SAP ERP Integration with Workday Configuration Guide

For SAP Cloud Integration Suite

Version 1.0 – August 2021

Contents

1 Introduction

This document provides an overview of the artifacts delivered as part of the SAP ERP Integration with Workday for the SAP Integration Suite. The document discusses some of the common configuration steps needed before deploying the Integration Flows within the package. Read this guide carefully before configuring the integration content.

1.1 Coding Samples

Any software coding and/or code lines/strings ("Code") included in this documentation are only examples and are not intended to be used in a productive system environment. The Code is only intended to better explain and visualize the syntax and phrasing rules of certain coding. We do not warrant the correctness and completeness of the Code given herein.

1.2 Internet Hyperlinks

The documentation may contain hyperlinks to the Internet. These hyperlinks are intended to serve as a hint about where to find related information. We do not warrant the availability and the correctness of this related information or the ability of this information to serve a particular purpose.

2 Overview

The integration of SAP ERP and Workday processes can be customized. It is expected that you customize the process as per your business requirements. Adjustments can be made at different components, including:

- Adjustment to the integration flow externalized parameters,
- Adjustment to the mapping step to reflect the possible custom properties in Workday.

In case of changes have been made to objects in Workday and custom fields have been added, the XSD needs to be re-generated using the Eclipse Plug-in. This XSD needs to be uploaded to the Integration flow and the mapping adjusted accordingly.

3 Preparing the Systems for Integration

3.1 Prerequisites

To configure the integration content using this guide, you need to have access and authorization to the systems listed below.

Access required:

- SAP ERP System details.
- SAP Integration Suite Tenant Details.
- Workday Tenant Details

Authorization required:

- SAP ERP system Details
    - The user should be able to perform different operations on:
        - ALE Configuration
        - RFC Destination Setup
        - Cost Centers (Read)
        - Exchange Rate (Read)

- SAP Integration Suite Tenant Details
    - AuthGroup.IntegrationDeveloper

- Workday Tenant
    - Appropriate authorizations for the technical user that will be used to connect to the Workday Tenant.

3.2 Adapter Installation

Installing the Workday adapter is a prerequisite to use this Integration Package. For the adapter, installation refers to the *Workday Adapter and Plug-in Installation Guide* that is included as part of the Workday adapter package.

3.3 Plug-in Installation

For the Eclipse plug-in (or Workbench) installation refer to the Workday *Adapter and Plug-in Installation Guide* that is included as part of the Workday adapter package.

4 Configuration

SAP ERP, Workday, and SAP Integration Suite need to be configured and prepared before the integration content package can be configured and deployed. Follow the steps mentioned in the next sections.

4.1 Configuration in SAP ERP

This section describes the mandatory configurations which need to be performed in the SAP ERP. Follow the steps mentioned in the following sub-sections.

4.1.1 ALE Configuration

This section describes the setup of IDOC based ALE distribution for communication between SAP ERP and Salesforce via SAP Cloud Platform Integration.

1. Configuring the Logical Systems and the Distribution Model
    a. Go to the SALE transaction
    b. Choose Basic Settings > Logical Systems > Define Logical Systems and define two logical systems that represent your SAP ERP system and the middleware system.
    c. Choose Modelling and Implementing Business Processes > Maintain Distribution Model and Distribute Views and define a distribution model for cost center data that connects the two logical systems you've created in the previous step
    d. Switch to the edit mode.
    e. Choose Create Model View.
    f. Select the model view that was previously created and choose “Add Message Type”. From the pop-up screen, choose:
        - Sender:
          Select the logical system representing your SAP ERP system.
        - Receiver:
          Select the logical system representing your middleware system.
        - Message Type:
          Select COSMAS and save the model.
    g. Repeat the above two steps for Message Type: EXCHANGE_RATE

2. Configuration of RFC Connections
    a. Go to the Configuration of RFC Connections (SM59) transaction in your SAP ERP system.
    b. Select the HTTP Connections to External Server (G) type and select Create.
    c. In the Target Host field, enter the <runtime URL of your SAP Cloud Platform Integration environment> part of the URL that you've copied in the first step.
    d. In the Path Prefix field, enter the /cxf/<sender address> part of the URL that you've copied in the first step.
    e. In the Logon Procedure section, select the Basic Authentication option. In the Logon section, enter the user ID and password of your SAP Cloud Platform Integration communication user.
    f. Repeat the above steps for COSMAS, EXCHANGE_RATE.

