Oracle® Cloud

Using the Oracle ERP Cloud Adapter with Oracle Integration 3

ORACLE®

Oracle Cloud Using the Oracle ERP Cloud Adapter with Oracle Integration 3,

F45581-43

Contents

About This Content

1 Understand the Oracle ERP Cloud Adapter

2 Create an Oracle ERP Cloud Adapter Connection

3   Add the Oracle ERP Cloud Adapter Connection to an Integration

4   Implement Common Patterns Using the Oracle ERP Cloud Adapter

5   Troubleshoot the Oracle ERP Cloud Adapter

About This Content

This guide describes how to configure this adapter as a connection in an integration in Oracle Integration.

Audience

This guide is intended for developers who want to use this adapter in integrations in Oracle Integration.

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 that have purchased support have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

Related Resources

See these Oracle resources:

- Oracle Cloud at `http://cloud.oracle.com`
- *Using Integrations in Oracle Integration 3*
- *Using the Oracle Mapper with Oracle Integration 3*
- Oracle Integration documentation on the Oracle Help Center.

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.

1
Understand the Oracle ERP Cloud Adapter

Review the following conceptual topics to learn about the Oracle ERP Cloud Adapter and how to use it as a connection in integrations in Oracle Integration. A typical workflow of adapter and integration tasks is also provided.

Topics:

- [Oracle ERP Cloud Adapter Capabilities](#)
- [Oracle ERP Cloud Adapter Restrictions](#)
- [What Application Version Is Supported?](#)
- [Oracle ERP Cloud Adapter Use Cases](#)
- [Workflow to Create and Add an Oracle ERP Cloud Adapter Connection to an Integration](#)

Oracle ERP Cloud Adapter Capabilities

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

> ⓘ **Note**
>
> If you have a co-located Oracle HCM Cloud with Oracle ERP Cloud, you may see Oracle HCM Cloud APIs in the Oracle ERP Cloud Adapter. It is recommended that you use the Oracle HCM Cloud Adapter for any HCM integrations. However, if you do use the Oracle ERP Cloud Adapter with these APIs, ensure that you have reviewed the supported SOAP services in Oracle HCM Cloud.
> See Oracle HCM Cloud Adapter Capabilities.

The Oracle ERP Cloud Adapter enables you to easily integrate on-premises or SaaS applications with Oracle ERP Cloud without having to know about the specific details involved in the integration. The Oracle ERP Cloud Adapter provides the following benefits:

- Supports connecting to private resources that are in your virtual cloud network (VCN) private subnet with a private endpoint. Private endpoints do *not* support Oracle ERP Cloud business events. See Connect to Private Resources in *Provisioning and Administering Oracle Integration 3* and [Configure the Endpoint Access Type](#). This type of connection does not use the connectivity agent.

- Integrates easily with the Oracle ERP Cloud application's WSDL file to produce a simplified, integration-centric WSDL.

- Provides declarative support for subscribing to business events raised by various modules in Oracle ERP Cloud and Oracle Supply Chain Management Cloud. See [Supported SCM and Procurement Business Events](#) and [Supported Financials Business Events](#).

- Generates automatic mapping to the exposed business object, event subscription, or business (REST) API that you select during adapter configuration:

- Business object: Represents a self-contained business document that can be acted upon by the integration. An integration can send requests to create a new record for that business object. They can send a request either to update or delete an existing record for a business object. Integrations can also send requests to retrieve information about one or more records representing that business object.

- Event subscription: Represents an event document to which you subscribe. The event subscription is raised by the Oracle ERP Cloud application.

  See Supported SCM and Procurement Business Events.

  You can also create custom business events in Oracle ERP Cloud that can be published and subscribed to with the Oracle ERP Cloud Adapter. See Create Custom Business Events.

- Business (REST) API: Represents an Oracle Fusion Applications REST API resource. You can select parent business resources and their corresponding child business resources on the Operations page in the Adapter Endpoint Configuration Wizard. Support is provided in the invoke (outbound) direction. If you select a top-level resource on the Operations page, you can also select sub-resources on the Sub-Resources page. See Invoke Child Resources Page.

- Simplified connection creation: Automatically identifies the required service catalog service WSDL, optional event catalog URL, and optional interface catalog URL to use based on the Oracle ERP Cloud host name you specify when creating a new connection on the Connections page.

- Dynamically invokes a REST endpoint/URL at runtime without requiring you to configure any extra invoke connection or REST outbound details.

  See Invoke an Endpoint Dynamically.

- Supports the following security policies for selection during Oracle ERP Cloud Adapter connection configuration:

  - Username Password Token With PGP Key Support

  - Username Password Token

  - OAuth Authorization Code Credentials

  - OAuth using JWT User Assertion

- Supports consuming extensible flexfields (EFFs) and descriptive flexfields (DFFs) for REST resources. You can select specific EFFs and DFFs in the Adapter Endpoint Configuration Wizard of an Oracle ERP Cloud Adapter invoke connection. You can then map the EFFs and DFFs in the mapper. See Invoke Descriptive and Extensible Page.

- Provides standard error handling capabilities.

- Exposes Supply Chain Management (SCM) Cloud events and web services.

- Supports MTOM attachments by default for the ErpIntegrationService, ErpObjectAttachmentService, and GenericSOAPService services for new connections starting with release 25.02. If the response from these services includes an attachment, they are received as an attachment reference instead of base64 content. To process the response, the attachment reference can be directly used by a stage file action to read. This eliminates the need for using mapper functions or writing to a stage file action explicitly to get the reference from base64. This behavior speeds up the development and execution of integrations.

- Enables you to upload a file to a secure FTP location. The file is identified and provided to Oracle ERP Cloud so that the data can be uploaded in the Oracle ERP Cloud business tables. In the invoke (outbound to Oracle ERP Cloud) direction, files can be uploaded in the following formats:

– BASE64 format: Files uploaded in this format are embedded in the SOAP message.

– MTOM format: This is the default upload format. Files uploaded in this format are sent as an attachment in the SOAP message. If there are errors during MTOM upload, the file is uploaded in BASE64 format.

During runtime, the Oracle ERP Cloud file upload occurs:

– The file is picked up.

– In the invoke (outbound to Oracle ERP Cloud) direction, Oracle ERP Cloud receives the file as an attachment object.

– The file is first uploaded in MTOM format to UCM. After uploading the document to UCM, a request is sent to Oracle ERP Cloud to process the file.

– If the document upload to MTOM fails, the file is uploaded in BASE64 format by providing the files as BASE64 content directly to Oracle ERP Cloud.

> **ⓘ Note**
>
> Create the UCM URL by appending the host and port of the service catalog with the following URI: `/idcws/GenericSoapPort`.

During runtime, the callback is received.

– ERP sends the callback on the callback endpoint.

– The callback contains the following information:

* Overall status.

* Document ID of the file that contains all the log data.

* List of all jobs, their child jobs, and their statuses.

– The file is first downloaded in MTOM format. If the download fails, the file is downloaded in BASE64 format.

– The file is stored in the attachment store. The reference of the file is provided as an output in the XML document.

• Enables you to upload files to Oracle WebCenter Content (Universal Content Manager) in encrypted or unencrypted format. Oracle WebCenter Content provides a unified repository to store unstructured content, enabling organizations to deliver the content to business users in the proper format.

See Upload a File to Oracle WebCenter Content.

> **ⓘ Note**
>
> Downloading files from Oracle WebCenter Content is not supported.

• Supports the `ErpImportBulkDataEvent` event subscription. The process of import bulk data is now simplified and based on the `ErpImportBulkDataEvent` event:

– Change in design for the invoke integration:
For new integrations in the invoke direction (Oracle Integration to Oracle ERP Cloud), support is added to raise an `ErpImportBulkDataEvent` event in Oracle ERP Cloud once the import bulk process completes.

To raise the `ErpImportBulkDataEvent` event, you must select the **Enable Callback** check box on the Response page of the Adapter Endpoint Configuration Wizard.

The callback-based **Integration Flow Identifier** and **Version** fields are removed because the callback is now an `ErpImportBulkDataEvent` event payload.

– Change in the callback integration:
All new callback integrations are now based on the `ErpImportBulkDataEvent` event. While configuring the callback integration, you must select the exact import job on the Operations page of the Adapter Endpoint Configuration Wizard for which the `ErpImportBulkDataEvent` event is to be received.

For older, existing integrations, the `ErpImportBulkDataEvent` event is not used. You must continue to manually specify details in the **Integration Flow Identifier** and **Version** fields on the Response page of the invoke integration to receive a callback.

See Invoke a File-Based Data Import (FBDI) Job.

• Supports the token-based authentication scheme for business and FBDI event messages originating from Oracle Fusion Applications.
Oracle ERP Cloud Adapter token-based authentication uses time-sensitive session tokens generated using strong encryption on the Oracle Fusion Applications event handler and passed to Oracle Integration. The session token is validated by Oracle Integration against the Oracle ERP Cloud application sender and added to local cache. Tokens are never persisted on Oracle Fusion Applications or Oracle Integration. Token-based authentication provides the following benefits:

– The token refreshes automatically.

– You don't have to worry about expiration.

– It's difficult to compromise because tokens are self-generated.

– No additional settings are required.

• Supports JWT user assertions with OAuth Client Credentials using the JWT User Assertion security policy. JWT assertions enable you to invoke a service provider that does not regard an OAuth client secret as secure. Trust is established with a key pair exchange instead of a client secret. See Propagate OAuth User Identity Between Services.

> ⓘ **Note**
>
> Note the following behavior:
>
> • During bidirectional account and contact synchronization, echoes are generated. Oracle Integration-based integrations use echo suppression to prevent unwanted update or create events (the echoes) from returning to the source application.
>
> • You cannot write database SQL queries with the Oracle ERP Cloud Adapter. Instead, you must write a Business Intelligence Publisher (BIP) report in Oracle Fusion Applications and invoke it from the Oracle ERP Cloud Adapter.

Supported SCM and Procurement Business Events

The following SCM and Procurement business events are supported. You can subscribe to these events during adapter configuration in the Adapter Endpoint Configuration Wizard.

• Inventory Management

• Maintenance

- [Manufacturing](#)
- [Order Management](#)
- [Procurement](#)
- [Product Lifecycle Management](#)
- [Supply Chain Collaboration and Visibility](#)

Inventory Management

Supported Business Events	Description	Event Payload	Callback Service
Advanced Shipment Notice Event	Signals that an advance shipment notice can be sent to an external customer for the shipment.	NA	SOAP Service: ShipmentService Operation: getAdvancedShipmentNoticeData
ASN Cancellation Event	Notifies that an ASN/ASBN line has been canceled in Oracle Fusion Receiving Cloud.	NA	SOAP Service: InboundShipmentService Operation: findShipment
ASN Creation Event	Notifies that an ASN/ASBN line has been created in Oracle Fusion Receiving Cloud.	NA	SOAP Service: InboundShipmentService Operation: findShipment
Backorder Line Event	Signals that a shipment line has been back ordered.	NA	SOAP Service: ShipmentLineService Operation: GetBackorderLineData
Cancel Inbound ASN	Notifies that an ASN/ASBN has been canceled in Fusion Receiving and is available for external systems to process.	ShipmentHeaderId ShipmentLineId	NA
Create Correction Transaction Event	Notifies that a correction transaction is created in Oracle Fusion Receiving Cloud.	NA	SOAP Service: ReceivingTransactionService Operation: findTransaction
Create Deliver Transaction Event	Notifies that a deliver transaction is created in Oracle Fusion Receiving Cloud.	NA	SOAP Service: ReceivingTransactionService Operation: findTransaction

Supported Business Events	Description	Event Payload	Callback Service
Create Inbound ASN	Notifies that an ASN/ASBN has been created in Fusion Receiving and is available for external systems to process.	ShipmentHeaderId	NA
Create Receiving Receipt Event	Notifies that a receipt is created in Oracle Fusion Receiving Cloud.	NA	SOAP Service: ReceiptService Operation: findReceipt
Create Return Transaction Event	Notifies that a return (to supplier, customer, organization) transaction is created in Oracle Fusion Receiving Cloud.	NA	SOAP Service: ReceivingTransactionService Operation: findTransaction
Create Transfer Order Line	Signals the creation of a transfer order line.	TransferOrderHeaderNumber TransferOrderHeaderId TOSourceOrganizationId TOSourceOrganizationCode RequisitionBUId RequisitionBUName TransferOrderSourceCode TransferOrderSourceName	NA
Financial Orchestration Transfer Price Business Event	Signals that the transfer price is published for supply chain financial orchestration.	SourceEventIdentifier EventType EventDate SourceDocumentId SourceDocumentType FinancialRouteFromBusinessUnitName FinancialRouteToBusinessUnitName FinancialRouteNumber UnitTransferPrice UOM CurrencyCode	NA

Supported Business Events	Description	Event Payload	Callback Service
Manifest Request Event	Signals that shipment information can be sent to the carrier manifesting system to determine rate, freight cost, and labels for the shipment.	NA	SOAP Service: Shipment Service Operation: getManifestRequestData
Modify Transfer Order Line	Signals the cancel or update of a transfer order line.	TransferOrderHeaderNumber TransferOrderHeaderId TransferOrderLineNumber TransferOrderLineId Action TOSourceOrganizationCode TOSourceOrganizationId TODestinationOrganizationCode TODestinationOrganizationId	NA
Outbound Direct Work Order Transactions	Notifies the inventory transactions created for the work orders in Oracle Fusion Cloud Manufacturing and Maintenance and available for external systems processing. This event is raised only for warehouse management system (WMS)-enabled organizations.	OutboundDirectWorkOrderTransactions	N/A
Outbound Receipt Advice	Notifies that a Receipt Advice is generated in Fusion Receiving and available for external systems to process.	ExternalSystemGroupId	NA

Supported Business Events	Description	Event Payload	Callback Service
Outbound Shipment Request	Notifies that a Shipment Request is generated in Fusion Shipping and available for external applications to consume.	PickBatchName	NA
Pick Confirm Event	Signals a pick confirm transaction.	TransactionId PickSlipNumber PickSlipLineNumber OrganizationId OrganizationCode InventoryItemId ItemNumber TransactionTypeId TransactionTypeName TransactionDate	NA
Print Label Request Event	Signals that a label request is created for the external system to print the labels.	OrganizationId PrintHeaderId PrintLabelType	NA
Receipt Advice Event Notification	Notifies that a receipt advice is generated in Oracle Fusion Receiving Cloud and available for external systems to process.	NA	SOAP Service: ReceiptAdviceService Operation: getReceiptAdviceDetails
Shipment Advice Event	Signals that the shipment is shipped and is ready for informing the source system with the shipped information.	NA	SOAP Service: ShipmentService Operation: getShipmentAdviceData
Shipment Request Generate Event	Signals that shipment line selection criteria is published for external systems to process the lines.	NA	SOAP Service: ShipmentLineService Operation: GenerateShipmentRequest

Supported Business Events	Description	Event Payload	Callback Service
Standard Cost Exported Event	Signals that a standard cost is exported for a scenario.	DocumentTitle DocumentIdentifier DocumentName RequestId CostOrganization CostBook ScenarioType EventDate ScenarioName	NA
Standard Cost Published Event	Signals that the standard cost is published for a scenario.	ScenarioName CostOrganization CostBook ScenarioType EventDate ScenarioEffectiveDate ScenarioIdentifier CostOrganizationIdentifier CostBookIdentifier RequestId Action	NA
Trade Screening Request Event	Signals to request trade screening for a shipment line.	NA	SOAP Service: ShipmentLineService Operation: getShipmentLineData
Transfer Price Published Event	Signals that the transfer price is published for a sales order fulfillment line.	FulfillLineId UnitTransferPrice CurrencyCode DeliveryId DeliveryName DeliveryDetailId SourceTransactionId SourceTransactionSystem SourceTransactionNumber SourceTransactionLineId SourceTransactionLineNumber OrderTypeCode UomCode	NA

Maintenance

Supported Business Events	Description	Event Payload	Callback Service
Customer Asset Created	Signals that a customer asset is created.	NA	SOAP Service: AssetService Operation: getAsset
Customer Asset Relationship Created	Signals that a customer asset relationship is created.	NA	SOAP Service: AssetRelationshipService Operation: getAssetRelationship
Customer Asset Relationship Deleted	Signals that an asset relationship is deleted.	NA	SOAP Service: AssetRelationshipService Operation: getAssetRelationship
Customer Asset Updated	Signals that a customer asset is updated.	NA	SOAP Service: AssetService Operation: getAsset
Estimate Header Updated	Signals estimate update event.	EstimateHeaderId EstimateStatusCode DocumentType DocumentName CustAccountId AssetId BuOrgId ProductItemId CreationDate LastUpdateDate CreatedBy LastUpdatedBy	NA
Estimate Header Created	Signals estimate create event.	EstimateHeaderId EstimateStatusCode DocumentType DocumentName CustAccountId AssetId BuOrgId ProductItemId CreationDate LastUpdateDate CreatedBy LastUpdatedBy	NA
Maintenance Asset Created	Signals that a maintenance asset is created.	NA	SOAP Service: AssetService Operation: getAsset
Maintenance Asset Updated	Signals that a maintenance asset is updated.	NA	SOAP Service: AssetService Operation: getAsset

Supported Business Events	Description	Event Payload	Callback Service
Work Order Create	Signals that a work order is created.	NA	SOAP Service: WorkOrderEnrichService Operation: getWorkOrderEnrich
Work Order Update	Signals that a work order is updated.	NA	SOAP Service: WorkOrderEnrichService Operation: getWorkOrderEnrich

Manufacturing

Supported Business Events	Description	Event Payload	Callback Service
Inspection Business Event	Signals that Inspection Business is raised.	IpEventId InspectionName	NA
Print Kanban Cards Event	Signals that the print kanban cards event is triggered.	KanbanCardId KanbanCardNumber OrganizationId InventoryItemId SubinventoryCode Locator CardStatus SupplyStatus CurrentReplenishmentCycle KanbanCreationDate PrintedOnDate SourceType SourceSubinventoryCode SourceLocator SupplierName SupplierSiteCode PullSequenceId	NA

Supported Business Events	Description	Event Payload	Callback Service

Print Product Label Event	Signals that a print product label is triggered.	WorkOrderNumber
		WorkOrderId
		OrganizationCode
		OrganizationId
		ItemNumber
		InventoryItemId
		OperationTransactionId
		InvTransactions
		• InvTransactionId
		SerialNumbers
		• SerialNumber
		LotNumbers
		• LotNumber
		OutputLotInformation
		• Outputs
		  – OutputItemNumber
		  – OutputLotNumber
			NA

Work Order Create	Signals that a work order is created.	WorkOrderNumber WorkOrderId OrganizationCode OrganizationId EventType	SOAP Service: WorkOrderEnrichService Operation: getWorkOrderEnrich

Supported Business Events	Description	Event Payload	Callback Service
Work Order Update	Signals that work order header attributes, or any of the attributes of the following child entities, are updated. **Work Order Header** Attributes: Quantity, Planned Start Date, Planned Completion Date, Status **Child Entities, Actions, and Attributes** **Work Order Operations** Create Delete Completion or reversal at the last operation Quantity rejected or scrapped at an operation **Work Order Operation Materials** Create Delete Replace with Substitute Update Required Quantity **Work Order Operation Resources** Create Delete Update Required Usage **Work Order Operation Resource Instances** Create Delete	WorkOrderNumber WorkOrderId OrganizationCode OrganizationId EventType	SOAP Service: WorkOrderEnrichService Operation: getWorkOrderEnrich

Supported Business Events	Description	Event Payload	Callback Service
Work Order Operation Outputs			
Create			
Delete			
Update Output Quantity			
Work Order Operation Material Serials			
Create			
Delete			
Work Order Operation Material Lots			
Create			
Delete			
Work Order Product Serials			
Create			
Delete			

Order Management

Supported Business Events	Description	Event Payload	Callback Service
Order Status Updated	Informs a subscriber that an order status or status of a fulfillment line that is part of an order was updated.	NA	SOAP Service: EventEnrichmentService Operation: getEnrichmentDetails

Supported Business Events	Description	Event Payload	Callback Service
Sales Order Notification	Informs a subscriber about a significant development on a sales order. This event occurs when the order status changes, the line status changes, the value of an attribute changes, a fulfillment line splits, or an exception occurs, such as a jeopardy or hold.	NA	SOAP Service: DocumentService Operation: getSalesOrderNotificationDetails
Sales Order Trade Compliance Screening	Communicates screening requests to a system that manages trade compliance.	NA	SOAP Service: OrderFulfillmentRequestService Operation: getOrderFulfillmentRequestDetails
Sales Order Transportation Planning	Communicates fulfillment requests to a transportation planning system.	NA	SOAP Service: OrderFulfillmentRequestService Operation: getOrderFulfillmentRequestDetails

Procurement

> ⓘ **Note**
>
> The purchase order event is enabled by default in Oracle ERP Cloud.

