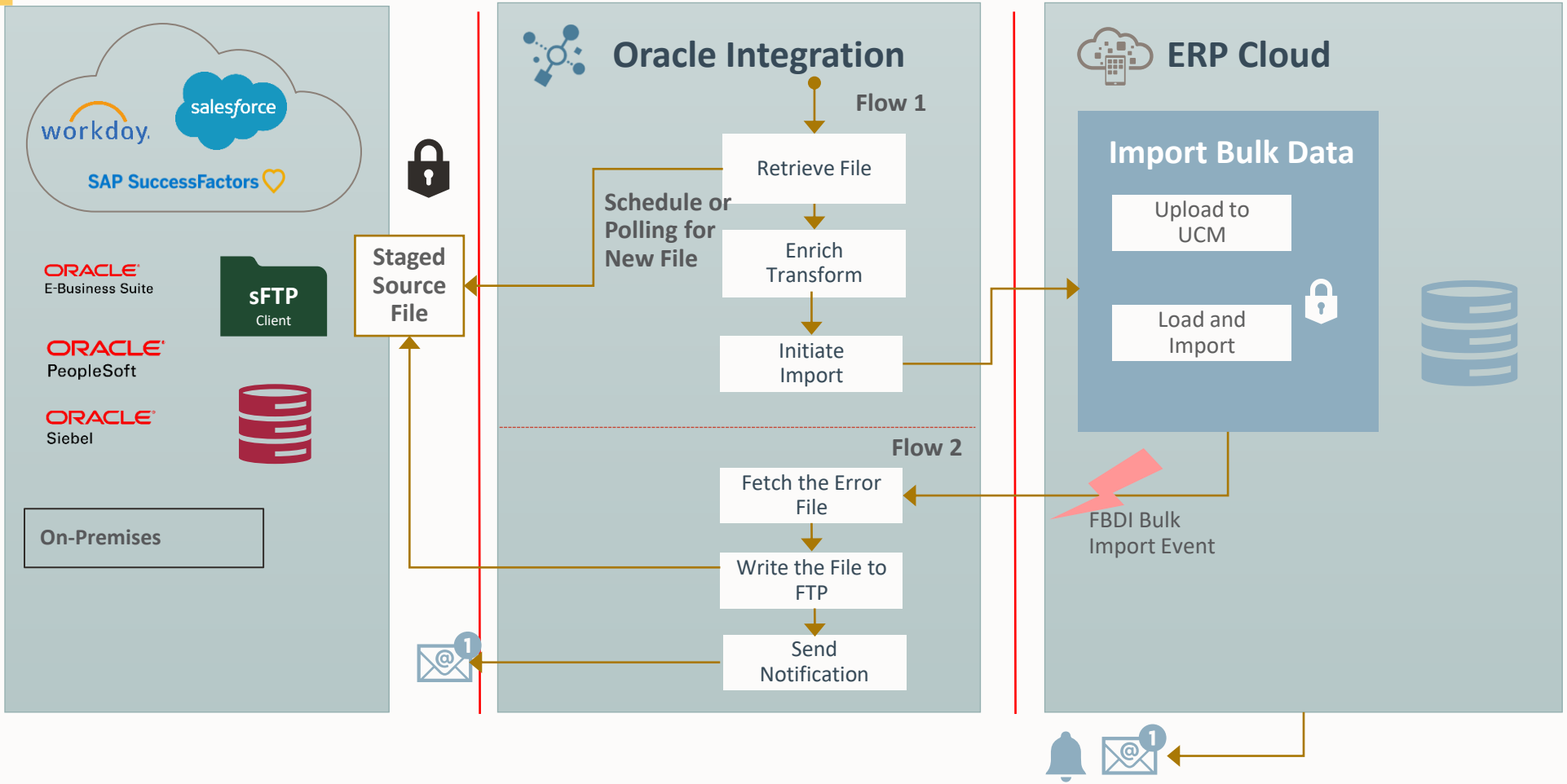
Copyright © 2020, Oracle and/or its affiliates. All rights reserved.