3. Creating a Port and Partner Profile.
    a. Go to the Ports in IDoc Processing (WE21) transaction.
    b. Select the XML HTTP node and choose to Create.
    c. Enter a name such as COSTCC_CPI and a description such as “Cost Center Replication from SAP”.
    d. Select the RFC destination that you've created as described in the previous step.
    e. Select the Application/x-sap.idoc content type.
    f. Select the SOAP Protocol checkbox.
    g. Repeat the above steps for COSMAS, EXCHANGE_RATE**.**
    h. Go to the Partner Profiles (WE20) transaction in your SAP ERP system.

i. Select the Partner Type LS node, and select Create.
j. In the Partner No. field, enter the name of the logical system representing your middleware system.
k. Save your entries, then choose Create Outbound Parameter (the plus symbol) in the Outbound Parameters section.
l. Add the entries for the following mentioned Message Types: COSMAS, EXCHANGE_RATE

Note: The configuration of STRUST should be in place for the IDOC based scenario

4.2 Configuration in Workday

This integration package is configured using basic Authentication when communicating to Workday.

A Technical Communication User is needed in Workday to perform all integration calls from the Integration Suite. The created technical user needs to have all the appropriate authorization to perform CRUD operations in Workday.

4.3 Configuration in SAP Integration Suite

In this section, the settings of the Integration Flows are discussed including the prerequisites, parameters of the Sender and Receiver systems, as well as others specific to each iFlow.

4.3.1 Replicate Exchange Rate from SAP ERP to Workday

This integration flow replicates Exchange Rates from SAP ERP. The integration begins from SAP ERP by triggering an IDoc received by SAP Cloud Integration. Figure 4.1 depicts the business process to be implemented.

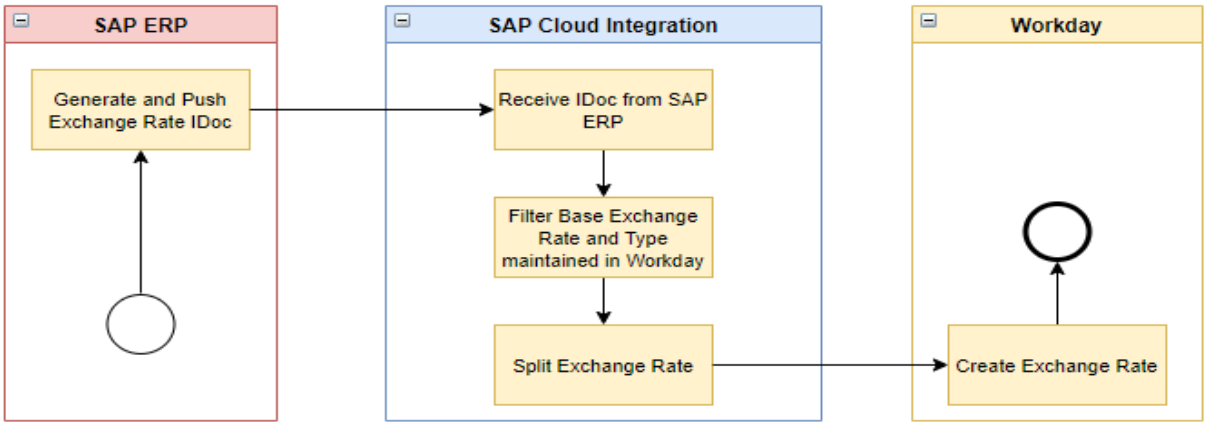

Figure 4.1 Process Diagram

The SAP Cloud Integration implementation of the process in Figure 4.1 is shown in Figure 4.2.