Supported Business Events	Description	Event Payload	Service Callback
Purchase Order Event	Published when a purchase order is created, changed, finally closed, or reopened.	NA	SOAP Service: PurchaseOrderService Operation: getPurchaseOrder
Supplier Created Event	Signals a supplier is created.	SupplierId SupplierNumber	NA

Supported Business Events	Description	Event Payload	Service Callback
Supplier Negotiation Invitation Event	Signals that a negotiation is published and open for suppliers to respond.	Auction Header ID Negotiation Number Negotiation Title Open Date Close Date Procurement BU ProcurementBU ID	NA
Supplier Updated Event	Signals a supplier is updated.	SupplierId SupplierNumber	NA

Product Lifecycle Management

Supported Business Events	Description	Event Payload	Callback Service
Bulk Delete Event	Signals bulk deletion of item entities.	RequestId RequestStatus	NA
Change Order Approval Event (replaced by Change Order Approval Event Version 2)	Signals that a change order is in approval. **Note**: This event was replaced by the Change Order Approval Event Version 2.	NA	SOAP Service: ChangeOrderService Operation: getChangeOrder
Change Order Approval Event Version 2	Signals that a change order is in approval. This is version 2. **Note**: This event replaces the Change Order Approval Event.	NA	SOAP Service: ProductDesignChangeOrderService Operation: findChangeOrderRedline
Change Order Completed Event (replaced by Change Order Completed Event Version 2)	Signals that a change order is completed. **Note**: This event was replaced by the Change Order Completed Event Version 2.	NA	SOAP Service: ChangeOrderService Operation: getChangeOrder

Supported Business Events	Description	Event Payload	Callback Service
Change Order Completed Event Version 2	Signals that a change order is completed. This is version 2. **Note**: This event replaces the Change Order Completed Event.	NA	SOAP Service: ProductDesignChangeOrderService Operation: findChangeOrderRedline
Change Order Interim Approval Event (replaced by Change Order Interim Approval Event Version 2)	Signals that a change order is in interim approval. **Note**: This event was replaced by the Change Order Interim Approval Event Version 2.	NA	SOAP Service: ChangeOrderService Operation: getChangeOrder
Change Order Interim Approval Event Version 2	Signals that a change order is in interim approval. This is version 2. **Note**: This event replaces the Change Order Interim Approval Event.	NA	SOAP Service: ProductDesignChangeOrderService Operation: findChangeOrderRedline
Change Order Open Event (replaced by Change Order Open Event Version 2)	Signals that a change order is open. **Note**: This event was replaced by the Change Order Open Event Version 2.	NA	SOAP Service: ChangeOrderService Operation: getChangeOrder
Change Order Open Event Version 2	Signals that a change order is open. This is version 2. **Note**: This event replaces the Change Order Open Event.	NA	SOAP Service: ProductDesignChangeOrderService Operation: findChangeOrderRedline
Change Order Scheduled Event (replaced by Change Order Scheduled Event Version 2)	Signals that a change order is scheduled. **Note**: This event was replaced by the Change Order Scheduled Event Version 2.	NA	SOAP Service: ProductDesignChangeOrderService Operation: getChangeOrder

Supported Business Events	Description	Event Payload	Callback Service
Change Order Scheduled Event V2	Signals that a change order is scheduled. This is version 2. **Note**: This event replaces the Change Order Scheduled Event.	NA	SOAP Service: ProductDesignChangeOrderService Operation: findChangeOrderRedline
Data Pool Subscription Confirmation Sent Event	Signals a data pool subscription confirmation is sent.	NA	SOAP Service: DataPoolSyndicationService Operation: findConfirmation
Data Pool Subscription Event	Signals a data pool subscription is created.	NA	SOAP Service: DataPoolSyndicationService Operation: findSubscription
GTIN Item CrossReference Relationship Create Event	GTIN Item CrossReference Relationship Create Event	NA	SOAP Service: ItemRelationshipService Operation: findGTINCrossReference
GTIN Item CrossReference Relationship Delete Event	GTIN Item CrossReference Relationship Delete Event	ItemRelationshipId OrganizationId OrganizationCode InventoryItemId ItemNumber TradingPartnerType TradingPartnerId TradingPartnerName TradingPartnerNumber UomCode GTIN RevisionCode EpcGtinSerial	NA
GTIN Item CrossReference Relationship Update Event	GTIN Item CrossReference Relationship Update Event	NA	SOAP Service: ItemRelationshipService Operation: findGTINCrossReference
Item Bulk Load Event	Signals items are imported.	RequestId RequestStatus	NA
Item Catalog Category Assignment Change Event	Signals a change in the item catalog category assignment.	NA	SOAP Service: ItemService Operation: findItem

Supported Business Events	Description	Event Payload	Callback Service
Item Category Assignment Delete Event	Signals the deletion of an item catalog category assignment.	ItemCategoryAssignmentId InventoryItemId OrganizationId OrganizationCode ItemNumber CategorySetId CatalogCode CategoryId CategoryCode MasterControlledFlag StartDate EndDate	NA
Item Create Event	Signals an item is created.	NA	SOAP Service: ItemService Operation: findItem
Item CrossReference Relationship Create Event	Item CrossReference Relationship Create Event	NA	SOAP Service: ItemRelationshipService Operation: findItemCrossReferenceRelatio nship
Item CrossReference Relationship Delete Event	Item CrossReference Relationship Delete Event	ItemRelationshipId OrganizationId OrganizationCode MasterOrganizationId MasterOrganizationCode InventoryItemId ItemNumber CrossReference SubType OrgIndependentFlag	NA
Item CrossReference Relationship Update Event	Item CrossReference Relationship Update Event	NA	SOAP Service: ItemRelationshipService Operation: findItemCrossReferenceRelatio nship
Item Import Job Complete Event	Signals that item import job is completed.	RequestId RequestStatus	NA
Item Level Multi Row EFF Delete Event	Signals the deletion of a row in the item-level multirow attribute group.	EffLineId ContextCode InventoryItemId OrganizationId ItemNumber OrganizationCode IsTranslatableContext MRUniqueKey	NA

Supported Business Events	Description	Event Payload	Callback Service
Item Publication Event	Signals that items are published.	DocumentId ErrorMessage PublicationJobStatus RequestId SpokeSystemCode	NA
Item Revision Change Event	Signals a change in the item revision.	N/A	SOAP Service: ItemServiceV2 Operation: findItem
Item Revision Level Multi Row EFF Delete Event	Signals the deletion of a row in the item revision-level multirow attribute group.	EffLineId ContextCode InventoryItemId OrganizationId RevisionId RevisionCode ItemNumber OrganizationCode IsTranslatableContext MRUniqueKey	NA
Item Structure Component Create Event	Signals that an item structure component is created.	NA	SOAP Service: StructureService Operation: findStructure
Item Structure Component Update Event	Signals that an item structure component is updated.	NA	SOAP Service: StructureService Operation: findStructure
Item Structure Create Event	Signals that an item structure is created.	NA	SOAP Service: StructureService Operation: findStructure
Item Structure Update Event	Signals that an item structure is updated.	NA	SOAP Service: StructureService Operation: findStructure
Item Supplier Association Create Event	Signals association to an item supplier has been created.	N/A	SOAP Service: ItemServiceV2 Operation: findItem
Item Supplier Association Update Event	Signals association to an item supplier has been updated.	N/A	SOAP Service: ItemServiceV2 Operation: findItem

Supported Business Events	Description	Event Payload	Callback Service
Item Supplier-Level Multirow EFF Delete Event	Signals the deletion of a row in the item supplier-level multirow attribute group.	EffLineId ContextCode InventoryItemId OrganizationId ItemNumber OrganizationCode IsTranslatableContext MRUniqueKey CategoryCode EndPointUrl	N/A
Item Update Event	Signals that an item is updated. **Note**: This event is for item updates that are not handled through the Item Bulk Load Event.	NA	SOAP Service: ItemService Operation: findItem
Manufacturer Create Event	Signals a manufacturer is created.	RegistryID OrganizationName (create manufacturers)	REST: manufacturers
Manufacturer Update Event	Signals a manufacturer is updated.	RegistryID OrganizationName Status (update manufacturers)	REST: manufacturers
New Item Request Completed	Signals that a new item request is completed.	NA	SOAP Service: NewItemRequestService Operation: getNewItemRequest
New Item Request Opened	Signals that a new item request is open.	NA	SOAP Service: NewItemRequestService Operation: getNewItemRequest
New Item Request Scheduled	Signals that a new item request is scheduled.	NA	SOAP Service: NewItemRequestService Operation: getNewItemRequest
New Item Request Status Changed To Approval	Signals that a new item request is in approval.	NA	SOAP Service: NewItemRequestService Operation: getNewItemRequest
New Item Request Status Changed To Definition	Signals that a new item request is in definition.	NA	SOAP Service: NewItemRequestService Operation: getNewItemRequest

Supported Business Events	Description	Event Payload	Callback Service
Oracle Health Publication Event	Signals that item information is published.	ItemSyncWithOracleHealthCompletedInfo SpokeSystemCode PublicationJobStatus RequestId ErrorMessage ProductPublication DocumentId PublicationJobStatus RequestId ProductLocationPublication DocumentId PublicationJobStatus RequestId ProductCostPublication DocumentId PublicationJobStatus RequestId	NA

Supported Business Events	Description	Event Payload	Callback Service
Product Upload Status Change Event	Signals a status change in a product upload.	ProductUploadId • newValue • oldValue ProductUploadName • newValue • oldValue ProductUploadStatus • newValue • oldValue SupplierId • newValue • oldValue ProductSchedule.EmailAddress • newValue • oldValue ProductSchedule.NotificationFlag • newValue • oldValue MappingName • newValue • oldValue ItemClassName • newValue • oldValue BatchId • newValue • oldValue CreationDate • newValue • oldValue CreatedBy • newValue • oldValue AssigneeUserName • newValue • oldValue ImportOnDataLoad • newValue • oldValue ScheduleId • newValue • oldValue	NA
Related Item Relationship Create Event	Related Item Relationship Create Event	NA	SOAP Service: ItemRelationshipService Operation: findRelatedItem

Supported Business Events	Description	Event Payload	Callback Service
Related Item Relationship Delete Event	Related Item Relationship Delete Event	ItemRelationshipId OrganizationId OrganizationCode MasterControlledFlag FromInventoryItemId FromItemNumber ToInventoryItemId ToItemNumber RelationshipType Rank ReciprocalFlag PlanningEnabledFlag	NA
Related Item Relationship Update Event	Related Item Relationship Update Event	NA	SOAP Service: ItemRelationshipService Operation: findRelatedItem
Source System Item Relationship Create Event	Source System Item Relationship Create Event	NA	SOAP Service: ItemRelationshipService Operation: findSpokeSystemRelationship
Source System Item Relationship Delete Event	Source System Item Relationship Delete Event	ItemRelationshipId OrganizationId OrganizationCode InventoryItemId ItemNumber SpokeSystemId SpokeSystemCode SpokeSystemItem	NA
Source System Item Relationship Update Event	Source System Item Relationship Update Event	NA	SOAP Service: ItemRelationshipService Operation: findSpokeSystemRelationship
Trading Partner Item Relationship Create Event	Trading Partner Item Relationship Create Event	NA	SOAP Service: ItemRelationshipService Operation: findTradingPartnerItemRelationship

Supported Business Events	Description	Event Payload	Callback Service
Trading Partner Item Relationship Delete Event	Trading Partner Item Relationship Delete Event	ItemRelationshipId TradingPartnerType OrganizationId OrganizationCode InventoryItemId ItemNumber TradingPartnerId TradingPartnerName TradingPartnerNumber TradingPartnerItemId TradingPartnerItemNumber CompetitorItemRelationshipTyp e	NA
Trading Partner Item Relationship Update Event	Trading Partner Item Relationship Update Event	NA	SOAP Service: ItemRelationshipService Operation: findTradingPartnerItemRelations hip

Supply Chain Collaboration and Visibility

Supported Business Events	Description	Event Payload	Service Callback
B2B Message Created	Signals that a B2B message with the delivery method of a business event has been created.	MessageId DocumentType Datetime SenderId SenderIdType RecipientId RecipientIdType IntermediaryId IntermediaryIdType ApplicationDocumentNumber	NA

Supported Financials Business Events

The following Financials business events are supported. You can subscribe to these events during adapter configuration in the Adapter Endpoint Configuration Wizard.

Cloud Product	Supported Business Event	Description	Enable By Using	First Release Available
Advanced Collections	Strategy Closed	Signals when the collection strategy associated to a customer is closed.	Automatically Initiate or Fulfill Collections Tasks in Third Party Systems feature	18C
Advanced Collections	Strategy External Task Opened	Signals when the collection strategy assigned to a customer has a task that should be performed by an external system and when that task is opened.	Automatically Initiate or Fulfill Collections Tasks in Third Party Systems feature	18C
Expenses	Expense Report Auditor Approved	Signals when the expense report is approved by the auditor.	ERP Business Events REST API	19B
Expenses	Expense Report Held	Signals when the expense report is placed on hold.	ERP Business Events REST API	19B
Expenses	Expense Report Hold Released	Signals when the hold on the expense report is released.	ERP Business Events REST API	19B
Expenses	Expense Report Manager Approved	Signals when the expense report is approved by the manager.	ERP Business Events REST API	19B
Expenses	Expense Report Paid	Signals when the expense report is paid.	ERP Business Events REST API	19B
Expenses	Expense Report Submitted	Signals when the expense report is submitted by the user.	ERP Business Events REST API	19B
Financials Common Module	ERP Integration Inbound	Signals when the import bulk data is completed using the ERP Integration web service.	ERP Integrations REST API	17D
Financials Common Module	ERP Integration Outbound	Signals when the export bulk data is completed using the ERP Integration web service.	ERP Integrations REST API	17D
General Ledger	Accounting Period Closed	Signals when a general ledger accounting period is closed.	ERP Business Events REST API	18C
General Ledger	Accounting Period Opened	Signals when a general ledger accounting period is opened.	ERP Business Events REST API	18C

Cloud Product	Supported Business Event	Description	Enable By Using	First Release Available
General Ledger	Accounting Period Reopened	Signals when a general ledger accounting period is reopened.	ERP Business Events REST API	18C
General Ledger	Journal Batch Approved	Signals when a journal batch is approved.	ERP Business Events REST API	18C
General Ledger	Journal Batch Posting Completed	Signals when a journal batch is posted.	ERP Business Events REST API	18C
Payables	Payables Invoice Approved	Signals when an invoice is approved.	AP: Enable Business Events profile option at the site level	18C
Payables	Payables Invoice Cancelled	Signals when an invoice is canceled	AP: Enable Business Events profile option at the site level	18C
Payables	Payables Invoice Created	Signals when an invoice is created.	AP: Enable Business Events profile option at the site level	18C
Payables	Invoice Hold Applied	Signals when an invoice hold is placed.	AP: Enable Business Events profile option at the site level	18B
Payables	Invoice Hold Released	Signals when an invoice hold is released.	AP: Enable Business Events profile option at the site level	18B
Payables	Payables Invoice Validated	Signals when an invoice is validated online.	AP: Enable Business Events profile option at the site level	18C
Payables	Payables Payment Created	Signals when a single payment is created.	AP: Enable Business Events profile option at the site level	18C
Payables	Payables Payment Voided	Signals when a payment is voided.	AP: Enable Business Events profile option at the site level	19A
Payments	Payment File Created	Signals when a payment file is created.	IBY: Enable Business Events profile option at the site level	18C
Receivables	Credit Case Folder Closure	Signals when a case folder whose request type is Credit Check Failure is closed.	Enabled by default	18B
Receivables	Credit Case Folder Created	Published when a credit case folder is created.	ERP Business Events REST API	21C

Cloud Product	Supported Business Event	Description	Enable By Using	First Release Available
Receivables	Credit Case Folder Refresh Requested	Published when a user clicks Refresh Data on the credit case folder.	ERP Business Events REST API	21C
Receivables	Receivables Autoinvoice Completed	Signals when an autoinvoice is completed.	ERP Business Events REST API	19A
Receivables	Receivables Credit Memo Applied	Signals when a standard credit memo is created and an on account credit memo is successfully applied.	ERP Business Events REST API	19A
Receivables	Receivables Credit Memo Completed	Signals when a credit memo is successfully completed.	ERP Business Events REST API	19A
Receivables	Receivables Credit Memo Incompleted	Signals when a credit memo is incomplete.	ERP Business Events REST API	19A
Receivables	Receivables Invoice Completed	Signals when an invoice is completed.	ERP Business Events REST API	18C
Receivables	Receivables Invoice Incompleted	Signals when an invoice is incomplete.	ERP Business Events REST API	19A
Receivables	Receivables Invoice Paid	Signals when a payment is applied to an invoice.	ERP Business Events REST API	18C
Receivables	Receivables Lockbox Batch Completed	Signals when a lockbox batch process is completed.	ERP Business Events REST API	19A
Receivables	Standard Receipt Applied	Signals when a standard receipt is applied to a transaction for the goods received or services rendered.	ERP Business Events REST API	19A
Receivables	Standard Receipt Created	Signals when a standard receipt is created to record payment from a customer for goods received or services rendered.	ERP Business Events REST API	18C
Receivables	Standard Receipt Deleted	Signals when a standard receipt is successfully deleted.	ERP Business Events REST API	19A
Receivables	Standard Receipt Reversed	Signals when a standard receipt is reversed.	ERP Business Events REST API	18C

Cloud Product	Supported Business Event	Description	Enable By Using	First Release Available
Receivables	Standard Receipt Unapplied	Signals when a standard receipt is successfully unapplied.	ERP Business Events REST API	19A
Revenue Management	Revenue Contract Batch Created	Signals when revenue contracts are created in a batch process.	ERP Business Events REST API	19D

For detailed information about enabling business events, see the following:

- About the REST APIs in *REST API for Oracle Financials Cloud*

- Overview of Public Business Events in *Implementing Payables Invoice to Pay*

Supported Project Portfolio Management Business Events

The following Project Portfolio Management business events are supported. You can subscribe to these events during adapter configuration in the Adapter Endpoint Configuration Wizard.

Work Area	Supported Public Event	Description	Enabled By Default	First Release Available	Callback Service
Project Financial Management	Publishing Financial Project Progress	Signals whenever financial project progress is published.	No	18C	REST Service: Project Progress Operation: Get the progress of a project
Project Financial Management	Financial Project Plan Changes	Signals whenever task assignments are created or modified in a financial project plan.	No	18C	REST Service: Project Plans Resource: Tasks Operation: Get a task of a project
Project Financial Management	Unplanned Project Costs	Signals whenever unplanned resources are added to the financial project plan.	No	22B	REST Service: Project Plans Operation: Project Plan Change
Project Foundation	Project Status Change	Signals whenever the status of a project plan changes.	No	17D	REST Service: Projects Operation: Get a project

Work Area	Supported Public Event	Description	Enabled By Default	First Release Available	Callback Service
Project Management	Project Deliverable Status Changes	Signals whenever project deliverable status or priority changes. Creating or deleting a deliverable doesn't generate signals.	No	19A	REST Service: Deliverables Method: Get a deliverable
Project Management	Project Gate Approver Status Change	Signals whenever the status of a project gate approver is changed.	No	21C	REST Service: Project Plans Resource: Tasks Operation: Get a task of a project
Project Management	Project Gate Status Change	Signals whenever the status of a project gate is changed.	No	21C	REST Service: Project Plans Resource: Gate Approvers Operation: Update
Project Resource Management	Project Resource Request Status	Signals whenever the status of a project resource request changes. A new request is created in Open or Pending Adjustment status, or resource assignments are readjusted or canceled.	No	19B	REST Service: Project Resource Requests Operation: Get a project resource request
Task Management	Project Milestone Completion	Signals whenever a project milestone is completed. Completing financial tasks that are flagged as milestones doesn't generate signals.	No	19A	REST Service: Project Plans Resource: Tasks Operation: Get a task of a project
Task Management	Project Task Progress Status Changes	Signals whenever project task progress status changes. Creating or deleting tasks doesn't generate signals.	No	19A	REST Service: Project Plans Resource: Tasks Operation: Get a task of a project

Detailed information about these events is provided. See Public Business Events in *Implementing Project Financial Management and Grants Management* and Public Business Events in *Implementing Project Execution Management*.

Oracle ERP Cloud Adapter Restrictions

Note the following Oracle ERP Cloud Adapter restrictions.