Demo Usecase – AP Invoice Import

Automate Oracle ERP Cloud FBDI Data Files

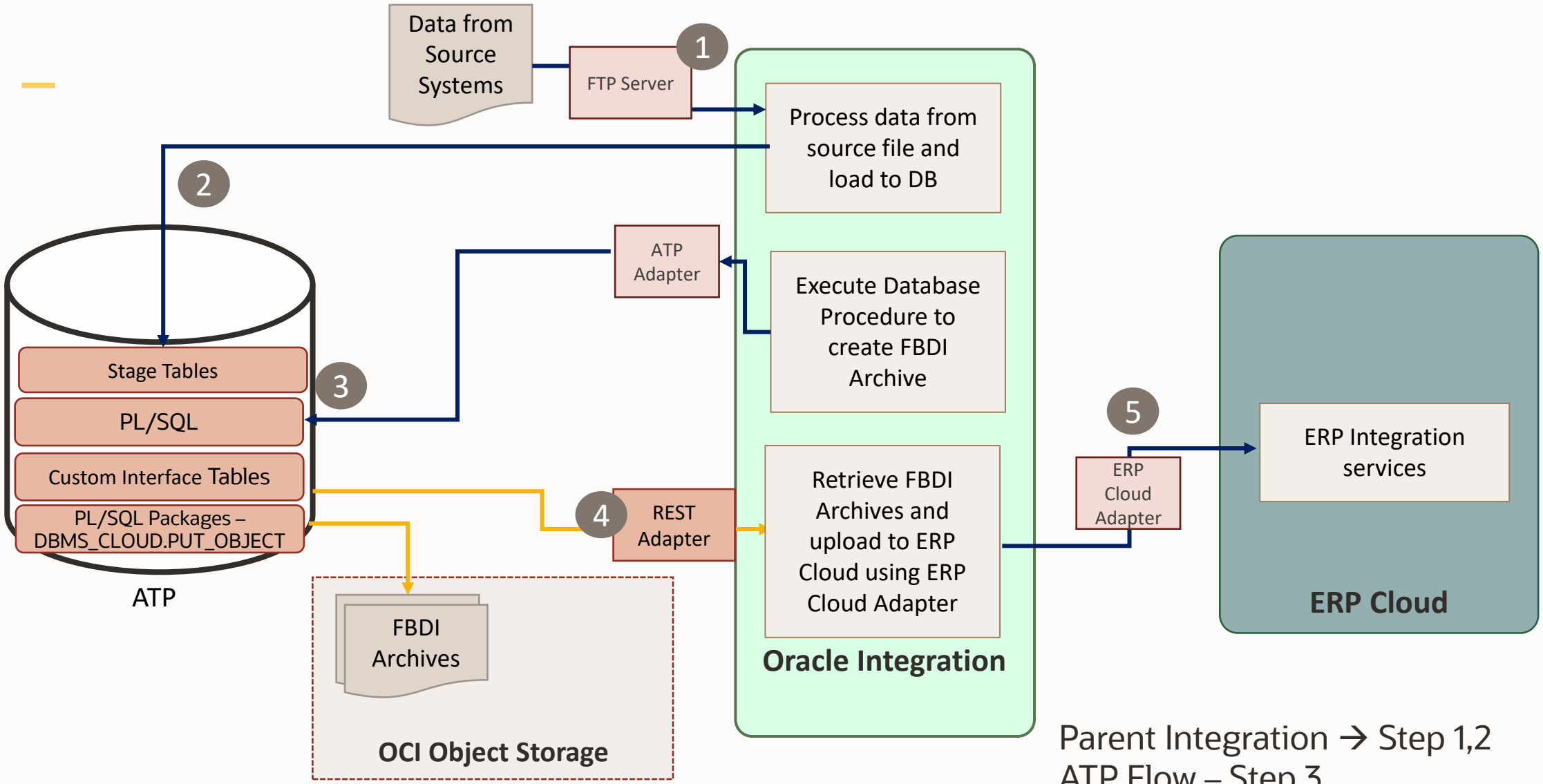
Copyright © 2020, Oracle and/or its affiliates. All rights reserved.