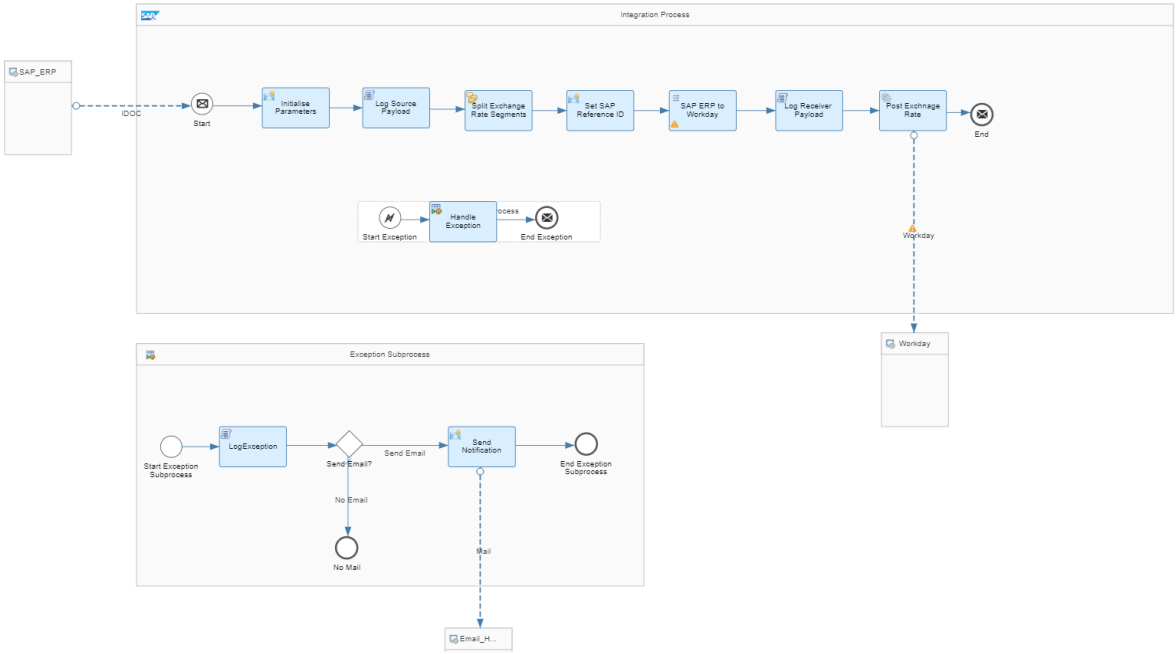

Figure 4.2 Integration Flow

4.3.1.1 Prerequisites

The following actions need to be performed as a prerequisite:

- Deploy the security artifacts that will be required during the configuration of integration content.
- Users need to define the time zone in configuration and the first time run date and hour from when to start replicating.

4.3.1.2 Deploying User Credentials in SAP Cloud Integration

To enable the Integration Flows to run, we will need to deploy Credentials for both Workday and SAP ERP in the Cloud Integration Tenant. These are discussed in the next sections.

4.3.1.2.1 Deploying User Credentials for Workday

To connect to Workday using basic Authentication, follow the steps below:

1. In your SAP Cloud Integration tenant, go to Monitor.
2. Click on Security Material in Manage Security.
3. Click on the Add dropdown and select User Credentials.
4. Specify the name and description of the User Credential.
5. Fill in the username and password of your technical Workday User.
6. Click on Deploy.