- You can successfully upload files of up to 1 GB in size to Oracle WebCenter Content (Universal Content Manager) with the Oracle ERP Cloud Adapter. However, when the file is unzipped or a virus scan is run, it may fail due to Oracle ERP Cloud size limits.

- The SubmitJobwithOutput operation is being deprecated soon. It is recommended that you use the ExportBulkdata operation from Oracle ERP Cloud to submit Business Intelligence Publisher (BIP) jobs and receive a call back in return.

- Downloading files from Oracle WebCenter Content is not supported.

- Oracle Fusion Applications allows clients to access the public event catalog using the HTTP basic authentication scheme. When the client is not allowed to communicate with the catalog using this scheme, they receive the following error: `Server redirected too many times (20)`. This occurs while testing the Oracle Cloud connection. You must file a service request with Oracle Fusion Applications to resolve this issue.

> ⓘ **Note**
>
> There are overall service limits for Oracle Integration. A service limit is the quota or allowance set on a resource. See Service Limits.

What Application Version Is Supported?

For information about which application version is supported by this adapter, see the Connectivity Certification Matrix.

Oracle ERP Cloud Adapter Use Cases

Common use cases for the Oracle ERP Cloud Adapter are as follows:

- Import journal entries in a batch into Oracle ERP Cloud

- Configure and receive a callback from Oracle ERP Cloud

- Trigger an integration based on events in Oracle ERP Cloud

- Synchronize product data in real time with the supply chain

Workflow to Create and Add an Oracle ERP Cloud Adapter Connection to an Integration

You follow a very simple workflow to create a connection with an adapter and include the connection in an integration in Oracle Integration.

Step	Description	More Information
1	Decide where to work	• Work in a project (see why working with projects is preferred in *Using Integrations in Oracle Integration 3*). • Work outside a project.

Step	Description	More Information
2	Create the adapter connections for the applications you want to integrate. The connections can be reused in multiple integrations and are typically created by the administrator.	Create an Oracle ERP Cloud Adapter Connection
3	Create the integration. When you do this, you add trigger and invoke connections to the integration. For a trigger, you select to include either a business object or event in your integration.	Understand Integration Creation and Best Practices in *Using Integrations in Oracle Integration 3* and Add the Oracle ERP Cloud Adapter Connection to an Integration
4	Map data between the trigger connection data structure and the invoke connection data structure.	Map Data in *Using Integrations in Oracle Integration 3*
5	(Optional) Create lookups that map the different values used by those applications to identify the same type of object (such as gender codes or country codes).	Manage Lookups in *Using Integrations in Oracle Integration 3*
6	Activate the integration. **Note**: If you deactivate an integration that contains a business event subscription, a message is displayed asking if you want to delete the event subscription. See Deactivate an Integration with Business Events.	Manage Integrations in *Using Integrations in Oracle Integration 3*
7	Monitor the integration on the dashboard.	Monitor Integrations in *Using Integrations in Oracle Integration 3*
8	Track payload fields in messages during runtime.	Assign Business Identifiers for Tracking Fields in Messages and Track Integration Instances in *Using Integrations in Oracle Integration 3*
9	Manage errors at the integration level, connection level, or specific integration instance level.	Manage Errors in *Using Integrations in Oracle Integration 3*

2

Create an Oracle ERP Cloud Adapter Connection

A connection is based on an adapter. You define connections to the specific cloud applications that you want to integrate.

Topics:

- [Prerequisites for Creating a Connection](#)
- [Create a Connection](#)
- [Upload a Certificate to Connect with External Services](#)
- [Refresh Integration Metadata](#)

Prerequisites for Creating a Connection

Satisfy the following prerequisites specific to your environment to create a connection with the Oracle ERP Cloud Adapter.

- [Subscribe to Oracle ERP Cloud](#)
- [Verify the Status of Location-Based Access Control (LBAC)](#)
- [Assign Required Roles to an Integration User](#)
- [Upload Files in Bulk and Insert Data into Oracle ERP Cloud Application Tables for New Integrations](#)
- [Upload Files to Oracle WebCenter Content](#)
- [Perform Prerequisites to Set Up the OAuth Authorization Code Credentials Security Policy](#)
- [Access the REST Catalog Through the Oracle ERP Cloud Adapter](#)
- [Create Custom Business Events](#)
- [Perform Prerequisites to Use the JWT User Assertion Security Policy](#)
- [Obtain the Oracle ERP Cloud Service Catalog Service WSDL, Event Catalog URL, or Interface Catalog URL (For Connections Created Prior to 2/18/20)](#)

Subscribe to Oracle ERP Cloud

This action enables you to create an Oracle ERP Cloud user account with the correct privileges. You specify this user account when creating an Oracle ERP Cloud Adapter connection on the Connections page.

See [Oracle ERP Cloud](#).

Verify the Status of Location-Based Access Control (LBAC)

Check if you have enabled Location-Based Access Control (LBAC) for Fusion Applications (for Oracle ERP Cloud).

If LBAC is enabled, you must allowlist (explicitly allow identified entities access) the Oracle Integration NAT Gateway IP address in your LBAC. If you do not perform this task, you can receive a `401 Access Denied` error or `403 Forbidden` error from Oracle Fusion Applications.

See How Location-Based Access Works in *Securing Oracle SCM Cloud* and Doc ID 2615294.1 at Oracle Support Services.

Assign Required Roles to an Integration User

To use the Oracle ERP Cloud Adapter in an integration, you must assign specific roles to an integration user.

Associating the Integration User with the Following Roles and Privileges

You associate the user with the following roles and privileges.

Role	Description
Integration Specialist	This is a job role and does not include data roles. Assign the Integration Specialist role to another job role that inherits other Oracle ERP Cloud roles. For example, assign the Application implementation consultant role, or another user-appropriate job role.
Oracle ERP Cloud-specific data access to the integration user	You must specify the specific data access roles based on the objects you want to integrate. This role applies to Release 13. See Managing Data Access for Users: Explained of *Securing Oracle Cloud ERP*.
AttachmentsUser	Provides access to the Attachments security group to download the log file or the output file with the ERP Integration Service. This role is automatically shipped. You must verify that this role is automatically assigned to the user.
SOAOperator	The SOA operator role is required to receive ERP business events.
FND_MANAGE_CATALOG_SERVICE_PRIV	The role to manage the web services catalog.
Customer Relationship Management Application Administrator (for Oracle CRM Cloud implementations)	See Chapter Customer Relationship Management Application Administrator (Job Role) in *Security Reference for CX Sales and B2B Service*.

Additional roles may be required as per each interface requirements.

Using the Security Console

Use the Security Console to manage application security such as roles, users, certificates, and administration tasks. Access to the Security Console is provided by the predefined **Security Manager** role. Access the Security Console in the following ways:

- Use the Manage Job Roles or Manage Duties tasks in the Setup and Maintenance work area.
- Select **Navigator**, then **Tools**, then **Security Console**.

See [Using the Security Console](#) in *Securing Oracle Cloud ERP*.

Create Connections Based on the User Role

You can create more than one service integration user account in Oracle Fusion Applications for different Oracle Fusion Applications roles that exist to perform different tasks and then create different Oracle Integration connections using those user accounts.

For example, you can create multiple connections in Oracle Integration such as ERP1, ERP2, ERP3, and so on and associate each of these connections with a designated account in Oracle ERP Cloud, such as user_integration_1 (general ledger), user_integration_2 (HCM), and user_integration_3 (projects). These actions create different connections for invoking different Oracle ERP Cloud jobs using an Oracle Fusion Applications user account set up for that job.

Upload Files in Bulk and Insert Data into Oracle ERP Cloud Application Tables for New Integrations

When using an Oracle ERP Cloud Adapter connection in an *existing* integration, you must satisfy the following prerequisites for the upload of files in bulk and the insertion of data into Oracle ERP Cloud application tables.

- Satisfy the following prerequisites for the bulk upload of files and the insertion of data into Oracle ERP Cloud application tables. This is only required for an ERP Cloud callback upon job completion. Only file-based data import (FBDI)-compliant jobs are supported for callbacks.

  1. Create a user similar to the Oracle ERP Cloud Adapter connection user in the Oracle Cloud Console. This user is linked to the Oracle Integration WebLogic security realm. The user name must exactly match the Oracle ERP Cloud user name. The password and email address can be anything. Ensure that this user has permissions to execute integrations in Oracle Integration. It is recommended that you have a role such as ServiceAdmin or ServiceDeveloper, which have executable permissions on integrations. Ensure that you select the Integration role for the Oracle ERP Cloud user in the Oracle ERP Cloud application.

  2. Import the following certificates:

     - In your browser, enter the service catalog URL:

For Release 13:

```
https://hostname:port/fscmService/ServiceCatalogService?WSDL
```

– In the WSDL, navigate to the X509 certificates section:

– Copy the first certificate string to a file.

> ⓘ **Note**
>
> For each certificate file that you create, add your certificate string between the `-----BEGIN CERTIFICATE-----` and `-----END CERTIFICATE-----` lines for the certificate to be successfully imported into Oracle Integration. For example:
>
> ```
> -----BEGIN CERTIFICATE-----
> certificate_string
> -----END CERTIFICATE-----
> ```
>
> Otherwise, you may receive an `Invalid Certificate` error.

– Copy the second certificate to a file. You have two certificate files (for example, `erp_cert1.cer` and `erp_cert2.cer`).

– In the Upload Certificate dialog in Oracle Integration, import both certificates as **Message Protection Certificate** types and enter unique alias names. See [Upload a Certificate to Connect with External Services](#).

– Satisfy the following manifest file recommendations (that is, the properties file in the zip file that must be uploaded to Universal Content Management (UCM)).

  * The manifest file expects import process details in the following format:

  ```
  <job package name>,<job def name>,<Manifest file name>,<job parameters (comma separated)>
  ```

  For example:

  ```
  oracle/apps/ess/financials/payables/invoices/
  transactions,APXIIMPT,AP,#NULL,#NULL,#NULL,#NULL,#NULL,#NULL,#NUL
  L,INVOICE
  ```

* The manifest file name should be a prefix of the actual zip file name if it contains _. Otherwise, it should just be the name. For example, if the zip file name is `AP_301.zip`, the manifest file name should be `AP.properties` and the third value in the manifest should be the manifest file name. If the zip file name is `AP.zip`, the manifest file name should be `AP.properties` and the third value in the manifest should be the manifest file name.

* Only one job is supported per invoke. You can have multiple entries in the manifest property file to import data from the interface table to the applications tables in batches of up to 10 for sequential or up to 5 for parallel processing. For example, the journal import data file has records of 10 ledgers. The property file has 10 entries with the unique ledger name as a parameter. After the data file is loaded in the interface table, the import process has 10 subprocesses for each ledger.

- Satisfy the following prerequisites to configure the integration that uses the bulk import feature:

  1. Map the following parameters to the Oracle ERP Cloud Adapter.

     – Map parameter `ICSFileReference` to the `File Reference` parameter from the other adapter (for example, the FTP Adapter, the REST Adapter, or whichever adapter you used that has the `ICSFileReference` parameter).

     – Map the `FileName` parameter from the source schema to the target schema (the target schema is the Oracle ERP Cloud bulk import schema). The `FileName` must be unique for every request.

Upload Files to Oracle WebCenter Content

To upload files to Oracle WebCenter Content (Universal Content Manager) with the Oracle ERP Cloud Adapter, you must satisfy the following prerequisites.

- Create a PGP Public Key:

  To upload encrypted files, a PGP public key is required. You must generate the PGP public key and save it for upload. The supported algorithm for the public key is RSA for encryption and the key size must be 1024 bits in length.

  The process for uploading files into Oracle ERP Cloud is:

  – You encrypt files using the Oracle ERP Cloud public key.

  – The data-loading process decrypts files using the Oracle ERP Cloud private key.

- Configure Security and User Access

  Once you have configured security groups and doc accounts for the file to upload, you can configure the Oracle ERP Cloud Adapter to upload the file to Oracle WebCenter Content.

  See Understanding Security and User Access in *Administering Oracle WebCenter Content*.

Perform Prerequisites to Set Up the OAuth Authorization Code Credentials Security Policy

Perform the following prerequisites to set up the OAuth Authorization Code Credentials security policy with an Oracle Fusion Applications identity domain or a non-Oracle Fusion Applications identity domain (for example, the Oracle Integration identity domain).

Topics:

- [Set Up the OAuth Authorization Code Credentials Security Policy with the Oracle Fusion Applications Identity Domain](#)
- [Set Up the OAuth Authorization Code Credentials Security Policy with a Non-Oracle Fusion Applications Identity Domain](#)

> ⓘ **Note**
>
> **The use of a non-Oracle Fusion Applications identity domain is being retired.**
>
> – Create all new connections with the OAuth Authorization Code Credentials security policy in an Oracle Fusion Applications identity domain. See [Set Up the OAuth Authorization Code Credentials Security Policy with the Oracle Fusion Applications Identity Domain](#).
>
> – Existing customers who use a non-Oracle Fusion Applications identity domain (for example, an Oracle Integration identity domain) are being scheduled for migration to an Oracle Fusion Applications identity domain with a completion date of sometime this year. See [Identity Upgrade Overview](#).
>
>   After migration, you must reconfigure the following:
>
>   * Reconfigure your OAuth resource settings in the Oracle Cloud Console to point to the Oracle Fusion Applications identity domain. See [Set Up the OAuth Authorization Code Credentials Security Policy with the Oracle Fusion Applications Identity Domain](#).
>
>   * Reconfigure your OAuth Authorization Code Credentials security policy connections (for example, the client ID, client secret, authorization code URI, and access token URI). Ensure that you provide consent and test the connection. See [Configure Connection Security](#).
>
>   * Reactivate the integrations using the updated connection. See Reactivate Integrations after a Connection Update.

Set Up the OAuth Authorization Code Credentials Security Policy with the Oracle Fusion Applications Identity Domain

You must create a resource application to represent the Oracle Fusion Applications resource and a client application for Oracle Integration to use the OAuth Authorization Code Credentials security policy. Once these tasks are completed, you can successfully configure a connection

on the Connections page. You do not need to create any JWT signing certificates for upload into Oracle Fusion Applications.

- [Create an Identity Domain Resource Application to Represent the Oracle Fusion Applications Resource](#)
- [Create the Confidential Client Application for Oracle Integration](#)
- [Resolve Errors That Occur When Clicking Provide Consent](#)

Create an Identity Domain Resource Application to Represent the Oracle Fusion Applications Resource

1. Create an identity domain resource application to represent the Oracle Fusion Applications resource.

   a. Log in to the identity domain as the domain administrator.

   b. In the menu bar, click **Identity & Security**.

   c. Click **Domains**.

   d. Select your compartment.

   e. Click the identity domain.

   f. In the menu bar, click **Integrated applications**.
   This is the location at which you create the client application for your grant type.

Details	User management	Administrators	Dynamic groups	Directory integrations	**Integrated applications**	Oracle cloud services	Federation	Domain policies

   Integrated applications

   g. Click **Add application**.

   h. Select **Confidential Application**, then click **Launch workflow**.

2. a. Provide a name (for example, `FA Resource`), and click **Submit**.

   b. Click the **OAuth configuration** tab, then the **Edit OAuth configuration** subtab.

   c. In the **Resource server configuration** section, select **Configure this application as a resource server now**.

   d. (Optional) In the **Configure application APIs that need to be OAuth protected** section, select a value from the **Access token expiration (seconds)** list.

   e. Click the **Allow token refresh** toggle.

   f. In the **Refresh token expiration** (seconds) list, select a value.

   g. In the **Primary audience** field, add the Oracle Fusion Applications URL and port. This is the primary recipient where the token is processed.

   ```
   https://FA_URL:443
   ```

   h. Click the **Add scope** toggle, then click **Add**.

   i. In the **Scope** field, enter `/`.

   j. In the **Description** field, enter **All**.

   k. Select **Requires user consent**.

   l. Click **Add**, then click **Submit**.

m. From the **Actions** menu at the top, select **Activate**, and then **Activate application** to activate the application for use. The resource server representing the resource is now active.

Create the Confidential Client Application for Oracle Integration

1. Sign in as the identity domain administrator to the Oracle Cloud Console.

2. In the menu bar, click **Identity & Security**.

3. Click **Domains**.

4. Select your compartment.

5. Click the identity domain.

6. In the menu bar, click **Integrated applications**.

7. Click **Add application**.

8. Select **Confidential Application**, then click **Launch workflow**.

9. Enter a name. The remaining fields on this page are optional and can be ignored.

10. Click **Submit**.

11. Click the **OAuth configuration** tab, then the **Edit OAuth configuration** subtab.

12. In the **Client configuration** panel, select **Configure this application as a client now**.

13. For the authorization code, select **Refresh token** and **Authorization code** in the **Allowed grant types** section.

14. In the **Redirect URL** field, enter the redirect URL of the client application. After user login, this URL is redirected to with the authorization code. You can specify multiple redirect URLs. This is useful for development environments in which you have multiple instances, but only one client application due to licensing issues. For example:

> ⓘ **Note**
>
> If you don't know the following information, check with your administrator:
>
> - If your instance is new or upgraded from Oracle Integration Generation 2 to Oracle Integration 3.
>
> - The complete instance URL with the region included (required for new instances).

For Connections…	Include the Region as Part of the Redirect URL?	Example of Redirect URL to Specify…
Created on new Oracle Integration 3 instances	Yes.	`https://OIC_instance_URL.region.ocp.oraclecloud.com/icsapis/agent/oauth/callback`

For Connections…	Include the Region as Part of the Redirect URL?	Example of Redirect URL to Specify…
Created on instances upgraded from Oracle Integration Generation 2 to Oracle Integration 3	No. This applies to both: • New connections created after the upgrade • Existing connections that were part of the upgrade	`https:// OIC_instance_URL.ocp.oraclecloud.com/ icsapis/agent/oauth/callback`

For the OAuth authorization code to work, the redirect URI must be set properly.

15. Click the **Add Resources** toggle.

16. Click **Add scope** to add appropriate scopes.
    If the Oracle Fusion Applications instance is federated with the identity domain, the Oracle Integration cloud service application is listed among the resources for selection. This enables the client application to access Oracle Integration.

17. Search for the Oracle Fusion Applications resource application created in Create an Identity Domain Resource Application to Represent the Oracle Fusion Applications Resource.

18. Find and expand the resource.

19. Select the scope, then click **Add**.

20. Click **Submit**.
    The Details page shows the client ID and client secret values in the **General Information** section.

21. Copy and save these values. You need this information when creating a connection for the OAuth Authorization Code Credentials security policy on the Connections page.
    Note the following details for successfully authenticating your account on the Connections page.

If The...	Then...
Identity domain safeguarding Oracle Integration and the Oracle Fusion Applications resource application are the same.	Log in to Oracle Integration using the local Oracle Fusion Applications user created earlier. You must create a connection and click **Provide Consent** on the Connections page for authentication to succeed.
Identity domain safeguarding Oracle Integration and the Oracle Fusion Applications resource application are different.	Log in to Oracle Integration using a general Oracle Integration developer account, create a connection, and click **Provide Consent** on the Connections page. You need to log in to the Oracle Fusion Applications resource identity domain application using the local Oracle Fusion Applications user account created earlier.

22. From the **Actions** menu at the top, select **Activate**, and then **Activate application** to activate the client application for use.

Resolve Errors That Occur When Clicking Provide Consent

After you configure the OAuth Authorization Code Credentials security policy on the Connections page, you must test your connection.

If you are logged in to Oracle Integration with an Oracle Integration user account and click **Provide Consent** to test the OAuth flow, consent is successful. However, when you test the connection, it fails with an `Unauthorized 401` error.

This error occurs because the Oracle Integration user account with which you logged in is not part of Oracle Fusion Applications.

1. Log out of Oracle Integration and log back in with a user account that exists in Oracle Fusion Applications.

2. Return to the Connections page and retest the connection.
   The connection is successful this time.

Set Up the OAuth Authorization Code Credentials Security Policy with a Non-Oracle Fusion Applications Identity Domain

You must set up trust between Oracle Fusion Applications and an identity domain and create a client application for Oracle Integration to use the OAuth Authorization Code Credentials security policy. Once these tasks are completed, you can successfully configure a connection on the Connections page. Use this option when you are integrating with a non-Oracle Fusion Applications identity domain, such as the Oracle Integration identity domain.

> ⓘ **Note**
>
> **The use of a non-Oracle Fusion Applications identity domain is being retired**. Customers using this identity domain are being migrated. See Identity Upgrade Overview.