Architecture: Bulk import of Invoices



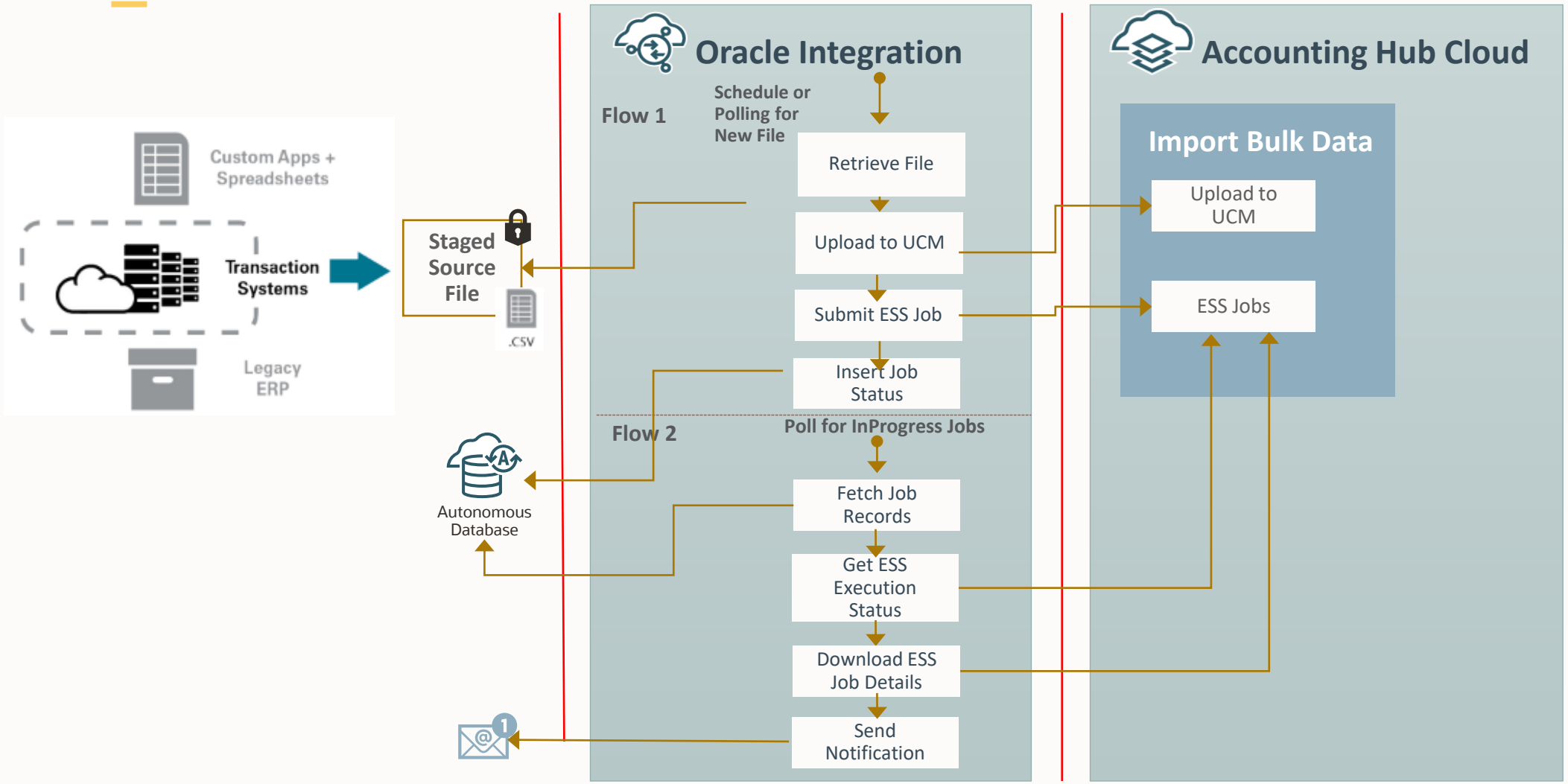
Copyright © 2020, Oracle and/or its affiliates. All rights reserved.