4.3.1.3 Configuration

Follow the below steps to configure the integration flow:

1. Open the integration flow “Replicate Exchange Rate from SAP ERP to Workday”.
2. Click on Configure.
3. Configure “Sender”. Provide an endpoint to the iflow as per the organization’s naming standards.

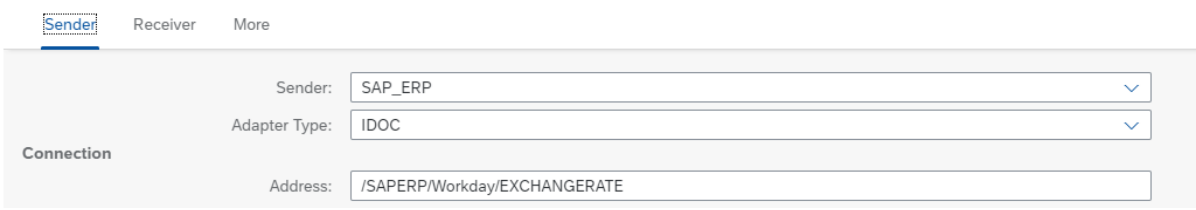

Figure 4.3 Configure Sender

Note: Replace the default values of the parameters in the configurations based on your scenario and landscape.

4. Go to Receiver.
5. Configure the “Receiver” connector named “Workday”. See Figure 4.4.

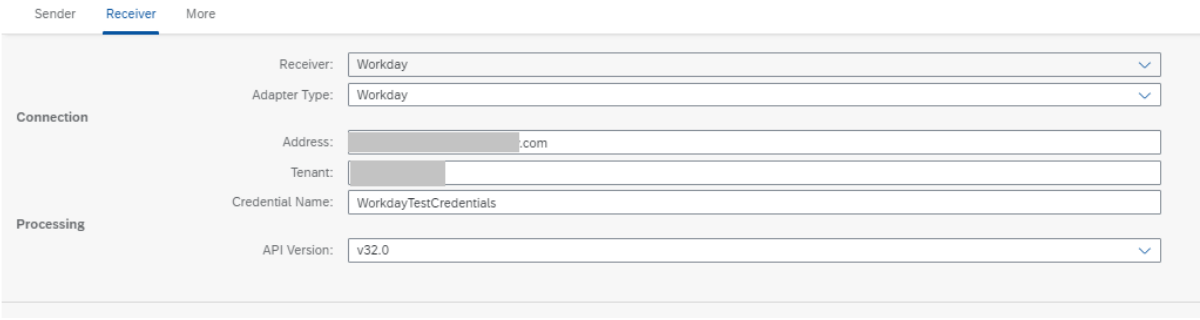

Figure 4.4 Configure Receiver Workday

The description of each of the fields in **Error! Reference source not found.** is presented in the table below.

Parameter	Description
Address	Specify the hostname of your Workday tenant. Example.: https://dev11111.workday.com
Tenant	Specify the ID of your Workday tenant. Example: mytenant
Credential Name	Specify the name of a deployed User Credentials artifact that holds the username and password used to authenticate with Workday.

API Version	Specify the Workday API version.