- Set Up Trust Between Oracle Fusion Applications and an Identity Domain
- (Optional) Create a Local User
- Create the Confidential Client Application for Oracle Integration
- Avoid Potential Errors When Testing Your Connection with a Nonfederated User Account

Set Up Trust Between Oracle Fusion Applications and an Identity Domain

1. Get the JWK signing certificates from the identity domain of Oracle Integration.

   a. Get the REST API of the identity domain endpoint that gives you the signing certificate endpoint. For example:

   ```
   /admin/v1/SigningCert/jwk
   ```

   See Getting Started with the Identity Domains REST API.

   b. Copy the endpoint.

   c. Get the identity domain URL from the Oracle Cloud Console or from the Oracle Integration **About** menu.

d. Add that URL to the front of the signing certificate and use a tool (for example, `postman`) to invoke the REST APIs. For example:

```
https://identity_domain_URL.identity.oraclecloud.com/admin/v1/
SigningCert/jwk
```

e. Perform a GET call to retrieve the payload of the signing keys. There are two sections in the payload:

- Identity domain signing key
- Certificate authority (CA) signing key

Examples of the type of response you receive are provided. See Retrieve the Tenant's Signing Certificate in JWK Format.

f. Copy both signing key sections into separate files. Note that the headers and footers in the files must be in the following exact format to be successfully uploaded to Oracle Fusion Applications:

```
-----BEGIN CERTIFICATE-----
 content_of_signing_key
. . .
. . .
-----END CERTIFICATE-----
```

You can validate the content. For example:

```
openssl x509 -in identity.cert -noout -text
```

2. File a service request (SR) with Oracle Fusion Applications Support that includes the following details:

- **SR Summary**: Set Up Trust Between Oracle Fusion Applications and OCI Identity Domain
- **Category**: Login, Logout and SSO

Attach your certificates for upload. You cannot upload the certificates yourself.

3. Create a resource application in an Oracle Integration identity domain to represent the Oracle Fusion Applications resource.

a. Log in to the identity domain as the domain administrator.

b. In the navigation pane, click **Identity & Security**.

c. Click **Domains**.

d. Select your compartment.

e. Click the identity domain.

f. In the navigation pane, click **Integrated applications**.

g. Click **Add application**.

h. Select **Confidential Application**, then click **Launch workflow**.

i. Provide a name (for example, `FA Resource`), and click **Submit**.

j. Click the **OAuth configuration** tab, then the **Edit OAuth configuration** subtab.

k. In the **Resource server configuration** section, click **Configure this application as a resource server now**.

l. (Optional) In the **Configure application APIs that need to be OAuth protected** section, select a value from the **Access token expiration (seconds)** list.

m. Click the **Allow token refresh** toggle.

n. In the **Refresh token expiration** (seconds) list, select a value.

o. In the **Primary Audience** field, add the Oracle Fusion Applications URL and port. This is the primary recipient where the token is processed.

```
https://FA_URL:443
```

p. Click the **Add scope** toggle, then click **Add**.

q. In the **Scope** field, enter `/`.

r. In the **Description** field, enter **All**.

s. Select **Requires user consent**.

t. Click **Add**, then click **Submit**.

u. From the **Actions** menu at the top, select **Activate**, and then **Activate application** to activate the client application for use.

(Optional) Create a Local User

> ⓘ **Note**
>
> The following step is required if the Oracle Fusion Applications user is *not* federated with an identity domain or whichever identity provider you are using.

1. Create an identity domain local user. *Carefully* review the following table to see if you already have a local user.

Scenario	Do I Need to Create a Local User?
You have an Oracle Fusion Applications user federated with the identity domain that is protecting Oracle Integration.	No. You do not need to create the local identity domain Oracle Fusion Applications user. This is because identity domain already has Oracle Fusion Applications users in its repository.
You do *not* have federation between Oracle Fusion Applications and the identity domain that is protecting Oracle Integration.	Yes. You must create the local identity domain Oracle Fusion Applications user that you plan to use with the OAuth setup in Oracle Integration.

The identity domain administrator must create a nonfederated local username in the identity domain that matches the user in Oracle Fusion Applications. If you have already used and invoked Oracle Fusion Applications REST endpoints, you likely already created a user with the necessary roles and accesses to invoke the REST endpoints of Oracle Fusion Applications. This user must be created in the identity domain and have a local user password.

Create the Confidential Client Application for Oracle Integration

1. Sign in as the identity domain administrator to the Oracle Cloud Console.

2. In the navigation pane, click **Identity & Security**.

3. Click **Domains**.

4. Select your compartment.

5. Click the identity domain.

6. In the navigation pane, click **Integrated applications**.

7. Click **Add application**.

8. Select **Confidential Application**, then click **Launch workflow**.

9. Enter a name. The remaining fields on this page are optional and can be ignored.

10. Click **Submit**.

11. Click the **OAuth configuration** tab, then the **Edit OAuth configuration** subtab.

12. In the **Client configuration** box, select **Configure this application as a client now**.

13. For the authorization code, select **Refresh token** and **Authorization code** in the **Allowed grant types** section.

14. In the **Redirect URL** field, enter the redirect URL of the client application. After user login, this URL is redirected to with the authorization code. You can specify multiple redirect URLs. This is useful for development environments in which you have multiple instances, but only one client application due to licensing issues. For example:

> ⓘ **Note**
>
> If you don't know the following information, check with your administrator:
>
> - If your instance is new or upgraded from Oracle Integration Generation 2 to Oracle Integration 3.
>
> - The complete instance URL with the region included (required for new instances).

For Connections…	Include the Region as Part of the Redirect URL?	Example of Redirect URL to Specify…
Created on new Oracle Integration 3 instances	Yes.	`https:// OIC_instance_URL.region.ocp.oraclecloud. com/icsapis/agent/oauth/callback`

For Connections…	Include the Region as Part of the Redirect URL?	Example of Redirect URL to Specify…

Created on instances upgraded from Oracle Integration Generation 2 to Oracle Integration 3	No.
	This applies to both:
	• New connections created after the upgrade
	• Existing connections that were part of the upgrade
		`https://`
		`OIC_instance_URL.ocp.oraclecloud.com/`
		`icsapis/agent/oauth/callback`

For the OAuth authorization code to work, the redirect URI must be set properly.

15. Click the **Add scope** toggle, then click **Add**.
If the Oracle Fusion Applications instance is federated with the identity domain, the Oracle Integration cloud service application is listed among the resources for selection. This enables the client application to access Oracle Integration.

16. Search for the Oracle Fusion Applications resource application created in Set Up Trust Between Oracle Fusion Applications and an Identity Domain.

17. Find and expand the resource.

18. Select the scope, then click **Add**.

19. Click **Submit**.
The details page shows the client ID and client secret values.

20. Copy and save these values. You need this information when creating a connection for the OAuth Authorization Code Credentials security policy on the Connections page.
Note the following details for successfully authenticating your account on the Connections page.

If The...	Then...
Identity domain safeguarding Oracle Integration and the Oracle Fusion Applications resource application are the same.	Log in to Oracle Integration using the local Oracle Fusion Applications user created earlier. You must create a connection and click **Provide Consent** on the Connections page for authentication to succeed.
Identity domain safeguarding Oracle Integration and the Oracle Fusion Applications resource application are different.	Log in to Oracle Integration using a general Oracle Integration developer account, create a connection, and click **Provide Consent** on the Connections page. You need to log in to the Oracle Fusion Applications resource identity domain application using the local Oracle Fusion Applications user account created earlier.

21. From the **Actions** menu at the top, select **Activate**, and then **Activate application** to activate the client application for use.

Avoid Potential Errors When Testing Your Connection with a Nonfederated User Account

After you configure the OAuth Authorization Code Credentials security policy on the Connections page, you must test your connection.

If you are logged in to Oracle Integration with an Oracle Integration user account and click **Provide Consent** to test the OAuth flow, consent is successful. However, when you test the connection, it fails with an `Unauthorized 401` error.

This error occurs because the Oracle Integration user account with which you logged in is not part of Oracle Fusion Applications.

1. Log out of Oracle Integration and log back in with a user account that exists in Oracle Fusion Applications.

2. Return to the Connections page and retest the connection.
   The connection is successful this time.

Access the REST Catalog Through the Oracle ERP Cloud Adapter

You must perform the following steps to access the REST catalog through the Oracle ERP Cloud Adapter. This enables you to browse for REST resources on the Operations page of the Adapter Endpoint Configuration Wizard. This also enables Oracle ERP Cloud to skip REST resources when an error is encountered while generating the metadata. Without this, Oracle ERP Cloud generates a partial catalog that results in missing business resources on the Operations page.

> ⓘ **Note**
>
> After saving your profile value changes, it takes approximately 30 minutes for the REST resources to be available for selection in the Adapter Endpoint Configuration Wizard.

1. Log in to the Cloud Applications Home Page for ERP Financials.

2. In **Setup and Maintenance**, open the **Task** list and click **Search**.

3. Enter `Manage Profile Option` and click the link.

4. Click **+** to add a new profile option.

5. Define a new profile option with the following details.

Element	Description
Profile Option Code	`ORACLE.BC.REST.IGNORECATALOGERRORS`
Profile Display Name	Ignore REST resource catalog errors.
Application	Oracle Middleware Extensions for Applications
Module	Oracle Middleware Extensions for Applications
Description	If a catalog describe action fails for a particular resource, log an error and proceed with other resources.

6. Click **Save and Close**.

7. In the next screen in the **Profile Option Levels** section, select the **Enabled** and **Updateable** check boxes for **Site & User**.

8. Click **Save and Close**.

9. Go to the Oracle Fusion Applications Home page and navigate to **Setup and Maintenance**.

10. Search for the task `Manage Administrator Profile Values`.

11. In the **Name** column, click the **Manage Administrator Profile Values** task.

12. In the **Profile Option Code** field, select **ORACLE.BC.REST.IGNORECATALOGERRORS**, and click **Search**.

Manage Administrator Profile Values ⑦

◢ Search : Profile Option

Profile Option Code	.REST.IGNORECATALOGERRORS	Application	
Profile Display Name		Module	
Category			

The search results are displayed.

Search Results

◢ Search Results : Profile Options

Actions ▾ View ▾ Detach

Profile Option Code	Profile Display Name	Application	Module	Start Date	End Date	Description
ORACLE.BC.REST.IGNORECATAL...	Ignore REST resource catalog errors	Oracle Middlewar...	Oracle Middlewa...	9/15/20		If a catalog describe fails for a particular resource, log an error and proceed with other resources. Save and close when done.

◢ ORACLE.BC.REST.IGNORECATALOGERRORS: Profile Values

Actions ▾ View ▾ ✚ ✖ 🔲 Detach

* Profile Level	Product Name	User Name	▲ ▼ Profile Value
Site			true

13. Under **ORACLE.BC.REST.IGNORECATALOGERROR Profile Values**, click **+** to add a row in the **Profile Level** section.

14. Select the **Profile Level** list to show the following options.

- **Site**: The **ORACLE.BC.REST.IGNORECATALOGERROR** profile value is applicable to all users.

- **User**: The **ORACLE.BC.REST.IGNORECATALOGERROR** profile value is applicable only to a specific user.

15. Select an option.

16. If you select **User**:

    a. Enter a specific user name in the **User Name** field.

    b. Enter `true` in the **Profile Value** field.

* Profile Level	Product Name	User Name	▲ ▼ Profile Value
User		CALVIN.ROTH	true

17. Click **Save and Close**.

Create Custom Business Events

You can create custom business events in Application Composer that are visible for selection when configuring the Oracle ERP Cloud Adapter as a trigger connection in the Adapter Endpoint Configuration Wizard. You must access Application Composer through the Oracle Fusion Applications user interface. Select **ERP and SCM Cloud** from the **Applications** list in

Application Composer to create the custom objects and promote them as custom events to be consumed by the Oracle ERP Cloud Adapter.

> ⓘ **Note**
>
> Custom business events are supported only for Oracle ERP Cloud custom business objects.

See technical note 2535444.1 at <u>My Oracle Support</u> for instructions.

Perform Prerequisites to Use the JWT User Assertion Security Policy

You must perform prerequisites to use the JWT User Assertion security policy.

Topics:

- <u>Configure a Confidential Application to Use the JWT User Assertion Security Policy</u>
- <u>Configure JWT Assertions for Outbound Use</u>

Configure a Confidential Application to Use the JWT User Assertion Security Policy

You must generate a private key and configure a confidential application to use the JWT User Assertion security policy.

See <u>Prerequisites for JWT User Assertion</u> in *Using the REST Adapter with Oracle Integration 3*.

Configure JWT Assertions for Outbound Use

Perform the following prerequisites to use JWT assertions.

- Take the private key you generated in <u>Configure a Confidential Application to Use the JWT User Assertion Security Policy</u> and upload it on the Certificates page. See <u>Upload a Certificate to Connect with External Services</u>.
  The service provider typically provides instructions on how to generate the signing keys and the format. For an example, see <u>Required Keys and OCIDs</u>.

- Create the JWT header and JWT payload JSON files. You upload both files on the Connections page when configuring the adapter to support JWT assertions.
  Note the following details about the JWT payload JSON file:

  – The `iss`, `exp`, `sub`, and `aud` claims are mandatory. Oracle Integration validates that these claims are present. Anything else you upload depends on the provider you are trying to call. For example, NHS may require additional claims.

  – The `iat` (issued at), `exp` (expiry), `nbf` (not before), and `jti` (JWT ID) claims are dynamically calculated if present in the JWT payload JSON file. If you manually provide values for these claims, they are replaced with dynamically-calculated values.

  – Any remaining claims are optional and depend upon the provider you are calling.

  For example:

JWT Header JSON File Example	JWT Payload JSON File Example

```
{
    "alg" : "RS256",
    "typ": "JWT",
    "kid": "fajwt2"
}
```

Where:

- `alg`: The algorithm to use.
- `typ`: A JWT assertion typically set to `JWT`.
- `kid`: A key identifier that is uniquely-generated and associated with the uploaded signing key.

```
{
    "iss":
"f6c9d437eed64e2a8f2b045e39e2e03f",
    "sub": "admin.user",
    "aud": "https://
identity.oraclecloud.com/",
    "exp": "1739412427"
    "iat": "1727372629"
    "jti": "12345"
  }
```

Where:

- JWT issuer (`iss`): A unique identifier for the entity that issued the assertion. This is typically the entity that holds the key material used to sign or integrity-protect the assertion. Examples of issuers are OAuth clients (when assertions are self-issued) and third-party security token services. If the assertion is self-issued, the issuer value is the client identifier (`client_id`). If the assertion was issued by a security token service (STS), the issuer must identify the STS in a manner recognized by the authorization server. The assertion must contain an issuer.
- JWT subject (`sub`): The subject typically identifies an authorized accessor for which the access token is being requested (that is, the resource owner or an authorized delegate). In some cases, this may be a pseudo anonymous identifier or other value denoting an anonymous user. When the client is acting on behalf of itself, the subject must be the value of the client's `client_id`. The assertion must contain a subject.
- JWT audience (`aud`): A value that identifies the party or parties to process the assertion. The assertion must contain an audience that identifies the authorization server as the intended audience. The authorization server must reject any assertion that does not contain its own identity as the intended audience (in this case, for an Oracle Cloud Infrastructure Identity and Access Management identity domain, `https://identity.oraclecloud.com/`).
- Expires at (`exp`): The time at which the assertion expires. While the serialization may differ by assertion format, the time must be expressed in UTC format with no time zone component. The assertion must contain an expires-at entity that limits the window during which the assertion can be used. The authorization server must reject expired assertions (subject to allowable

JWT Header JSON File Example	JWT Payload JSON File Example
	clock skew between systems). The authorization server may reject assertions with an expires-at attribute value that is unreasonably far in the future. – Issued at (`iat`): The time at which the JWT was issued. – JWT identifier (`jti`): A unique identifier for the JWT. This helps to prevent replay attacks and ensures the token is only used once.

Obtain the Oracle ERP Cloud Service Catalog Service WSDL, Event Catalog URL, or Interface Catalog URL (For Connections Created Prior to 2/18/20)

The steps in this section are only required for existing connections created prior to the initial release of the simplified connections page on 2/18/20. For *existing* connections, you are prompted to specify a service catalog service WSDL (for accessing and configuring the inbound and outbound adapter to use either business objects or business services) in the **ERP Services Catalog WSDL URL** field and optionally an event catalog URL (for accessing and configuring the inbound adapter to use event subscriptions) in the **ERP Events Catalog URL** field and interface catalog URL (for accessing and configuring the outbound endpoint using REST business resources) in the **Interface Catalog URL** field.

> ⓘ **Note**
>
> **For new connections created with the initial release of the simplified connections page on 2/18/20, the preconfiguration details described in this section are not required**. All WSDLs and URLs are automatically identified for you based on the Oracle ERP Cloud host name that you specify in the **ERP Cloud Host** field on the Connections page.

The following sections describe how to obtain the service catalog service WSDL and event catalog URL:

For Fusion Applications Releases 13 and Later

Obtain the Oracle Fusion Applications Release 13 and later service catalog service WSDLs and event catalog URLs through the following methods.

- [Obtain the Service Catalog Service WSDL](#)
- [Obtain the Event Catalog URL](#)

Obtain the Service Catalog Service WSDL

To obtain the physical endpoint of your instance, perform the following steps:

1. Log in to the Fusion Applications home page. For example:

   ```
   https://acme.fa.us6.oraclecloud.com/fscmUI/faces/FuseWelcome
   ```

   Where `acme` is the system name and `us6` is the data center.

2. Copy `https://acme.fa.us6.oraclecloud.com/` and append it with `fscmService/ServiceCatalogService?WSDL`. For example:

   ```
   https://acme.fs.us2.oraclecloud.com/fscmService/ServiceCatalogService?WSDL
   ```

Obtain the Event Catalog URL

Starting in Release 13, you access all Fusion Applications URLs using a consolidated endpoint. You must switch to the new consolidated endpoint that conforms to the following naming pattern:

```
https://systemName.fa.dcsn.oraclecloud.com/...
```

You must switch to the consolidated endpoint immediately after upgrading to Release 13. Newly provisioned instances using Release 13 only have the consolidated endpoint available. In Release 13, multiple domains are consolidated. You must specify the domain in the URL. For example, if specifying the `fa` domain, the URL looks as follows:

1. Copy the following URL:

   ```
   https://acme.fa.us6.oraclecloud.com/
   ```

2. Append `soa-infra` to the end of the URL:

   ```
   https://acme.fa.us6.oraclecloud.com/soa-infra
   ```

Create a Connection

Before you can build an integration, you must create the connections to the applications with which you want to share data.

> ⓘ **Note**
>
> You can also create a connection in the integration canvas. See Define Inbound Triggers, Outbound Invokes, and Actions.

To create a connection in Oracle Integration:

1. Decide where to start:

- Work in a project (see why working with projects is preferred).

  a. In the navigation pane, click **Projects**.

  b. Select the project name.

  c. Click **Integrations** .

  d. In the **Connections** section, click **Add** if no connections currently exist or **+** if connections already exist. The Create connection panel opens.

- Work outside a project.

  a. In the navigation pane, click **Design**, then **Connections**.

  b. Click **Create**. The Create connection panel opens.

2. Select the adapter to use for this connection. To find the adapter, scroll through the list, or enter a partial or full name in the **Search** field.

3. Enter the information that describes this connection.

Element	Description
Name	Enter a meaningful name to help others find your connection when they begin to create their own integrations.
Identifier	Automatically displays the name in capital letters that you entered in the **Name** field. If you modify the identifier name, don't include blank spaces (for example, `SALES OPPORTUNITY`).
Role	Select the role (direction) in which to use this connection.
	Note: *Only* the roles supported by the adapter you selected are displayed for selection. Some adapters support all role combinations (trigger, invoke, or trigger and invoke). Other adapters support fewer role combinations.
	When you select a role, only the connection properties and security policies appropriate to that role are displayed on the Connections page. If you select an adapter that supports both invoke and trigger, but select only one of those roles, you'll get an error when you try to drag the adapter into the section you didn't select.
	For example, assume you configure a connection for the Oracle Service Cloud (RightNow) Adapter as only an **invoke**. Dragging the adapter to a **trigger** section in the integration produces an error.
Keywords	Enter optional keywords (tags). You can search on the connection keywords on the Connections page.
Description	Enter an optional description of the connection.

Element	Description
Share with other projects	**Note**: This field only appears if you are creating a connection in a project.
	Select to make this connection publicly available in other projects. Connection sharing eliminates the need to create and maintain separate connections in different projects.
	When you configure an adapter connection in a different project, the **Use a shared connection** field is displayed at the top of the Connections page. If the connection you are configuring matches the same type and role as the publicly available connection, you can select that connection to reference (inherit) its resources.
	See Add and Share a Connection Across a Project.

4. Click **Create**.

   Your connection is created. You're now ready to configure the connection properties, security policies, and (for some connections) access type.