Integration flow to Process FBDI which has lot of validations and cross referencing



Parent Integration → Step 1,2
ATP Flow – Step 3,
Child Integration → Step 4,5

Architecture: Bulk import of Transactions to Accounting Hub Cloud



Copyright © 2020, Oracle and/or its affiliates. All rights reserved.

ERP Cloud Integration Patterns with OIC

- Real time
- Bulk Import
- **Bulk Extract**

Copyright © 2020, Oracle and/or its affiliates. All rights reserved.

3. ERP Cloud – Export Pattern

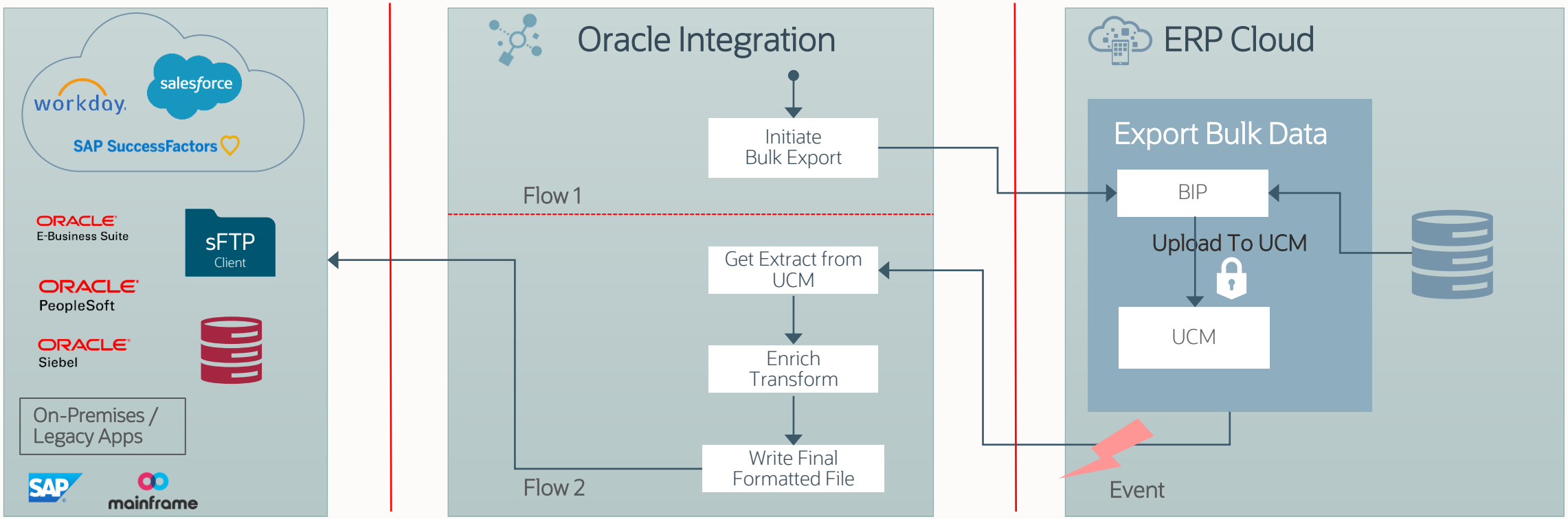
Copyright © 2020, Oracle and/or its affiliates. All rights reserved.

Patterns to Extract Data From ERP Cloud…

- **Extract-Bulk Data Extract Async – Executing ESS Job**– Designed for extracting incremental data for scenarios
  - Get the list of invoices that has been approved since last execution
  - Extract payment data since last execution to update downstream or upstream applications to reflect payments
- **Extract Data Synchronously – Invoke BIP Report Service**– Designed for extracting lookup values or transaction details of a transaction. Example, give chart of account (COA) values for a specific ledger. The reports are small and can be CSV/XML format
- **BI Cloud Connector** – This is used mainly for data lake or warehouse applications where you want to periodically extract incremental data from ERP cloud. This applies more to data integration (ETL) instead of application integrations

Copyright © 2020, Oracle and/or its affiliates. All rights reserved.