Table 1 Configure Receiver Workday

6. Configure the "Receiver" connector named "Email_Handler". See Figure 4.5.

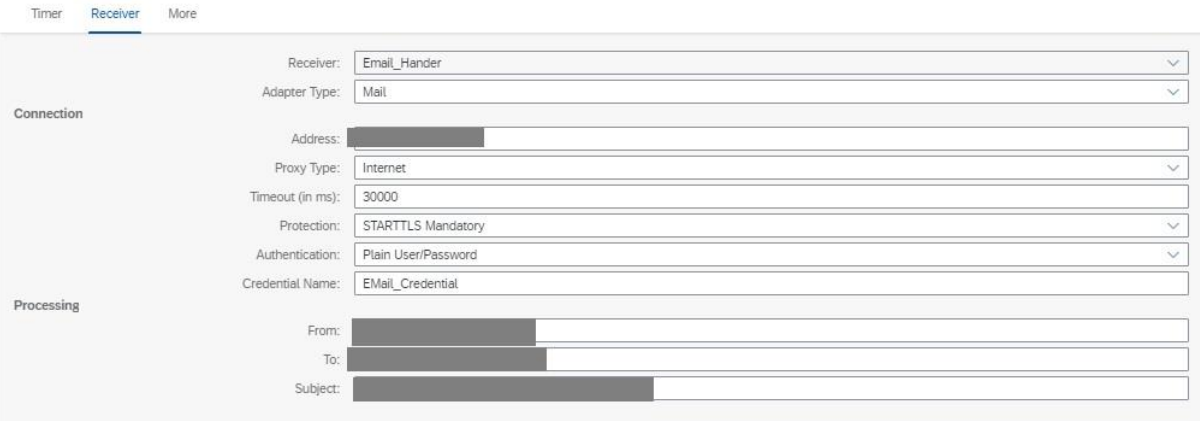

Figure 4.5 Configure Receiver Mail Server

The description of each of the fields in Figure 4.5 is presented in the table below.

Parameter	Description
Address	Specify a combination of the hostname and port of your email Server. Example: smtp.gmail.com:587
Basic Credential Name	Specify the name of a deployed User Credentials artifact that holds the Username and Password used to authenticate with the mail server.
From	Specify the email address from which the exception notification should come.
To	Specify the email address where to sent the exception notification.
Subject	Specify the template to be used as a subject of your email.

Table 2 Configure Receiver Mail Server

7. Configure "More" as shown in Figure 4.6.

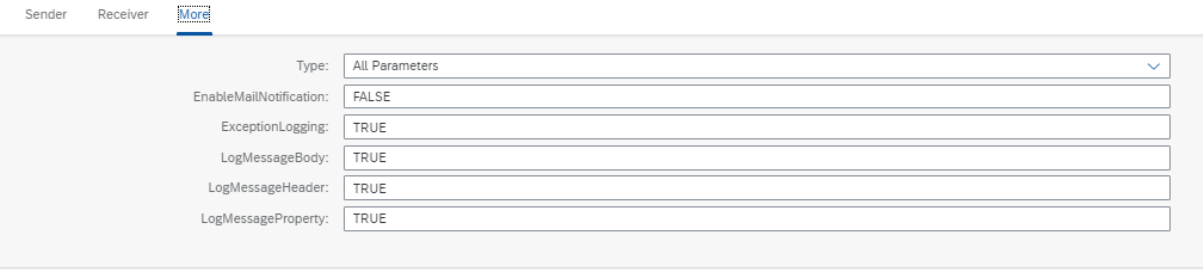

Figure 4.6 Configure More options

The description of each of the fields in Figure 4.6 is presented in the table below.

Parameter	Description
LogMessageBody	Possible values “TRUE” / “FALSE”. Specify “TRUE” to log the Message Body (Not recommended in a live environment). Use “FALSE” as a default value.
LogMessageHeader	Possible values “TRUE” / “FALSE”. Specify “YES” to log Message Headers. Use “FALSE” as a default value.
LogMessageProperty	Possible values “TRUE” / “FALSE”. Specify “TRUE” to log Message properties (Not recommended in a live environment). Use “FALSE” as a default value.
ExceptionLogging	Possible values “TRUE” / “FALSE”. Specify “YES” to log Message Exceptions. Use “FALSE” as a default value.
EnableMailNotification	Possible values “TRUE” / “FALSE”. In case the value is set to “TRUE”, the integration Flows will send a notification to the email address specified in the To field of the Mail server. See Table 2. The notification is sent in case an exception occurs.

Table 3 Configure More options

8. Save and Deploy.

4.3.1.4 Integration Message Mapping

In case your organization uses custom fields in Workday, you might need to customize the provided integration flow and adapt it to your needs. Users should update the existing solution by creating a new XSD using the Eclipse Workday Workbench Plug-in, change this schema in the message mapping, and add custom connections as needed.