5. Follow the steps to configure a connection.
   The connection property and connection security values are specific to each adapter. Your connection may also require configuration with an access type such as a private endpoint or an agent group.

6. Test the connection.

Configure Connection Properties

Enter connection information so your application can process requests.

1. Go to the **Properties** section.

   The fields that are displayed are based on your version of Oracle Integration.

2. For new connections created with the initial release of the simplified connections page on 2/18/20, the **ERP Cloud Host** field is displayed. Enter the Oracle ERP Cloud host name. For example:

   ```
   https://customer_chosen_domain_name.fa.DC.oraclecloud.com
   ```

   > ⓘ **Note**
   >
   > The Oracle ERP Cloud host name can easily be derived from the Oracle ERP Cloud login URL. For example: `https://myDomain.fa.DC.oraclecloud.com/fscmUI/faces/FuseWelcome`

3. For existing connections created prior to the initial release of the simplified connections page on 2/18/20, the **URL** fields are displayed. Specify the URLs to use in this integration.

   - **ERP Services Catalog WSDL URL**

   - **ERP Events Catalog URL (optional)**

   - **Interface Catalog URL (optional)**

For information about obtaining the URL, see Obtain the Oracle ERP Cloud Service Catalog Service WSDL, Event Catalog URL, or Interface Catalog URL (For Connections Created Prior to 2/18/20).

Configure Connection Security

Configure security for your Oracle ERP Cloud Adapter connection by selecting the security policy and security token.

1. Go to the **Security** section.

2. Select the security policy to use. Based on your selection, the page is refreshed to display various login credential fields.

> ⓘ **Note**
>
> Passwords are mandatory.

Element	Description
Username Password Token With PGP Key Support	Specify the following details to upload an encrypted file to Oracle WebCenter Content (Universal Content Management (UCM). The supported algorithm for the public key is RSA for encryption and key size should be 1024 bits long. • **Username**: Enter the username. • **Password**: Enter the password. • **PGP Public Key for UCM Upload**: Click ⬆, then browse for and upload the public key to encrypt the file. The PGP public key must already be created. See Upload Files to Oracle WebCenter Content. Ensure that a unique filename is present in the upload request payload file. See Use a Unique File Name for the Upload Request Payload When using PGP Encryption.
Username Password Token	You receive the username and password to enter when subscribing to Oracle ERP Cloud. • **Username**: Enter the username. • **Password**: Enter the password.

Element	Description
OAuth Authorization Code Credentials	• **Client ID**: Enter the client identifier (ID) issued during OAuth client application creation. The client ID identifies the client (the software requesting an access token) making the request. See Perform Prerequisites to Set Up the OAuth Authorization Code Credentials Security Policy.
	• **Client Secret**: Enter the client secret issued during OAuth client application creation. See Perform Prerequisites to Set Up the OAuth Authorization Code Credentials Security Policy.
	• **Authorization Code URI**: Enter the URI from which to request the authorization code. This endpoint is used to initiate the OAuth authentication and authorization process during which a user is directed to the OAuth server to provide credentials, to review granted permissions, and to provide consent.
	`https://`*`Identity Domain_URL`*`/` `oauth2/v1/authorize`
	• **Access Token URI**: Enter the URI to use for the access token. A request must be sent to this URI to obtain an access token.
	`https://`*`Identity Domain_URL`*`/` `oauth2/v1/token`
	• **Scope**: Enter the scopes specified during OAuth client application creation: – The URL that corresponds to the federated Oracle Fusion Application instance. – `offline_access` Recommended because this scope enables your access token URI to be automatically refreshed, eliminating the need to perform a manual refresh.
	`https://`*`FA_URL`*`:443/` `offline_access`
	Scopes enable you to specify the type of access you need. Scopes limit access for the OAuth token. They do not grant any additional permission beyond that which the user already possesses. See Perform Prerequisites to Set Up the OAuth Authorization Code Credentials Security Policy.
	• **Client Authentication**: You can optionally configure OAuth flows with client authentication. This is similar to the Postman

Element	Description
	user interface feature for configuring client authentication. – **Send client credentials as basic auth header**: Pass the client ID and client secret in the header as basic authentication. – **Send client credentials in body**: Pass the client ID and client secret in the body as form fields. When configuration is complete, perform the following steps: **a.** Click **Provide Consent** to test the OAuth flow. **b.** If the identity domain Oracle Integration and Oracle Fusion Applications users are different, log in to the respective instance when prompted. **Note**: You are not prompted to log in if these users are the same. **c.** Return to the Connections page and click **Test**.
OAuth using JWT User Assertion **Note**: • This policy is typically used on behalf of a user. • This policy supports the propagation of a user identity between systems.	• **Access token URI** — Enter the URL to which to send a request to obtain the access token. For example: `https://accounts.google.com/o/oauth2/token` • **JWT headers in JSON format** — Upload the JWT header file in JSON format. • **JWT payload in JSON format** — Upload the JWT payload file in JSON format. • **JWT private key alias** — Enter the JWT private key alias. This is the same alias you specified when uploading the signing key certificate on the Certificates page. • **Scope** — (Optional) Enter the scopes. • **Access token request** — (Optional) Enter the request to obtain the access token. The format you specify can vary by service provider.

Configure the Endpoint Access Type

Configure access to your endpoint. Depending on the capabilities of the adapter you are configuring, options may appear to configure access to the public internet, to a private endpoint, or to an on-premises service hosted behind a fire wall.

- Select the Endpoint Access Type

- Ensure Private Endpoint Configuration is Successful

Select the Endpoint Access Type

1. Go to the **Access type** section.

2. Select the option for accessing your endpoint.

Option	This Option Appears If Your Adapter Supports ...
Public gateway	Connections to endpoints using the public internet.
Private endpoint	Connections to endpoints using a private virtual cloud network (VCN). **Note**: To connect to private endpoints, you must complete prerequisite tasks in the Oracle Cloud Console. Failure to do so results in errors when testing the connection. See Connect to Private Resources in *Provisioning and Administering Oracle Integration 3* and Troubleshoot Private Endpoints in *Using Integrations in Oracle Integration 3*.

Ensure Private Endpoint Configuration is Successful

- To connect to private endpoints, you must complete prerequisite tasks in the Oracle Cloud Console. Failure to do so results in errors when testing the connection. See Connect to Private Resources in *Provisioning and Administering Oracle Integration 3*.

- When configuring an adapter on the Connections page to connect to endpoints using a private network, specify the fully-qualified domain name (FQDN) and *not* the IP address. If you enter an IP address, validation fails when you click **Test**.

Test the Connection

Test your connection to ensure that it's configured successfully.

1. In the page title bar, click **Test**. What happens next depends on whether your adapter connection uses a Web Services Description Language (WSDL) file. Only some adapter connections use WSDLs.

If Your Connection...	Then...
Doesn't use a WSDL	The test starts automatically and validates the inputs you provided for the connection.
Uses a WSDL	A dialog prompts you to select the type of connection testing to perform: • **Validate and Test**: Performs a full validation of the WSDL, including processing of the imported schemas and WSDLs. Complete validation can take several minutes depending on the number of imported schemas and WSDLs. No requests are sent to the operations exposed in the WSDL. • **Test**: Connects to the WSDL URL and performs a syntax check on the WSDL. No requests are sent to the operations exposed in the WSDL.

2. Wait for a message about the results of the connection test.

- If the test was successful, then the connection is configured properly.

- If the test failed, then edit the configuration details you entered. Check for typos and verify URLs and credentials. Continue to test until the connection is successful.

3. When complete, click **Save**.

Upload a Certificate to Connect with External Services

Certificates allow Oracle Integration to connect with external services. If the external service/ endpoint needs a specific certificate, request the certificate and then import it into Oracle Integration.
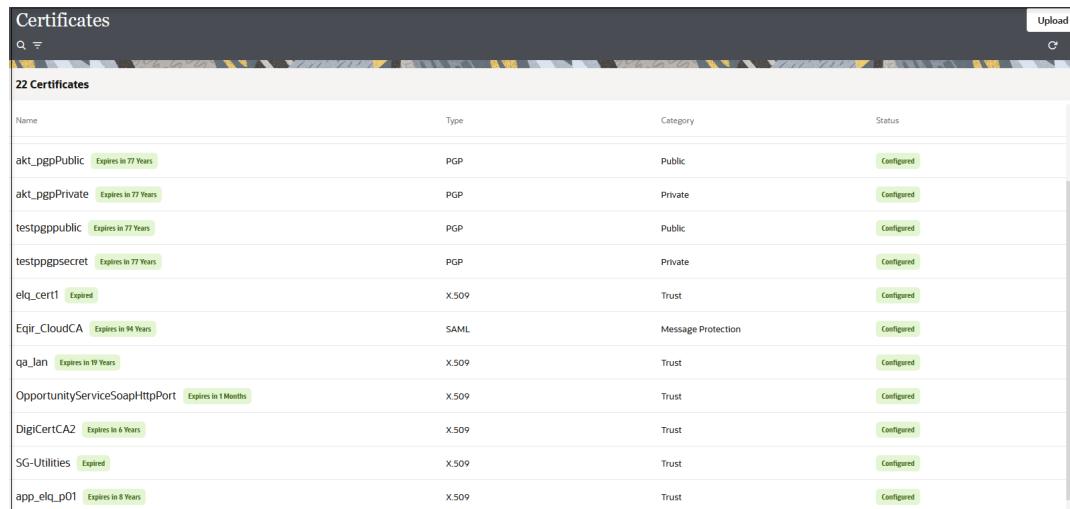
If you make an SSL connection in which the root certificate does not exist in Oracle Integration, an exception error is thrown. In that case, you must upload the appropriate certificate. A certificate enables Oracle Integration to connect with external services. If the external endpoint requires a specific certificate, request the certificate and then upload it into Oracle Integration.

1. Sign in to Oracle Integration.

2. In the navigation pane, click **Settings**, then **Certificates**.
   All certificates currently uploaded to the trust store are displayed on the Certificates page.

3. Click **Filter** 〒 to filter by certificate expiration date, status, and type. Certificates installed by the system cannot be deleted.

4. Click **Upload** at the top of the page.
   The Upload certificate panel is displayed.

5. Enter an alias name and optional description.

6. In the **Type** field, select the certificate type. Each certificate type enables Oracle Integration to connect with external services.

   • [Digital Signature](#)

   • [X.509 (SSL transport)](#)

   • [SAML (Authentication & Authorization)](#)

   • [PGP (Encryption & Decryption)](#)

   • [Signing key](#)

Digital Signature

The digital signature security type is typically used with adapters created with the Rapid Adapter Builder. See Learn About the Rapid Adapter Builder in Oracle Integration in *Using the Rapid Adapter Builder with Oracle Integration 3*.

1. Click **Browse** to select the digital certificate. The certificate must be an X509Certificate. This certificate provides inbound RSA signature validation. See RSA Signature Validation in *Using the Rapid Adapter Builder with Oracle Integration 3*.

2. Click **Upload**.

X.509 (SSL transport)

1. Select a certificate category.

   a. **Trust**: Use this option to upload a trust certificate.

      i. Click **Browse**, then select the trust file (for example, `.cer` or `.crt`) to upload.

   b. **Identity**: Use this option to upload a certificate for two-way SSL communication.

      i. Click **Browse**, then select the keystore file (`.jks`) to upload.

      ii. Enter the comma-separated list of passwords corresponding to key aliases.

      > ⓘ **Note**
      >
      > When an identity certificate file (`.jks`) contains more than one private key, all the private keys must have the same password. If the private keys are protected with different passwords, the private keys cannot be extracted from the keystore.

      iii. Enter the password of the keystore being imported.

   c. Click **Upload**.

SAML (Authentication & Authorization)

1. Note that **Message Protection** is automatically selected as the only available certificate category and cannot be deselected. Use this option to upload a keystore certificate with SAML token support. Create, read, update, and delete (CRUD) operations are supported with this type of certificate.

2. Click **Browse**, then select the certificate file (`.cer` or `.crt`) to upload.

3. Click **Upload**.

PGP (Encryption & Decryption)

1. Select a certificate category. Pretty Good Privacy (PGP) provides cryptographic privacy and authentication for communication. PGP is used for signing, encrypting, and decrypting files. You can select the private key to use for encryption or decryption when configuring the stage file action.

   a. **Private**: Uses a private key of the target location to decrypt the file.

      i. Click **Browse**, then select the PGP file to upload.

      ii. Enter the PGP private key password.

   b. **Public**: Uses a public key of the target location to encrypt the file.

      i. Click **Browse**, then select the PGP file to upload.

      ii. In the **ASCII-Armor Encryption Format** field, select **Yes** or **No**.

         • **Yes** shows the format of the encrypted message in ASCII armor. ASCII armor is a binary-to-textual encoding converter. ASCII armor formats encrypted

messaging in ASCII. This enables messages to be sent in a standard messaging format. This selection impacts the visibility of message content.

- **No** causes the message to be sent in binary format.

iii. From the **Cipher Algorithm** list, select the algorithm to use. Symmetric-key algorithms for cryptography use the same cryptographic keys for both encryption of plain text and decryption of cipher text. The following supported cipher algorithms are FIPS-compliant:

- AES128

- AES192

- AES256

- TDES

c. Click **Upload**.

Signing key

A signing key is a secret key used to establish trust between applications. Signing keys are used to sign ID tokens, access tokens, SAML assertions, and more. Using a private signing key, the token is digitally signed and the server verifies the authenticity of the token by using a public signing key. You must upload a signing key to use the OAuth Client Credentials using JWT Client Assertion and OAuth using JWT User Assertion security policies in REST Adapter invoke connections. Only PKCS1- and PKCS8-formatted files are supported.

1. Select **Public** or **Private**.

2. Click **Browse** to upload a key file.
If you selected **Private**, and the private key is encrypted, a field for entering the private signing key password is displayed after key upload is complete.

3. Enter the private signing key password. If the private signing key is not encrypted, you are not required to enter a password.

4. Click **Upload**.

Refresh Integration Metadata

You can manually refresh the currently-cached metadata available to adapters that have implemented metadata caching.

Metadata changes typically relate to customizations of integrations, such as adding custom objects and attributes to integrations. There may also be cases in which integrations have been patched, which results in additional custom objects and attributes being added. This option is similar to clearing the cache in your browser. Without a manual refresh, a staleness check is only performed when you drag a connection into an integration. This is typically sufficient, but in some cases you may know that a refresh is required. For these cases, the **Refresh Metadata** menu option is provided.

> ⓘ **Note**
>
> The **Refresh Metadata** menu option is only available with adapters that have implemented metadata caching.

1. Decide where to start:

- Work in a project (see why working with projects is preferred).

     a. In the navigation pane, click **Projects**.

     b. Select the project name.

     c. Click **Integrations** .

     d. In the **Connections** section, hover over the adapter connection to refresh.

- Work outside a project.

     a. In the navigation pane, click **Design**, then **Connections**.

     b. Hover over the adapter connection to refresh.

2. Click **Actions** , then select **Refresh metadata**.

If successful, the following message is displayed.

```
Metadata refresh for connection connection_name has been initiated
successfully.
```

3

Add the Oracle ERP Cloud Adapter Connection to an Integration

When you drag the Oracle ERP Cloud Adapter into the trigger or invoke area of an integration, the Adapter Endpoint Configuration Wizard appears. This wizard guides you through the configuration of the Oracle ERP Cloud Adapter endpoint properties.

These topics describe the wizard pages that guide you through configuration of the Oracle ERP Cloud Adapter as a trigger or invoke in an integration.

Topics:

- [Basic Info Page](#)
- [Trigger Request Page](#)
- [Trigger Response Page](#)
- [Invoke Actions Page](#)
- [Invoke Operations Page](#)
- [Invoke Response Page](#)
- [Invoke Child Resources Page](#)
- [Invoke Descriptive and Extensible Page](#)
- [Summary Page](#)

Basic Info Page

You can enter a name and description on the Basic Info page of each adapter in your integration.

Element	Description
What do you want to call your endpoint?	Provide a meaningful name so that others can understand the responsibilities of this connection. You can include English alphabetic characters, numbers, underscores, and hyphens in the name. You can't include the following characters:
	• No blank spaces (for example, `My Inbound Connection`)
	• No special characters (for example, `#;83&` or `righ(t)now4`) except underscores and hyphens
	• No multibyte characters
What does this endpoint do?	Enter an optional description of the connection's responsibilities. For example:
	`This connection receives an inbound request to synchronize account information with the cloud application.`

Trigger Request Page

Enter the Oracle ERP Cloud connection trigger request values for your integration. The values you specify start the integration.

Select the specific type to receive as a request from Oracle ERP Cloud.

- **Receive Business Events raised within ERP Cloud**: 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.

- **Receive Callback Message upon completion of FBDI bulk Import Job submitted via another Integration**: Select to configure a callback notification response to send upon completion of the data import into the Oracle ERP Cloud application. The bulk data import process you select is received as a request that starts the integration.

- **Receive Requests from ERP Cloud Applications (explicitly sent from Groovy Script or Business Logic)**: Select to receive a business object as a request from the Oracle ERP Cloud application. This selection invokes the integration.

> ⓘ **Note**
>
> For existing integrations, your ability to select either a business object or event subscription is based on the content of the WSDL file (for business objects) or event catalog URL (for business event subscriptions) you specified on the Connections page during Oracle ERP Cloud Adapter configuration.
> For new integrations, the WSDL file and event catalog URL do not need to be supplied.

Receive Business Events raised within ERP Cloud

> ⓘ **Note**
>
> If business events are not displayed for selection, ensure that you configured your URL correctly on the Connections page. For connections created before the 2/18/20 release of the simplified connections page, you must explicitly specify the ERP events catalog URL. For connections created on or after the 2/18/20 release of the simplified connections page, you must specify only the Oracle ERP Cloud host name. See Configure Connection Properties.

Element	Description
Business Event For Subscription	Select the event subscription from the Oracle ERP Cloud application. This event is received as a request that starts the integration. Only events that can be subscribed to are displayed.
	Any custom business events that you created and published in the Application Composer application are also available for selection. Custom events are identifiable by their description.
Filter By Event Name	Type the initial letters of the name to filter the display of business event subscriptions.

Element	Description
Filter Expr for *Business_Event_Name*	Enter an event condition filter expression. A filter expression specifies that the contents (payload or headers) of a message be analyzed before any event is sent. For example, you can apply a filter expression that specifies that an event be sent only if the message includes a customer ID. When the expression logic is satisfied, the event is accepted for delivery to the integration.
Event Description	Displays a description of the selected business event.

Receive Callback Message upon completion of FBDI bulk Import Job submitted via another Integration

Element	Description
Download Options	Specify when to download the log files that describe the overall status of the Oracle ERP Cloud import job. • **Always**: Always download the logs, regardless of import job failure or success. • **On Failure**: Only download the logs if the import job is a failure. • **On Success**: Only download the logs if the import job is successful. • **Never**: Never download the logs.
Select Bulk Data Import Process	Select the bulk data import process to receive as a request that starts the integration. You can also type the initial letters of the name to filter the display of bulk data import processes.
Not seeing expected Bulk Data Import Processes?	If the process you want is not visible, then verify the following: • Check the Oracle ERP Cloud user roles assigned to the user. See Assign Required Roles to an Integration User. • Check whether the job is an FBDI job. See Bulk Import Troubleshooting Issues.
Description	Displays a description of the selected bulk data import process.

Receive Requests from ERP Cloud Applications (explicitly sent from Groovy Script or Business Logic)

Element	Description
Select a Business Object	Select the business object from the Oracle ERP Cloud application to receive as a request that starts the integration. A description of the business object is displayed at the bottom of the page.
Filter by object name	Type the initial letters of the name to filter the display of business objects.

Trigger Response Page

Select the Oracle ERP Cloud trigger response business object for your integration.

This page only is displayed if you selected **Receive Requests from ERP Cloud Applications (explicitly sent from Groovy Script or Business Logic)** on the Request page.

Element	Description
Filter by object name	Enter the initial letters to filter the display of business objects.
Select a Business Object	Select the business object to receive from the Oracle ERP Cloud application as a response.

Invoke Actions Page

Select the Oracle ERP Cloud invoke option for your integration. These options are only displayed when you are configuring the Oracle ERP Cloud Adapter as an invoke connection in an integration.