(1.) Extract-Bulk Data Extract Async – Executing ESS Job



- **Supplier Invoice to Payment**: Complete payables period close using ERP Integration Service
- **Prebuilt** Reports: Seamless launch of payables register, trial balance, and reconciliation reports
- **Extension** Reports: Automated payment data extract from ERP Cloud to update downstream external application

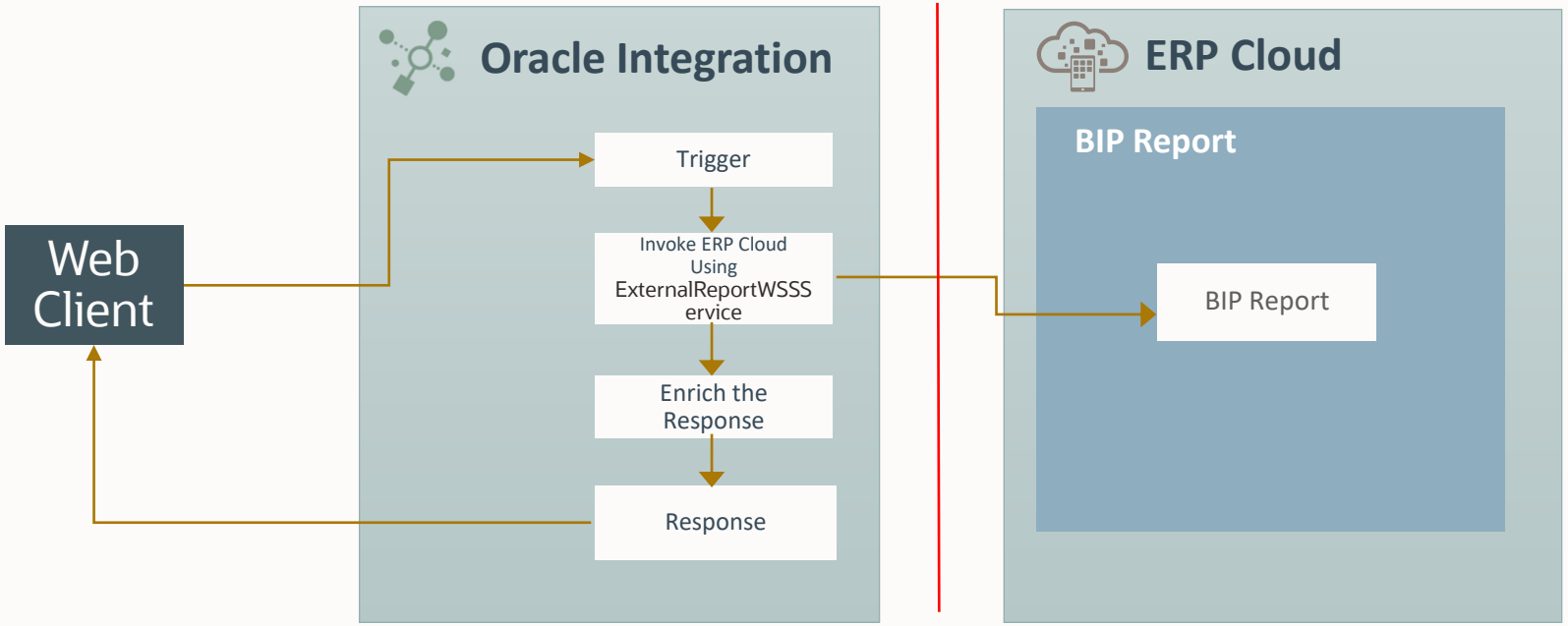
Copyright © 2020, Oracle and/or its affiliates. All rights reserved.