4.3.2 Replicate Cost Centers from SAP ERP to Workday

This integration flow replicates Cost Centers from SAP ERP to Workday. The integration starts when an IDoc consisting of Cost Center details is triggered by SAP ERP and received by SAP Cloud Integration. Figure 4.7 depicts the business process to be implemented.

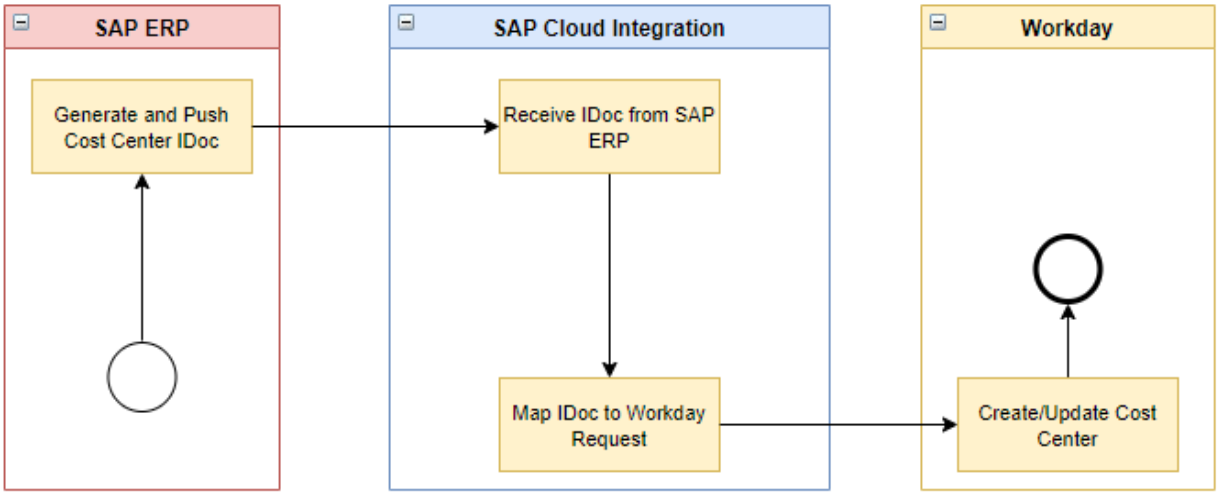

Figure 4.7 Process Diagram

The SAP Cloud Integration implementation of the process in Figure 4.7 is shown in Figure 4.8.