Element	Description
What would you like to do with the Oracle ERP Cloud Adapter	• **Query, Create, Update, or Delete Information**: Provides the standard configuration path for selecting a business object or service. This option displays the standard Operations and Response pages. This is the default selection.
	• **Import Bulk Data into Oracle ERP Cloud**: Provides a scenario for loading and orchestrating data from a secure FTP location to Oracle ERP Cloud.
	Data is loaded into a selected product interface table and then imported into the related main product application tables. A callback notification may also be configured to send when the data import completes. This option also shows a modified Operations page and a unique Response page in the Adapter Endpoint Configuration Wizard for importing data.
	If you receive a `Generic` error message during configuration, see Selection of the Import Bulk Data into Oracle ERP Cloud Option May Return a GENERIC Error.
	• **Send Files to ERP Cloud**: Select to upload files to Oracle WebCenter Content (Universal Content Manager) in encrypted or unencrypted format.

Invoke Operations Page

Enter the Oracle ERP Cloud invoke operation values for your integration.

See the appropriate section based on your selection on the Actions page:

- [Query, Create, Update, or Delete Information](#)

- [Import Bulk Data into Oracle ERP Cloud](#)

- [Send Files to ERP Cloud](#)

Query, Create, Update, or Delete Information

If you selected **Query, Create, Update, or Delete Information** on the Actions page, select the business object or service and the operation to perform on the selected business object or service.

Element	Description
Browse by	Select to browse by business object or service. There is a one-to-one correspondence between the business object and service. The service acts on the business document. • **Business Objects**: Select to browse a list of available business objects. • **Services**: Select to browse a list of available services. • **Business (REST) Resource**: Select to browse a list of available Oracle Fusion Applications REST API resources. This option is only available if you specified an interface catalog URL in the **Interface Catalog URL** field on the Connection Properties page when configuring the Oracle ERP Cloud Adapter.
Filter by object name (displayed if **Business Objects** is selected)	Type the initial letters to filter the display of business objects or select a specific category: • **All** • **Active** • **Custom** • **Deprecated** • **Standard**
Select a Business Object (displayed if **Business Objects** is selected)	Select the business object to use.
Filter by service name (displayed if **Services** is selected)	Type the initial letters to filter the display of services.
Select a Service (displayed if **Services** is selected)	Select the service to use.
Select the Operation to Perform on the Business Object/Resource or Service (displayed if **Services** or **Business Objects** is selected)	Select the operation to perform on the selected business object or service.
Select the operation to perform on the selected resource (displayed if **Business (REST) Resource** is selected)	Select the operation to perform on the selected resource. **Note**: If you select **get**, only the following query parameters are supported: • **expand** • **fields** • **onlyData**
Select a Service Application (displayed if **Business (REST) Resources** is selected)	Select the service application to see the business resources defined in the application.

Element	Description
Select a Business Resource (displayed if **Business (REST) Resources** is selected)	Select the parent business resource to use. You can then click **Browse and configure a child resource** to select the corresponding child business resources of that parent to use. **Note**: Existing integrations created prior to the introduction of this feature can be edited to select parent business resources and their corresponding child business resources.
Browse and configure a child response	Click to access a page to select the following: • The parent and child business resources of the selected parent business resource • The operation to perform on the parent and child business resources After you click **Ok**, the link name changes to **View and edit the configuration of a child resource**. Both the parent and child business resources are displayed on the Summary page. To reset to your original selections, click this link, then click **Reset**.
Life Cycle	Displays the state of the selected business object or service. Deprecated indicates the business document is nearing the end of use and must be used with caution.
Name	Displays the name of the selected business object or service.
Description	Displays the description of the selected business object or service.

Import Bulk Data into Oracle ERP Cloud

If you selected **Import Bulk Data into Oracle ERP Cloud** on the Actions page, select the job name to import, the job property name, and the type of log data for Oracle ERP Cloud to extract. See External Data Integration Services for Oracle Cloud: Overview.

Element	Description
Select Bulk Data Import Process	Select the job name to import. Import jobs are the background jobs that run on Oracle ERP Cloud to perform data upload operations. The job name you select is used to import data. The list of import jobs is obtained by invoking `ErpIcsIntegrationService` in the service catalog service WSDL.

The following information is obtained with each job:
- Interface ID: The import job key.
- UCM account: The account with which to upload the file.
- Import job name and package name: To be displayed in the user interface.
- Description: The bulk data import process description.

> ⓘ **Note**
>
> If import jobs do not appear in the list, there may be several causes. See Jobs Not Appearing in the Import Jobs List on the Operations Page.

Element	Description
Reuse job property file uploaded separately in respective UCM account	Select this check box, then enter the job property file name (without an extension) that Oracle ERP Cloud can obtain from the respective UCM account.
Job Property File	Enter the job property file name (without the extension) that Oracle ERP Cloud gets from the UCM account.
Extract File	Select the type of log data for Oracle ERP Cloud to extract while processing the data file:

- **All**: All failed records with supporting load and import process files.
- **Error**: Records that failed to load and import.
- **Log**: Log files for load and import processes.
- **Out**: Output files for load and import processes.
- **None**: None.

Send Files to ERP Cloud

If you selected **Send Files to ERP Cloud** on the Actions page, select the security group and doc account required for uploading the file.

Element	Description
Security Group	Select the security group in which to upload the file. A security group is a set of files grouped under a unique name. Every file in the content server repository belongs to a security group. Access to security groups is controlled by permissions assigned to roles on the content server. Roles are assigned to users where they are maintained in Oracle Fusion Applications. The default security group in Fusion Applications is FAFusionImportExport.
Doc Account	Select the doc account to assign to the file. In Fusion Applications, every content item has an account assigned to it. You must have the appropriate permission to the account such as read and/or write. The access to the document is the intersection between account permissions and security group permissions. There are several Fusion Applications accounts.
Encrypt the File	Select this checkbox to encrypt the file before upload to UCM. To select this checkbox, you must have selected to encrypt the file when configuring the Oracle ERP Cloud Adapter connection on the Connections page. See Configure Connection Security.

See Understanding Security and User Access of *Administering Oracle WebCenter Content*.

Invoke Response Page

Enter the Oracle ERP Cloud invoke response values for your integration.

Element	Description
Notification Mode	Select an option for being notified of data import completion status. These options are configured in the Oracle ERP Cloud application. This information is sent from Oracle Integration to the Oracle ERP Cloud application. • **Email & Bell Notification**: Select to receive both email and bell notifications. • **Email notification**: Select to receive only an email notification. • **Bell Notification**: Select to receive only a bell notification.
Occurrence	Select when to receive a notification about data import status: • **Send in any case** • **Send on import success** • **Send on import failure**

Element	Description
Enable Callback	Select to enable callback behavior for the import job selected on the Operations page. When you select this option for new integrations, the `ErpImportBulkData` event of Oracle ERP Cloud is raised once the import job completes.
	When you select this option for existing integrations, you must also provide the callback integration and callback identifier described in the fields below.
Integration Flow Identifier (This field is visible when using an Oracle ERP Cloud Adapter connection in an *existing* integration.)	Optionally specify a callback integration in which to receive details about the status of the outbound Oracle ERP Cloud request flow (failed records) (for example, enter `01.00.0000`). This is a completely separate integration that handles callbacks. The name of the integration is only required to trigger a second integration. Otherwise, this field can be left blank. The inbound integration is expected to handle callbacks from Oracle ERP Cloud. The integration must have an Oracle ERP Cloud Adapter configured in the trigger (inbound) direction. You select **As a Callback** on the Request page in the trigger direction.
Integration Flow Version (This field is visible when using an Oracle ERP Cloud Adapter connection in an *existing* integration.)	Enter the integration version in two digits. For example, enter `01` if the identifier version is `01.00.0000`.

Invoke Child Resources Page

Select the child resources to include with the parent resource selected on the Operations page. This helps to minimize the size of the integration WSDL file. If you do not select any child resources, all child resources (including custom resources) associated with the parent resource are included by default in the integration WSDL file. This increases the size of the WSDL file and can cause memory issues in Oracle Integration. This page is only displayed if you select a top-level parent resource on the Operations page.

Select a maximum of ten child resources to include in either the request payload sent to the external API or the response message received from the external API. Do not select child resources that are not required for use by this integration.

Element	Description
Select Child Resources	Select the child resources to use. Only the child resources associated with the parent resource you selected on the Operations page are displayed for selection.
Your Selected Child Resources	Displays the selected child resources.

Invoke Descriptive and Extensible Page

Select the descriptive flexfield (DFF) or extensible flexfield (EFF) and associated contexts. A flexfield is a flexible data field that your organization can customize to meet your business

needs without programming. It provides a set of placeholder fields (segments) associated with a business object.

Two types of flexfields are supported for selection:

- Descriptive flexfield: A field you customize to enter additional information for which your Oracle Fusion Applications product has not already provided a field.

- Extensible flexfield: Similar to a descriptive flexfield in that it provides a customizable expansion space that implementers (such as Oracle Fusion Applications users) can use to configure additional attributes (segments) without additional programming.

Element	Description
Select Flexfields(s)	Select a flexfield to see the configured contexts.
Select Context(s)	Select a maximum of 20 contexts to include in either the request payload sent to the external API or the response message received from the external API.
Number of Contexts Selected	Displays the number of selected contexts.

Summary Page

You can review the specified adapter configuration values on the Summary page.

Element	Description
Summary	Displays a summary of the configuration values you defined on previous pages of the wizard.
	The information that is displayed can vary by adapter. For some adapters, the selected business objects and operation name are displayed. For adapters for which a generated XSD file is provided, click the XSD link to view a read-only version of the file.
	To return to a previous page to update any values, click the appropriate tab in the left panel or click **Go back**.
	To cancel your configuration details, click **Cancel**.

4
Implement Common Patterns Using the Oracle ERP Cloud Adapter

You can use the Oracle ERP Cloud Adapter to implement the following common patterns.

Topics:

- [Propagate OAuth User Identity Between Services](#)
- [Configure Callbacks](#)
- [Upload a File to Oracle WebCenter Content](#)
- [Invoke an Endpoint Dynamically](#)
- [Invoke a File-Based Data Import (FBDI) Job](#)
- [Invoke a Non-File-Based Data Import (FBDI) Job](#)
- [Use Multiple Callback Integrations for the Same FBDI Job](#)
- [Select Extensible and Descriptive Flexfields in an Integration](#)

> ### ⓘ Note
>
> Oracle Integration offers a number of prebuilt integrations, known as *recipes*, that provide you with a head start in building your integrations. You can start with a recipe, and then customize it to fit your needs and requirements. Depending upon the solution provided, a variety of adapters are configured in the prebuilt integrations.
> See the Recipes and Accelerators page on the Oracle Help Center.

Propagate OAuth User Identity Between Services

Oracle Integration provides support for OAuth identity propagation when invoking REST API operations. OAuth identity propagation enables you to securely transfer the same user identity and access credentials across services. The services involved may use the same identity domain within Oracle Integration, a different identity domain outside Oracle Integration, or a third-party identity provider.

- [How Identity Propagation in Oracle Integration Works](#)
- [Propagate User Identity](#)

How Identity Propagation in Oracle Integration Works

It is a common business requirement to propagate the identity of a user between multiple services. For example:

- You log in to a VBCS application and call Oracle Integration, which is using the identity domain in its tenancy.

- Oracle Integration then invokes an Oracle Fusion Applications endpoint, which is using a separate identity domain in a different tenancy. The Oracle Fusion Applications endpoint must know the end user making the call to drive its business logic.

- Oracle Integration also invokes a Salesforce endpoint, using a third-party identity provider outside of Oracle. The Salesforce endpoint must also know the end user making the call to drive its business logic.

Identity propagation works as follows for these types of scenarios:

- User Authentication - A user authenticates with an identity provider using their credentials.

- Token Issuance - Upon successful authentication, the identity provider issues a JWT access token containing the user's identity information and authorized scopes.

- Token propagation - When the user accesses a different service, the JWT access token is propagated with the request.

- Token validation - Each service receiving the request validates the JWT access token by verifying its integrity, expiration, and issuer.

- Getting the identity - After a successful token validation, the service extracts the user's identity from the JWT access token's claims.

- Access Controls - Based on the identity, appropriate access controls are applied to determine the user's access to resources.

Oracle Integration provides support for OAuth identity propagation with the *OAuth using the JWT User Assertion* security policy. This security policy is available if you need to use the following adapters as invoke connections to call REST API operations.

- REST Adapter

- Oracle ERP Cloud Adapter

- Oracle HCM Cloud Adapter

- Oracle CX Sales and B2B Service Adapter

No identity propagation configuration tasks are required on the Connections page or in the Adapter Endpoint Configuration Wizard for these adapters. Instead, you configure the user identity to propagate in the mapper with the **Subject** element under **Security Properties**.

> ⓘ **Note**
>
> - To use identity propagation with an invoke connection created prior to Release 25.04, open the adapter in the Adapter Endpoint Configuration Wizard, click through each page, and click **Save**. These actions create the necessary **Subject** source and target elements in the mapper.
>
> - Identity propagation is an optional feature. If you do not want to use identity propagation with the *OAuth using JWT User Assertion* security policy, leave the **Subject** elements empty.

Propagate User Identity

This section provides an overview of propagating user identity.

Oracle Integration and Oracle Fusion Applications are in different identity domains. For identity propagation between different identity domains to be successful, you must satisfy the following requirements:

- The user identity to propagate must be present in both the identity domain of Oracle Integration, the identity domain of Oracle Fusion Applications, and Oracle Fusion Applications Oracle Identity Management (IDM). You must have the appropriate associated roles.

- The user must have sufficient privileges to run the integration in each identity domain.

1. Create a trigger connection (for example, with the REST Adapter).

2. Create a new invoke connection with the Oracle Fusion Applications adapter you are using.

3. Configure the invoke connection to use the *OAuth using JWT User Assertion* security policy, uploading the necessary header and payload files, specifying the private key alias uploaded on the Certificates page, and specifying the scopes under **Optional security**.
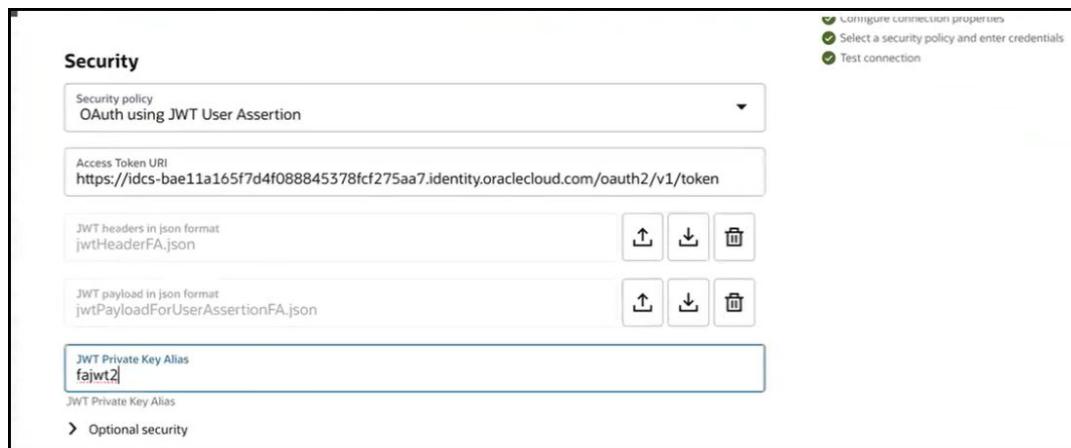
4. Create an application integration.

5. Drag the trigger and invoke connections into the integration canvas for configuration with the Adapter Endpoint Configuration Wizard.

6. Open the mapper.

7. Set the user that has permission to execute the integration through either of two options in the mapper:

   - Expand **Security Properties** in the **Sources** and **Target** areas and map the user in the source **Subject** element to the target **Subject** element.
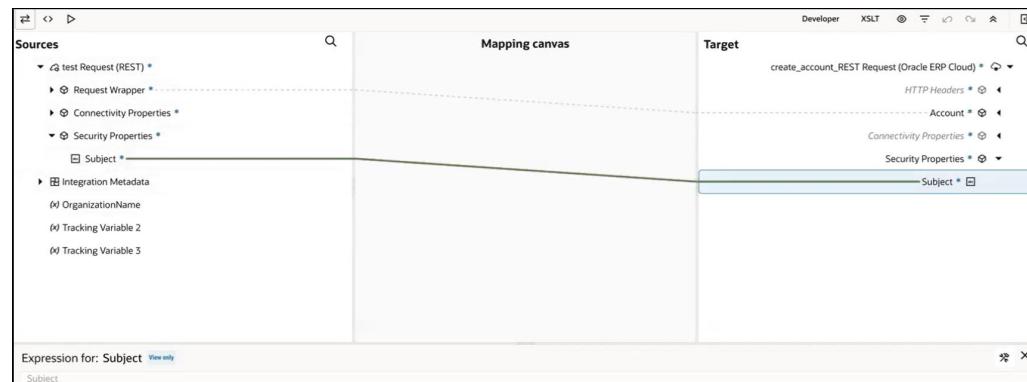
- Expand **Security Properties** in the **Target** area and manually set the user for the **Subject** element in the Expression Builder. For this example, this option is demonstrated. The user name is specified in the Expression Builder as `"boss.user"`.

> ⓘ **Note**
>
> If you run the integration in a tool such as `Postman`, you use a user name/password or client credentials. The username is populated in the subject node on the trigger side and is used to get the JWT access token.
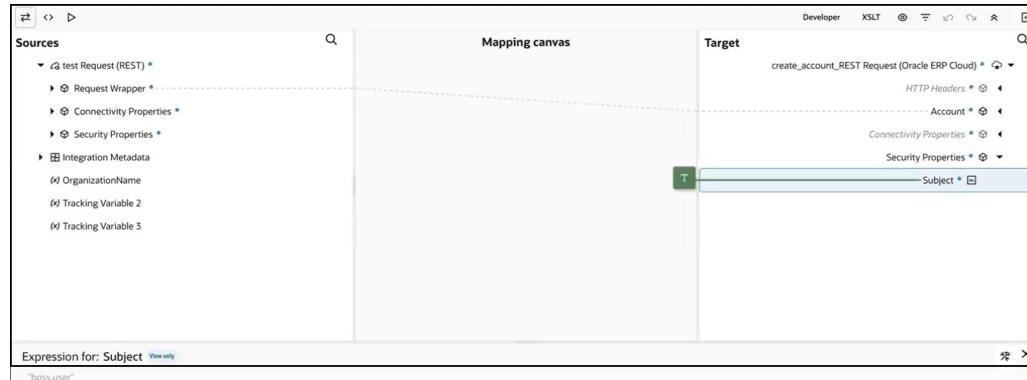
8. Complete design of your integration.

9. Activate and run the integration as the `boss.user` user specified in the mapper. The activity stream indicates the run was successful.

   If the integration run was unsuccessful, the following errors may have occurred.

Error	Reason for Error

`The 401 error message is usually returned by services that require user`
`credentials. So if you have got this error then it probably means that you entered an`
`invalid username or password.`
	If the user is present in both the identity domain of Oracle Integration and the identity domain of Oracle Fusion Applications, and the Oracle Fusion Applications user can receive the token correctly, but that user lacks sufficient privileges to run the integration.

`Request to access token failed.`
`Cause: status = 400 Error:`
`{\"error\":\"invalid_grant\",\"error`
`_description\":\"Invalid user`
`assertion:`
`The user name that you entered is invalid. Contact your system administrator.\"`
	If the user is present in the identity domain of Oracle Integration, but not present in the identity domain of Oracle Fusion Applications, a token cannot be generated.

Watch a video to learn more:

[Video](#)

Configure Callbacks

For new integrations, you do *not* need to consume an explicit event when configuring the Oracle ERP Cloud Adapter as a trigger connection on the Request page. When you design a callback integration, you select the **Receive Callback Message upon completion of FBDI bulk import job submitted via another integration** option on the Request page.

After selecting this option, you must select the specific bulk data load or import process for which the callback event is received. When this callback integration is activated, event subscription automatically occurs.

The event is raised by the Oracle ERP Cloud application regardless of whether the load or import job succeeds or fails. The Oracle ERP Cloud application then invokes the Oracle Integration endpoint that is the callback integration.

Upload a File to Oracle WebCenter Content

You can upload a file to Oracle WebCenter Content (Universal Content Manager) with the Oracle ERP Cloud Adapter. The file to upload can be either encrypted or unencrypted. This section provides a high-level overview for performing this scenario.

To upload a file to Oracle WebCenter Content:

1. Create an Oracle ERP Cloud Adapter connection with the **Invoke** role. During connection configuration, you can select to optionally encrypt the file to upload by selecting the **PGP Public Key for UCM Upload** checkbox.

2. Create an orchestrated integration.

3. Drag the Oracle ERP Cloud Adapter to the invoke part of the integration canvas. This invokes the Adapter Endpoint Configuration Wizard.