(2) Extract Data Synchronously – Invoke Report Service

Usecase Flow

- User creates a GL BIP report in ERP Cloud
- OIC consumes the report using External Report Service
- Enrich the response
- Response to client

ERP BIP report to file system

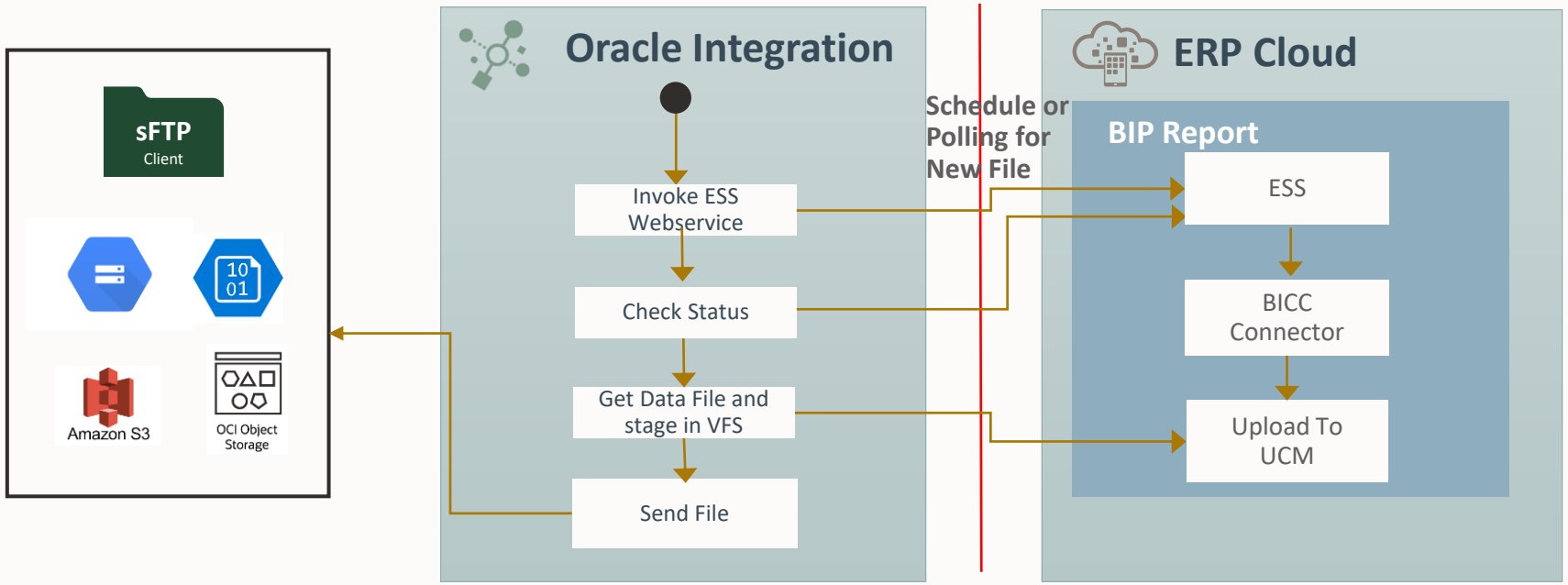


Copyright © 2020, Oracle and/or its affiliates. All rights reserved.

(3) Extract Data Asynchronously – BICC

Usecase Flow

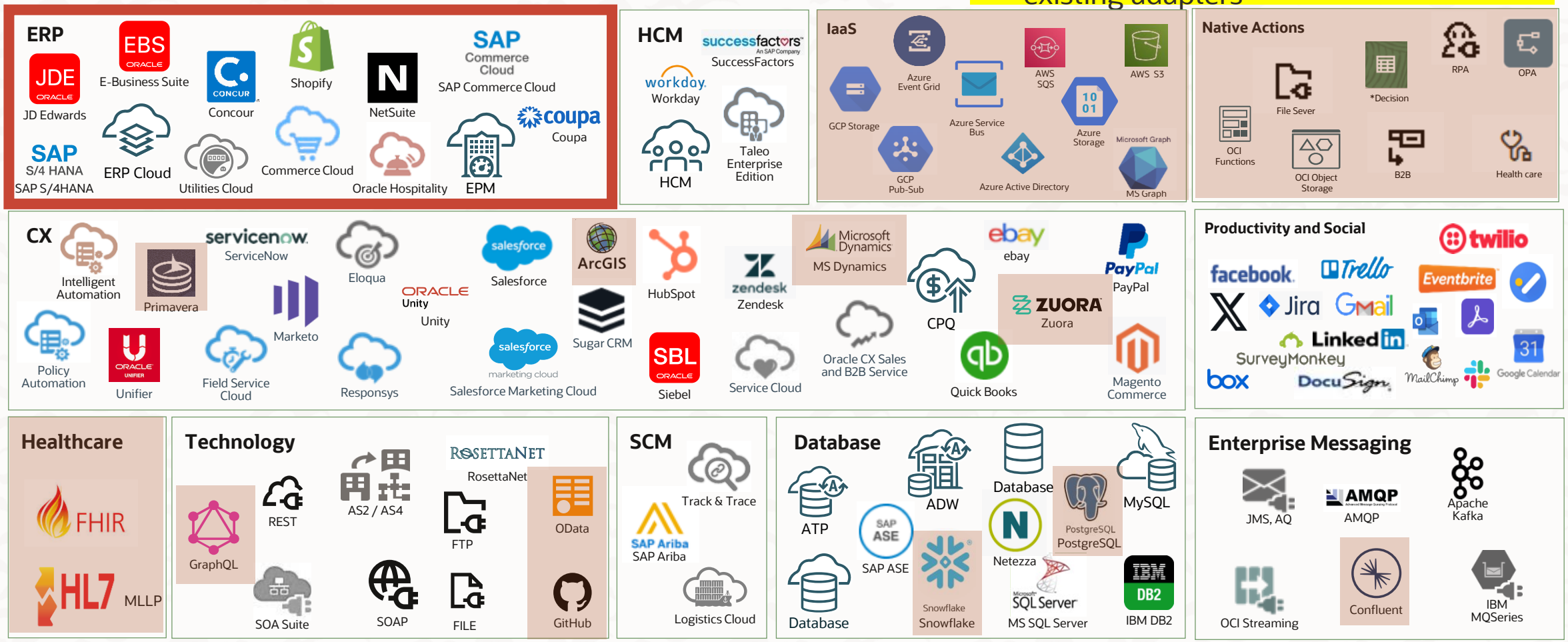
- A scheduler integration invokes ESS Webservice
- Check status and fetch the file from UCM
- Push the file to any of the cloud storage locations



Copyright © 2020, Oracle and/or its affiliates. All rights reserved.

Oracle Integration – New Adapters

- **110+** Adapters
- **20+** new adapters in OIC 3
- **5+** new native actions in OIC 3
- Plus a lot of new features announced in existing adapters



Copyright © 2024, Oracle and/or its affiliates

Simplified ERP Integration with OIC ERP Cloud adapter

- **Auto Discovery of batch and real-time web services and business events**
- Wizard driven **native support for bulk imports and callback** upon completion
  - Comprehensive bulk import support: 100+ interfaces coverage across Financials, Projects, Procurement, and Supply Chain Management
  - Automated Bulk Import Flow: Uploading file, loading data to I/F tables, launch import job, generate call back upon completion with status / failure indication
- Wizard driven **native support of subscribing business events**
  - Near real-time synchronization with downstream applications
- Simplified low-touch initiation of **bulk exports with callback**
  - Extracting data, uploading to WebCenter Content (UCM) server, generate callback upon completion with status / failure indication
- Comprehensive support of **handling large files, encryption / decryption, zip / unzip**

Copyright © 2020, Oracle and/or its affiliates. All rights reserved.

Questions?