4. On the Actions page, select **Send Files to ERP Cloud**.
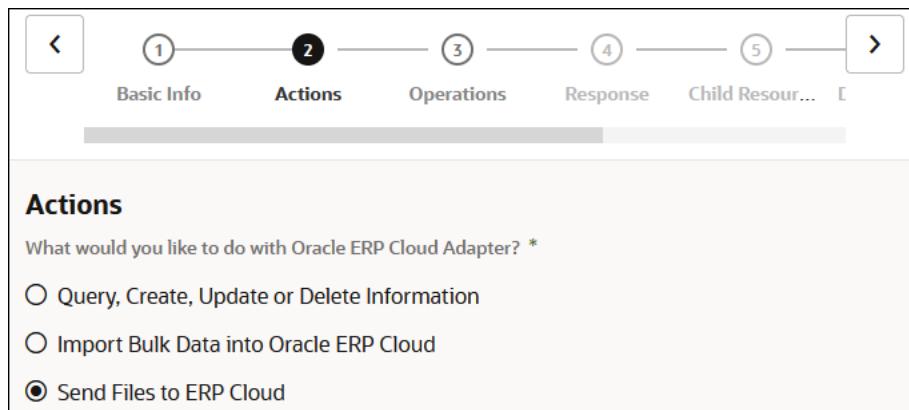
5. On the Operations page, select the following mandatory values:

- **Security Group**: Select the security group to which the file to upload belongs. A security group is a set of files grouped under a unique name. Every file in the UCM server repository belongs to a security group. Access to security groups is controlled by permissions assigned to roles on the content server. Roles are assigned to users where they are maintained on Oracle Fusion Applications. The default security group in Fusion Applications **FAFusionImportExport**.

- **Doc Account**: Select the doc account for the file to upload. In Fusion Applications, every content item has an account assigned to it. You must have the appropriate permission to the account such as read and/or write. Access to the document is the intersection between account permissions and security group permissions.

6. If you selected to encrypt the file to upload on the Connections page in Step 1, select **Encrypt the File**.

7. Once the UCM file upload endpoint is saved, provide the reference to the file to upload to UCM.

You can also override the security group and doc account that you previously set by hard coding new values in the mapper that receive reference during runtime.

If file upload is successful, a document ID is returned. Use the document ID for downstream processing.

Invoke an Endpoint Dynamically

You can dynamically invoke a REST endpoint/URL at runtime without configuring additional invoke connection or REST outbound details. As long as the Oracle ERP Cloud REST APIs return a response with HATEOS links, you can use this feature by mapping the HATEOS link to the invoke connection. This feature is useful in situations that require invoking a REST endpoint dynamically or when the endpoint is not known at design time. This feature is also useful in situations that require invoking multiple REST services, all of which accept the same input payload and return the same response payload as configured for the outbound endpoint. For these cases, this feature eliminates the need to create multiple connections to invoke each REST endpoint.

> ⓘ **Note**
>
> Note the following restrictions.
>
> - The request and response schema must be the same as provided during endpoint configuration.
>
> - Template parameters are not supported while mapping these properties.
>
> - The HTTP verb cannot be changed for the endpoint URL. For example, if the endpoint is configured to use POST, the outgoing request uses POST even if the endpoint URI changes at runtime.
>
> - Because the endpoint URL is determined at runtime, there is no facility to test whether the security credentials provided during connection configuration also work with the new endpoint URL. If you think the endpoint URL determined at runtime requires a different authorization header then the original URL, you may need to provide a mapping for the authorization standard header.

This use case provides a high level overview of one way to design an integration that uses dynamic endpoints. You retrieve child objects using the REST API (for example, Primary Address is a child object of the Account parent object). The integration is designed as follows.

- An initial invoke is configured to get the Account object by using the REST API. The response of this REST API does not provide the child objects. Instead, there are HATEOS links to the child objects (that is, the Primary Address object).

- A second invoke uses the HATEOS links from the earlier response to make another invoke connection to the REST endpoint to fetch the child Primary Address object using dynamic REST endpoint support.

To change the endpoint configuration at runtime, you map one or more of the various properties under the **ConnectivityProperties** target element.

1. Create an orchestrated integration.

2. Drag an adapter into the integration canvas as an trigger connection (it can be any adapter).

3. Configure the adapter in the Adapter Endpoint Configuration Wizard.

4. Drag an initial Oracle ERP Cloud Adapter into the integration canvas as an invoke connection.

5. Configure it to use the **crmRestApp** service application, the **Account** object (business resource), and the **get** operation.

   The response of the first invoke connection contains a collection of HATEOS links, each pointing to a child object such as **Primary Address**.

6. In the mapper between the trigger adapter connection and the Oracle ERP Cloud Adapter invoke connection, map source elements to target elements. For this example, a **PartyNumber** source element is passed to an **id** target element.
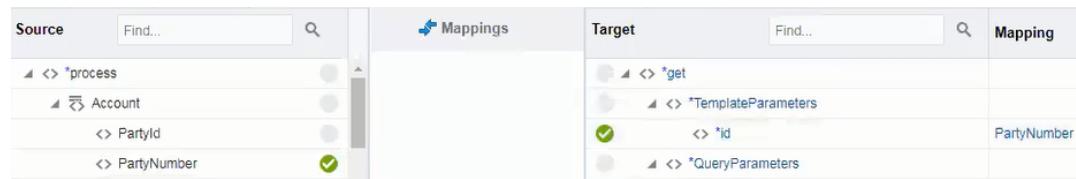
7. Add a for-each action to iterate between the HATEOS links. The value in the **Repeating Element** field is from the response object.
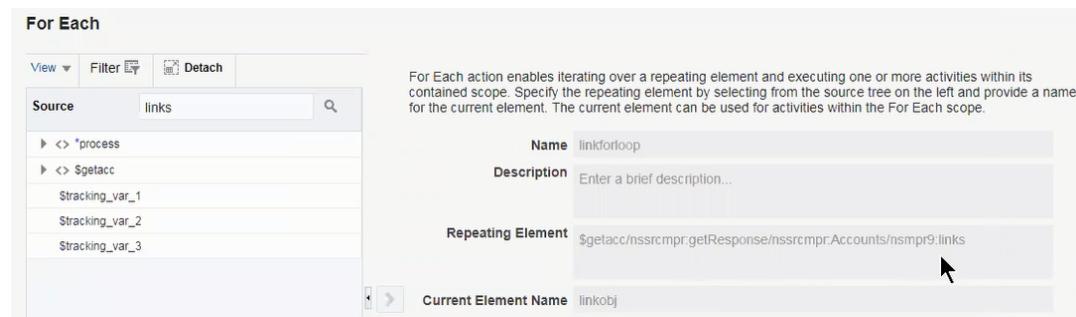
8. Add a switch action to get the HATEOS link corresponding to the **Primary Address** object.

9. Drag the Oracle ERP Cloud Adapter into the switch action as the second invoke connection.

10. Configure it to use the **crmRestApp** service application, the **Primary Address** object (business resource), and the **getAll** operation. This object uses dynamic REST endpoint support. The **Primary Address** is a collection of links. The **getAll** operation is selected for getting all the HATEOS links.

11. In the mapper immediately before the second Oracle ERP Cloud Adapter invoke connection, expand **RestApi** under **ConnectivityProperties** in the target section.

12. From the source section, map **href** to **AbsoluteEndpointURI** under **ConnectivityProperties**. The **ConnectivityProperties** schema element supports dynamic REST endpoints. The **href** element points to the **Primary Address** object link. The **href** element is invoked by the Oracle ERP Cloud Adapter.

13. If necessary, map other nodes under **ConnectivityProperties**. The runtime values provided by these mappings dynamically configure the request.

You can also hover the cursor over these properties for brief descriptions.

Element	Description
AbsoluteEndpointURI	Represents the absolute endpoint URL that the REST Adapter invokes. Empty values are ignored. To route the request to an endpoint URL determined at runtime, provide a mapping for this element. **AbsoluteEndpointURI** takes first precedence among other URL-related properties under **ConnectivityProperties**.
BaseUri	The equivalent of the base URL provided during connection configuration. To substitute only the base URI and retain the rest of the URL, provide a mapping for this element. The mapping is ignored if **AbsoluteEndpointURI** has a nonempty runtime value.
RelativeUri	Forms the part of the endpoint URI between **BaseUri** and **?**. The mapping has no effect if **BaseUri** has an empty runtime value or **AbsoluteEndpointURI** has a nonempty runtime value. The runtime value must start with a **/**.
Uri	Use the various elements under this node to substitute runtime values for the specific parts of an endpoint URL.
Scheme	Provide a mapping to change only the scheme of the endpoint URL. Supported values are **HTTP** and **HTTPS**.
Host	Provide a mapping to change only the **Host** portion of the endpoint URL
Port	Provide a mapping to change only the port of the endpoint URL.
Query	Provide a mapping to change only the query portion of the endpoint URL. A query portion follows the **?**.
Path	Provide a mapping to change only the path portion of the endpoint URL. A **Path** is the part of a URI between the hostname and **?**.
Plugin	The various properties under this node impact the way the REST Adapter invokes the endpoint URL.
PostQueryString	When the runtime value is **true** and the HTTP verb is POST, the query string parameters are sent using POST as form parameters. The default is **false**.

Element	Description
UseFormUrlEncoding	When the runtime value is **false**, the REST Adapter uses RFC 3986-compliant encoding to encode the query parameters. The default is **true**. This is the equivalent of setting the custom header **x-ics-use-x-www-form-urlencoded** to **false**. See section "RFC 3986 Support for Encoding Query Parameters" for more information on **x-ics-use-x-www-form-urlencoded**. **x-ics-use-x-www-form-urlencoded** takes precedence when both are set.

14. Drag an FTP Adapter to the switch action for writing the **Primary Address** object response to a file on an FTP server.

15. In the mapper between the Oracle ERP Cloud Adapter and the FTP Adapter, map the **Primary Address** object details.

16. Activate and invoke the integration. The Oracle ERP Cloud Adapter invokes the endpoint URI determined at runtime.

Invoke a File-Based Data Import (FBDI) Job

To invoke an FBDI job, follow the steps described in this section.

An FBDI job invocation works as follows:

1. Oracle Integration calls Oracle Fusion Applications to perform the bulk import.

2. Oracle Fusion Applications uses a business event to return to Oracle Integration in a separate callback integration.

3. The callback integration subscribes to the business event for the import job and is triggered when the import job completes.

1. Determine whether the job is an FBDI process. See [Financials File-Based Data Imports](#) for a list of FBDI jobs.

2. To invoke and configure an FBDI job, select **Import Bulk Data into Oracle ERP Cloud** on the Actions page of the Adapter Endpoint Configuration Wizard. See [Invoke Actions Page](#).

3. Go to the Operations page of the wizard. See [Invoke Operations Page](#).

4. Go to the Response page. The following functionality is provided:

    • For *new* integrations based on the `ErpImportBulkDataEvent` event:
    Select the **Enable Callback** check box. The Oracle ERP Cloud Adapter has been enhanced to enable raising the `ErpImportBulkDataEvent` event on the Oracle ERP Cloud application when the import job completes. The **Integration Flow Identifier** and **Version** fields have been removed because the callback integration now subscribes to the `ErpImportBulkDataEvent` event.

    • For older, *existing* callback-based integrations:
    Select the **Enable Callback** check box and continue to manually specify details in the **Integration Flow Identifier** and **Version** fields. The `ErpImportBulkDataEvent` event is not used.

5. To invoke the FBDI job, you need a ZIP file consisting of a data file in CSV format and a manifest/properties file that has job details such as job name and its parameters.

See [Using External Data Integration Services for Oracle ERP Cloud](#).

Invoke a Non-File-Based Data Import (FBDI) Job

To invoke a non-FBDI job, follow the steps described in this section.

1. Determine whether the job is an FBDI process. See [Financials File-Based Data Imports](#).

2. If the job is non-FBDI, perform the following steps:

    a. Generate the data file based on the template and upload it to Oracle WebCenter Content (Universal Content Manager). Use either ERPIntegrationService::uploadFileToUCM or the Universal Content Manager API / fscmService/GenericSoapPort.

    b. Invoke ERPIntegrationService::submitEssJobRequest.

    c. Invoke ERPIntegrationService::getEssJobStatus to get the status of the job. You may need to invoke it multiple times to get the final status.

    d. Invoke ERPIntegrationService::downloadEssJobExecutionDetails for the logs.

Use Multiple Callback Integrations for the Same FBDI Job

You may have a use case in which you have multiple data sources and require different callbacks for each data source. This use case can be implemented in the Oracle ERP Cloud Adapter.

For example, assume you need to create journals from multiple sources and put the log files into the respective source system directories.

• For source A, you have integration INTA

• For source B, you have integration INTB, which loads journals using an FBDI bulk import.

- A callback is enabled for both integrations. The callback log file must placed in the respective source systems directory.

Configure a trigger Oracle ERP Cloud Adapter connection as follows:

1. While configuring a callback trigger on the Request page, select **Receive Business Events raised within ERP Cloud** *instead* of **Receive Callback Message upon Completion of FBDI bulk Import Job submitted via another Integration**.

2. Select the event **ERP Integration Inbound event**.

3. Configure a filter expression on this event based on the **document name** in the event payload. Ensure that the document name has a particular format that identifies the source of the data.
   These actions enable multiple callbacks to be configured depending on the document name.

Select Extensible and Descriptive Flexfields in an Integration

You can select specific extensible flexfields (EFFs) and descriptive flexfields (DFFs) in the Adapter Endpoint Configuration Wizard of an Oracle ERP Cloud Adapter invoke connection. You can then map the EFFs and DFFs in the mapper.

The following use case provides an overview of how to design this type of integration.

1. Create an orchestrated integration.

2. Add a REST Adapter as a trigger connection.

3. Enter the following details:

   a. On the Basic Info page, enter a name.

   b. On the Resource Configuration page, select the **POST** action and **Configure a request payload for this endpoint** and **Configure this endpoint to receive the response**.

   c. On the Request page, select the following:

      i. Select **JSON sample** as the request payload and enter the JSON sample.

      ii. From the **Element** list, select **request-wrapper**.

      iii. For the media type of the request body, select **JSON**.

   d. On the Response page, select the following:

      i. Select **JSON sample** as the response payload and enter the JSON sample.

      ii. From the **Element** list, select **response-wrapper**.

      iii. For the media type of the response body, select **JSON**.

4. Add an Oracle ERP Cloud Adapter as an invoke connection.

5. Enter the following details.

   a. On the Basic Info page, enter a name.

   b. On the Actions page, select **Query, Create, Update, or Delete Information**.

   c. On the Operations page, select **Business (REST) Resources** from the **Browse by** list.

   d. Select an appropriate business resource and operation to perform on the resource.

   e. On the Child Resources page, select child resources with extensible or descriptive flexfields.

     f. On the Descriptive and Extensible page, select a specific flexfield and associated contexts.

6. In the request mapper between the two adapters, map appropriate source and target flexfields.

7. In the response mapper after the Oracle ERP Cloud Adapter, map appropriate source and target flexfields.

8. Save the integration.

9. Create business identifiers for tracking the integration during runtime.

10. Activate the integration.

5

Troubleshoot the Oracle ERP Cloud Adapter

Review the following topics to learn about troubleshooting issues with the Oracle ERP Cloud Adapter.

Topics:

Additional integration troubleshooting information is provided. See Troubleshoot Oracle Integration in *Using Integrations in Oracle Integration 3* and the [Oracle Integration Troubleshooting page](#) on the Oracle Help Center.

Request Oracle Fusion Applications Egress IP Addresses

Follow these best practices to obtain the Oracle Fusion Applications egress IP addresses to use to enable callback messages to be sent successfully from Oracle Fusion Applications to Oracle Integration.

1. Obtain the IP addresses to use in either of two ways:
   - • Sign in to Oracle Support and search for Doc ID 2698639.1 or KB45068 (Oracle Allow List IPs For Outbound Connectivity For Fusion Applications). Both documents identify the IP addresses to use.
   - • File a service request (SR) with Oracle Fusion Applications Support to obtain the IP addresses. Include the following details in the **SR Summary**:

     Oracle Allow List IPs For Outbound Connectivity For Fusion Applications

2. Allowlist the IP addresses in the Oracle Cloud Console. See Restrict Access to an Instance Using the Self-Service Allowlist in *Provisioning and Administering Oracle Integration 3*.

Bulk Import Troubleshooting Issues

This section describes bulk import troubleshooting issues.

Topics:

Selection of the Import Bulk Data into Oracle ERP Cloud Option May Return a GENERIC Error

Selecting the **Import Bulk Data into Oracle ERP Cloud** option on the Actions page when adding an invoke connection to an integration may return a `GENERIC` error.

Solution: Perform the following step before refreshing or recreating the Oracle ERP Cloud Adapter connection.

1. Open the following URL in your browser:

   `https://ERP HOST/fscmService/ErpIcsIntegrationService?wsdl`

   The WSDL definition is displayed and an internal refresh of the instance is performed.

2. Perform either of the following steps:

   a. Hover over the existing Oracle ERP Cloud Adapter connection.

   b. Click **Actions** ..., then select **Refresh metadata**.

   or

   a. Create a new Oracle ERP Cloud Adapter connection.

   b. Add the new Oracle ERP Cloud Adapter invoke connection to an integration.

How to Pass an Interface Request ID to an Import Job in a Bulk Import Process

To add a request ID (`{req_id}`) as a parameter in the manifest file/properties file, pass the request ID in a parameter list as `{req_id}`. This dynamically retrieves the load request ID in Oracle ERP Cloud and enables the import process to continue.

Bulk Data Import Implementation Recommendations

If you want to use the bulk data import feature with Oracle ERP Cloud, it is recommended that you select the **Import Bulk Data into Oracle ERP Cloud** option on the Actions page of the Adapter Endpoint Configuration Wizard, and not use the web service APIs.

However, if you instead directly use the ERPIntegrationService web service (and importBulkData operation) for bulk data imports, ensure that the properties for the `jobOptions` parameter are set to values. For example:

```
<jobOptions>ExtractFileType=ALL,InterfaceDetails=TO_DETERMINE<jobOptions>
```

The `jobOptions` parameter is required for all FBDI imports and is required to receive callbacks.

Note that if you select the **Import Bulk Data into Oracle ERP Cloud** option on the Actions page of the Adapter Endpoint Configuration Wizard, this task is not required.

Create a Job Property File for the importBulkData Operation

You can generate the job property file for each job to further simplify the request payload of the importBulkData operation.

See the following documentation for details:

1. See Using External Data Integration Services for Oracle ERP Cloud of [External Data Integration Services for Oracle Cloud: Overview](#).

   a. Scroll to the bottom and see the Oracle Support Services link under Related Topics: [Using External Data Integration Services for Oracle ERP Cloud](#).

   b. Scroll to the Attachments section at the bottom of the link and see Appendix 12: Creating a Job Property File for the importBulkData Operation in the *Using External Data Integration Services* guide appropriate to your Oracle Fusion Applications release.

Error Response Received When Invoking a Bulk Import with the Oracle ERP Integration WSDL

If you receive an error when trying to perform a bulk import using the importBulkData operation of the ERP Integration Service WSDL, ensure that you are correctly using the Oracle ERP Cloud Adapter to perform this task.

See [Invoke a File-Based Data Import (FBDI) Job](#).

Import Bulk Data into ERP Cloud Application Option Must Be Reselected in an Imported Integration

If you import an integration using the bulk data import feature into another instance, the **Import Bulk Data into ERP Cloud Application** option on the Actions page of the Adapter Endpoint Configuration Wizard is not selected. Instead, the initial option on this page is selected. You must open the Adapter Endpoint Configuration Wizard in edit mode, reselect the **Import Bulk Data into ERP Cloud Application** option, save your changes, and activate the integration. If you later re-import this integration into another instance, the **Import Bulk Data into ERP Cloud Application** option is correctly selected. This issue only occurs with the initial import.

Jobs Not Appearing in the Import Jobs List on the Operations Page

If you selected **Import Bulk Data into ERP Cloud Application** on the Actions page, you can specify the import job to import on the Operations page of the Adapter Endpoint Configuration Wizard. If the job does not appear in the **Import Job Name** list, the causes may be as follows:

*   Only File-Based Data Imports (FBDI)-compliant jobs are visible. FBDI jobs are described in File-Based Data Imports of *File-Based Data Import (FBDI) for Financials*.

*   Your user account may not have the correct roles. See Assign Required Roles to an Integration User.

See Import Bulk Data into ERP Cloud Application.

Receive a Callback from an ExportBulkData Operation

To receive a callback from an ExportBulkData operation, you can also configure events in the callback integration. An event is a good alternative if there are issues when using the ExportBulkData callback operation in the callback integration. Both methods are supported.

Configure the Callback for the ExportBulkData Operation

ExportBulkData operation behavior is different from ImportBulkData operation behavior. The approach used with ImportBulkData to configure a callback integration does not work with ExportBulkData.

To consume the callback received from ExportBulkData, you must configure the integration as follows:

1. Create an integration with an event as a trigger.

2. Subscribe to an Oracle ERP Cloud integration outbound event with the Oracle ERP Adapter. Do not add any filter; use the default.

3. Parse the payload to get the document ID.

```
{
 "JOBS": [
  {
   "JOBNAME": "TEST PO Extract Extract Job",
   "JOBPATH": "/oracle/apps/ess/custom/int",
   "REQUESTID": "9519",
   "STATUS": "SUCCEEDED",
   "DOCUMENTNAME": "ExportBulkData_TESTPOEXTACT_9519"
```

```
    },
    {
      "JOBNAME": "Upload Interface Error and Job Output File to Universal
Content Management",
      "JOBPATH": "/oracle/apps/ess/financials/commonModules/shared/common/
interfaceLoader",
      "REQUESTID": "9520",
      "STATUS": "SUCCEEDED",
      "DOCUMENTNAME": "ExportBulkData_TESTPOEXTACT_9519"
    }
  ],
  "SUMMARYSTATUS": "SUCCEEDED",
  "DOCUMENTID": "10174",
  "DOCUMENTNAME": "ExportBulkData_TESTPOEXTACT_9519"
}
```

4. Use the SOAP Adapter to download the file from Universal Content Manager (UCM) using the above document ID.

5. Continue using the SOAP Adapter because it supports attachments.

6. In the integration that invokes the ExportBulkData operation, open the mapper.

7. Add **EnableEvent=Y** in the **jobOptions** element of the **exportBulkData** operation.

Oracle ERP Cloud Callback About the Bulk Import Issue

If Oracle Integration does not receive an Oracle ERP Cloud callback about the bulk import, it is likely due to an incomplete prerequisite to using the adapter.

See Upload Files in Bulk and Insert Data into Oracle ERP Cloud Application Tables for New Integrations.

Business Event Troubleshooting Issues

This section describes business event troubleshooting issues.

Topics:

- Event-Based Oracle ERP Cloud Adapter Trigger Connections Fail When Configured with OAuth

- Deactivate an Integration with Business Events

- Multiple Data Sources with Different Callbacks For Each Data Source

- Payable Invoice-Related Events Are Not Being Sent from Oracle Fusion Applications

- Business Events or Objects Not Appearing in Adapter Endpoint Configuration Wizard

- Business Event Received from a Nonproduction Oracle Fusion Applications Environment

Deactivate an Integration with Business Events

If the integration to deactivate contains a business event subscription, a message is displayed asking if you want to delete the event subscription. If you select to delete the event subscription, the integration does not receive any events after it is reactivated.
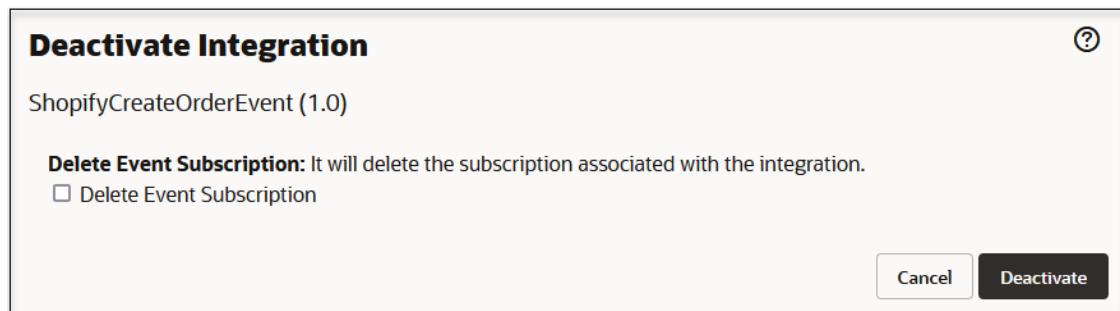
If you do not want to delete the event subscription, the events in this integration are resent if the integration is activated within six hours.

Multiple Data Sources with Different Callbacks For Each Data Source

You can have multiple data sources and therefore require different callbacks for each data source.

Perform the following steps to configure multiple callback integrations for the same FBDI job:

1. When configuring a callback trigger connection, instead of selecting the in-built callback option, select **Receive Business events raised within ERP Cloud** on the Request page.

2. Select the event **ERP Integration Inbound event**.

3. Configure the filter on this event based on the document name in the event payload and ensure that the document name has a particular format that identifies the source of the data.

This enables multiple callbacks to be configured depending on the document name.

Payable Invoice-Related Events Are Not Being Sent from Oracle Fusion Applications

If payable invoice-related events are not being sent from Oracle Fusion Applications, see the following Oracle Fusion Applications document available at Oracle Support Services.

1. Go to Oracle Support Services and search for Doc ID 2650773.1 (*Payables Invoice Created : How to enable Payable Invoice creation event for OIC process*).

2. Set user profile **ORA_AP_ENABLE_BUSINESS_EVENTS** to **Y** in Oracle Fusion Applications, as described in this document.

Business Events or Objects Not Appearing in Adapter Endpoint Configuration Wizard

If business events or objects are not displayed for selection in the Adapter Endpoint Configuration Wizard, the cause may be incomplete or old metadata. The wizard may also fail with the following error.

```
Failed to fetch Business Events from Public Event Catalog. Either it
may be empty Or Cloud Application is not reachable due to improper OAM
configuration on Cloud application. Please check if you are able to read
Event catalog here: https://xxxx.oraclecloud.com/soa-infra/PublicEvent/
catalog_
```

Ensure that the following issues are satisfied:

- The Oracle ERP Cloud Adapter is using the latest and most complete metadata. Select **Refresh Metadata** on the Connection page for the Oracle ERP Cloud Adapter connection and retest. See Refresh Integration Metadata.

- All prerequisites to create an Oracle ERP Cloud Adapter connection have been satisfied. See Prerequisites for Creating a Connection.

Business Event Received from a Nonproduction Oracle Fusion Applications Environment

Note the following issue and resolution when receiving a business event from a nonproduction Oracle Fusion Applications environment.

Problem	Root Cause	How to Diagnose	Action Required

An Oracle ERP Cloud Adapter trigger endpoint in an Oracle Integration production environment received business events from an Oracle Fusion Applications test environment.	An active business event subscription present in an Oracle Fusion Applications test environment is configured with an Oracle Integration production endpoint. This may occur because of the following:
	
	• You have activated an Oracle ERP Cloud business event callback flow in an Oracle Integration production environment with an Oracle Fusion Applications test environment connection setting.
	
	• This subscription is not deleted at the time of deactivation.
		Check the `PublicEvent` subscription's REST resource with the Postman `Get` method and also check the endpoint URL for the related subscription. REST resource:
		
		`https://`*`fa_host`*`.oraclecloud.com/soa-infra/PublicEvent/subscriptions`
		
		This is a sample entry for a subscription in Oracle Fusion Applications:
		
		`{`
		`    "csfKey": "idcs-5378d3136b9f423f",`
		`    "endpointURL": "https://`*`xxxx`*`.oci.cloud.com/ic/ws/integration/v1/flows/erp/`*`XXXX`*`/1.0/",`
		`    "filter": "<xpathExpr xmlns:ns_1='http://xmlns.oracle.com/apps'>$inputVariable/ns_1:objectName</xpathExpr>",`
		`    "name": "{http://xmlns.oracle.com/apps/crmCommon}ICSGenericEventCRM",`
		`    "id": "hczItaWmNsb3Vkb25saW5lLm1sOjQ0My9pY9",`
		`    "state": true`
		`}`
			If the subscription is not correct, delete the subscription with the Postman `Delete` method using the subscription ID:
			
			`https://`*`fa_host`*`.oraclecloud.com/soa-infra/PublicEvent/subscriptions/{id}`

Event-Based Oracle ERP Cloud Adapter Trigger Connections Fail When Configured with OAuth

When an Oracle ERP Cloud Adapter trigger connection is configured with OAuth, you get the following error when attempting to receive events from Oracle Fusion Applications.

```
[2022-07-01T11:40:01.040+00:00] [oic_server1] [ERROR] [] [oracle.soa.adapter]
[tid: [ACTIVE].ExecuteThread: '69' for
queue: 'weblogic.kernel.Default (self-tuning)'] [userId: ] [ecid:
<ECID>-00024ed8,0] [APP: Cloud Adapter Inbound Http App]
[partition-name: DOMAIN] [tenant-name: GLOBAL] [ACTIVE] ExecuteThread: '69'
for queue: 'weblogic.kernel.Default (self-tuning)
'BaseTransportServlet.createErrorInstance Rejected message FlowID = 5200020
Flow Name: <FLOW> Flow Version: 01.00.0000
[2022-07-01T11:50:01.049+00:00] [oic_server1] [ERROR] []
[oracle.soa.adapter.tbacallback] [tid: [ACTIVE].ExecuteThread: '92'
for queue: 'weblogic.kernel.Default (self-tuning)'] [userId: ] [ecid:
<ECID>-00025562,0] [APP: Cloud Adapter Inbound Http App]
[partition-name: DOMAIN] [tenant-name: GLOBAL] OSCCloudUtils:getRefreshToken -
> OIC Authentication properties are empty. Review
the Integrations Trigger connection, test and save the connection and re-
activate the integration flow. If the problem persists,
please reach out to Oracle support.[2022-07-01T11:50:01.050+00:00]
[oic_server1] [ERROR] [] [oracle.soa.adapter] [tid: [ACTIVE].ExecuteThread:
'92' for queue: 'weblogic.kernel.Default (self-tuning)'] [userId: ] [ecid:
<ECID>-00025562,0] [APP: Cloud Adapter Inbound Http App]
[partition-name: DOMAIN] [tenant-name: GLOBAL] Unable to process SOAP Request
for ic/ws/integration/v1/flows/erp/<FLOW>/1.0 due to:
[oracle.cloud.connector.api.CloudInvocationException[[ OIC Authentication
properties are empty. Review the Integrations Trigger connection,
test and save the connection and re-activate the integration flow. If the
problem persists, please reach out to Oracle support.]
]]
```

The Oracle ERP Cloud Adapter does not support this use case. Instead, configure the Oracle ERP Cloud Adapter trigger connection with the Username Password Token security policy to successfully receive events.

Failed Messages Are Not Automatically Resubmitted

Oracle Integration does not automatically resubmit failed messages. You must manually resubmit failed messages. Resubmitting a failed message starts the integration from the beginning.

See Resubmit Failed Messages in *Using Integrations in Oracle Integration 3*.

Another option is to design the integration to catch the fault from the invoke connection and retry in case of an error.

Exception Error Received While Parsing the REST Application Catalog fscmRestApp

If you select **Business (REST) Resource** and choose **fscmRest** on the Operations page of the Adapter Endpoint Configuration Wizard and receive the following error, you need to add a profile option in Oracle ERP Cloud.

```
An error occurred while loading the application catalog, ERROR: Exception
while parsing the
REST application catalog fscmRestApp. Error accessing the URL: https://
host.fa.em2.oraclecloud.com:
443/fscmRestApi/resources/latest/describe?metadataMode=minimal - received
HTTP Response Code: 500;
Reason: Internal Server Error. This might be because REST APIs are not
enabled on the Application.
Please contact your Application Administrator.
```

1. Go to **Setup and Maintenance** > **Manage Profile Options**.

2. Click **+** to add a new profile option.

3. Define a new profile option with the following details.

Element	Description
Profile Option Code	`ORACLE.BC.REST.IGNORECATALOGERRORS`
Application	`Application Toolkit`
Module	`Application Toolkit`
Description	If a catalog describe action fails for a particular resource, log an error and proceed with other resources.
Start Date	Enter the start date.

4. Click **Save and Close**.

5. Go to **Setup and Maintenance** > **Manage Administrator Profile Values**.

6. Enter the following:

   a. In the **Profile Level** field, select **User**.

   b. In the **Profile Value** field, enter `true`.

7. Click **Save and Close**.

Use a Unique File Name for the Upload Request Payload When using PGP Encryption

If you select to upload a PGP public key on the Connections page, a unique filename must be present in the upload request payload file. If the same file name used for uploading is also used to load data into the Oracle ERP Cloud interface table, the same name is detected in Oracle WebCenter Content (Universal Content Management (UCM) and the file is not loaded.

Oracle ERP Cloud Adapter Error Messages

Note the following Oracle ERP Cloud Adapter error messages and possible causes.

Error Code Number	Error Message	Error Code Purpose
CA-ERP-001	Unable to verify the call-back message sent by ERP Cloud hence the call-back request sent by ERP Cloud is not processed. Please ensure the steps described in the link https://docs.oracle.com/en/cloud/paas/integration-cloud/erp-adapter/prerequisites-creating-connection.html#GUID-D4CF2D13-326D-41A2-A119-B932859C7041 have been completed prior to executing the integration flow that submits bulk data import request to ERP Cloud.	When a callback message is not processed due to prerequisites not being executed.
CA-ERP-002	The user is not created in ICS/OIC. Please execute #1 in the pre-requisites link.	A specific exception when a user is not created.
CA-ERP-003	The certificates are not imported in ICS/OIC. Please execute #2 in the pre-requisites link	A specific exception when certificates are not created.

Error Code Number	Error Message	Error Code Purpose
CA-ERP-004	Unable to process the callback message due to incomplete payload sent by ERP Cloud. The payload sent by ERP Cloud application is not having Document ID and hence the bulk data import job specific report & log files could not be downloaded from ERP Cloud (UCM). Please verify the payload sent by ERP Cloud. You would want to visit the troubeshooting section here http://www.oracle.com/pls/topic/lookup?ctx=oic&id=ICSER-GUID-82650DE7-6A3B-4070-B149-03F1A5922681 for probable solution. The payload sent by ERP Cloud is as follows.	When documentID is NULL in the callback payload.

{
"JOBS": [{"JOBNAME": "Load Interface File for Import", "JOBPATH":
"/oracle/apps/ess/financials/commonModules/shared/common/interfaceLoader","DOCUMENTNAME":
"AP_06223025.zip","REQUESTID": "120862","STATUS": "SUCCEEDED","CHILD": [{"JOBNAME": "Transfer
File","JOBPATH": "/oracle/apps/ess/financials/commonModules/shared/common/interfaceLoader","REQUESTID":
"120864","STATUS": "SUCCEEDED"}, {"JOBNAME": "Load File to Interface","JOBPATH":
"/oracle/apps/ess/financials/commonModules/shared/common/interfaceLoader","REQUESTID": "120865","STATUS":
"SUCCEEDED"}]}, {"JOBNAME": "Import Payables Invoices","JOBPATH":
"/oracle/apps/ess/financials/payables/invoices/transactions","REQUESTID": "120867","STATUS": "WARNING"},
{"JOBNAME": "Upload Interface Error and Job Output File to Universal Content Management","JOBPATH":
"/oracle/apps/ess/financials/commonModules/shared/common/interfaceLoader","REQUESTID": "121649","STATUS":
"SUCCEEDED"}],"SUMMARYSTATUS": "ERROR"}

Import Payables Invoice Report Job is Not Triggered

If the import payables invoice report job is not triggered from the import payables invoice, check the status of the import payables invoice job. Depending on the status of the import payables invoice job, the import payables invoice report gets triggered.

Reactivate Integrations when the Connection URL is Modified

Reactivate an integration when callbacks fail because subscriptions are not present in Oracle ERP Cloud or there are misdirected callbacks from Oracle ERP Cloud to Oracle Integration due to a change in the Oracle ERP Cloud URL used in the Oracle Integration connection. During reactivation, Oracle Integration resubscribes to the Oracle ERP Cloud application.

Oracle ERP Cloud SOAP-Based Callback Failures in the Oracle ERP Cloud Adapter Trigger Connection

If you configured a callback for FBDI-compliant import jobs, after the job completes processing, the Oracle ERP Cloud application should invoke the Oracle Integration endpoint that has the Oracle ERP Cloud Adapter trigger. This is the callback that Oracle Integration receives from the Oracle ERP Cloud application. However, the callback fails.

The callback failure occurs because the Oracle ERP Cloud Adapter was configured to use a SOAP-based callback architecture. The Oracle ERP Cloud Adapter must now use the business event-based callback architecture. If your Oracle Fusion Application instance has been upgraded to version 25c and you have integrations using a version of the Oracle ERP Cloud Adapter that uses a SOAP-based callback architecture, you receive the following error during the callback attempt:

```
Error while processing authentication at Trigger. Failed due to - 401 :
Unauthorized"
```

Verify the following steps.

- Verify the callback integration details in the integration where the import job is invoked. See the invoke Response page of the Adapter Endpoint Configuration Wizard.

  If the invoke Response page in your integration includes the **Integration Flow Identifier** and **Integration Flow Version** fields below the **Enable Callback** check box, this indicates that you are using an older version of the Oracle ERP Cloud Adapter that uses a SOAP-based callback architecture. The Oracle ERP Cloud Adapter should now use the business event-based callback architecture.

  Solution: To use the business event-based callback architecture and successfully receive the callback integration:

  1. Delete the old Oracle ERP Cloud Adapter from the integration canvas.

  2. Configure a new version of the Oracle ERP Cloud Adapter and ensure that you select the **Enable Callback** check box on the invoke Response page. This action ensures that the business event-based callback architecture is used. See Invoke Response Page.

  3. Reconfigure your mappings in the mapper and reactivate the integration.

  4. Create a *new* Oracle ERP Cloud Adapter trigger-based integration to receive the callback and select **Receive Callback Message upon completion of FBDI bulk Import Job submitted via another Integration** on the trigger Request page and the bulk data import process to receive as a request that starts the integration. This is the callback that Oracle Integration receives from the Oracle ERP Cloud application. See Trigger Request Page.

  5. Activate the callback integration, which creates the subscription using the business event-based architecture.

- If there are authentication errors when sending the callback, you see a `Failed at Trigger` message or do not see any events arriving. Ensure that you resolve any authentication issues.

- Use REST APIs to diagnosis why you did not receive the callback integration. See this Oracle Support note.

Error When Discovering REST Services or SOAP Services through the Oracle ERP Cloud Adapter

You can receive the following errors when trying to discover REST services or SOAP services through the Oracle ERP Cloud Adapter.

- REST Services Error
- SOAP Services Error

REST Services Error

If you receive the following error when trying to discover REST services, verify that you also receive the error outside of Oracle Integration by running the `curl` command described in the Goal section of Doc ID 2576807.1 at My Oracle Support (MOS). If the error occurs, follow the steps in this MOS document to resolve this issue.

```
An error occurred while loading the application catalog, ERROR: Exception
while parsing the REST
application catalog fscmRestApp. Error accessing the URL: https://
hostname.oraclecloud.com:443/fscmRestApi/
resources/latest/describe?metadataMode=minimal - received HTTP Response Code:
400; Reason Bad Request. This
might be because REST APIs are not enabled on the application. Please contact
your Application Administrator.
```

SOAP Services Error

If you receive the following error when trying to discover SOAP services, you must verify the entries in your service catalog.

```
Failed to located the service endpoint for the service {http://
xmlns.oracle.com/apps/financials
/commonModules/shared/model/erpIntegrationService/}ErpIntegrationService.
Please contact the administrator..
Integration TEST_SUBMIT_ESS (1.0) cannot be activated.{0}. ; Failed to
located the service endpoint for
the service {http://xmlns.oracle.com/apps/financials/commonModules/shared/
model/erpIntegrationService/}
ErpIntegrationService
```

For example, perform the following steps:

1. Invoke `ServiceCatalog` from the SOAP UI client with the following payload:

   ```
   client https://elor.fa.us2.oraclecloud.com/fndAppCoreServices/
   ServiceCatalogService?wsdl
   ```

   The payload should look as follows:

   ```
   <soapenv:Body>
     <typ:getAllServiceEndPoints/>
   </soapenv:Body>
   ```

2. Add authentication and time stamp headers to your payload.

3. For any missing services, contact Oracle Fusion Applications Support to have those services added to the service catalog.

4. Reactivate your integration.

Oracle Universal Content Management (UCM) File Upload Failure

Oracle UCM file upload may fail intermittently in the Oracle ERP Cloud Adapter. This is due to the need to clear the browser cache and cookies each time the integration runs. As a workaround to performing this task each time, perform the following steps.

1. Edit the integration.

2. Open the mapper in edit mode for the Oracle ERP Cloud Adapter invoke connection.

3. Map a unique filename value to the **docTitle** target element in the mapper.

   For example, map the following:
   /$downloadToICS/DownloadFileToICSResponse/DownloadResponse/ICSFiles/ ICSFile/Properties/filename to **/FileUpload/docTitle**

4. Save your changes and rerun the integration to resolve this issue.