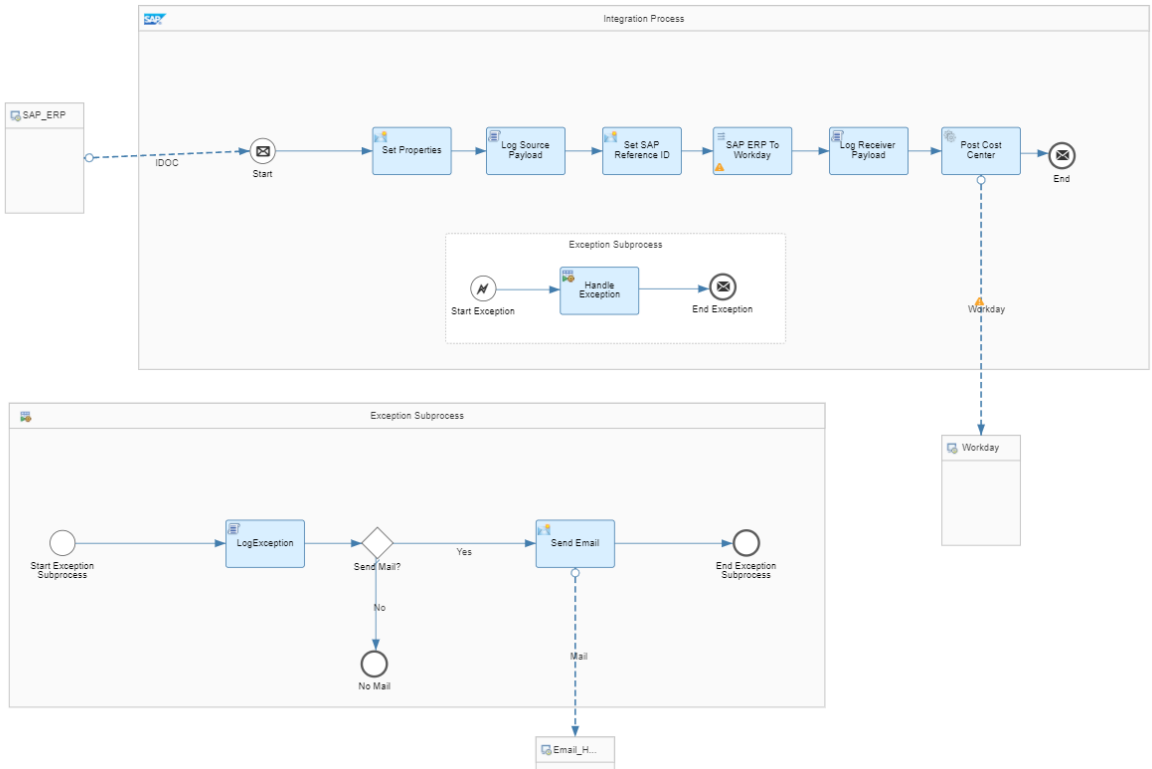

Figure 4.8 Integration Flow

4.3.2.1 Prerequisites

The following actions need to be performed as a prerequisite:

- Deploy the security artifacts that will be required during the configuration of integration content.

To enable the Integration Flows to run, we will need to deploy Credentials of Workday to the Cloud Integration Tenant. These are discussed in the next sections.

4.3.2.1.1 Deploying User Credentials for Workday

This is necessary to connect to Workday using basic Authentication (username and password). Follow the steps below:

1. In your SAP Cloud Integration tenant go to Monitor.
2. In Manage Security click on Security Material.
3. Click on the Add dropdown and select User Credentials.
4. Specify the name and description of the User Credential.
5. Fill in the username and password of your technical Workday User.
6. Click on Deploy.

4.3.2.2 Configuration

Follow the steps below to configure the integration flow:

1. Open the integration flow.
2. Click on Configure.
3. Configure “Sender”. Provide an endpoint to the iflow as per the organization’s naming standards.

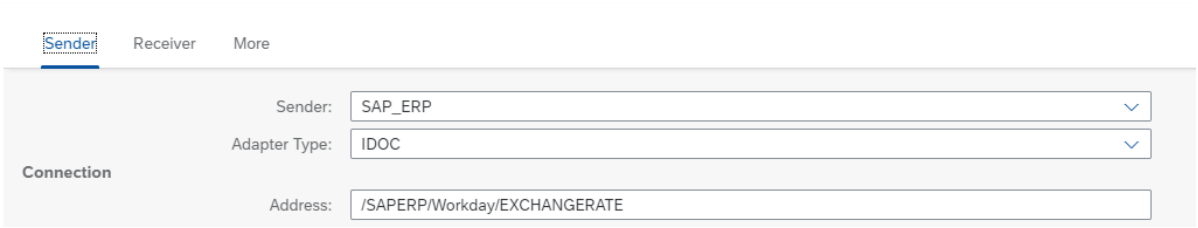

Figure 4.8 Configure Sender

Note: Replace the default values of the parameters in the configurations based on your scenario and landscape.

4. Go to Receiver.
5. Configure the “Receiver” connector named **“**Workday”. See Figure below.

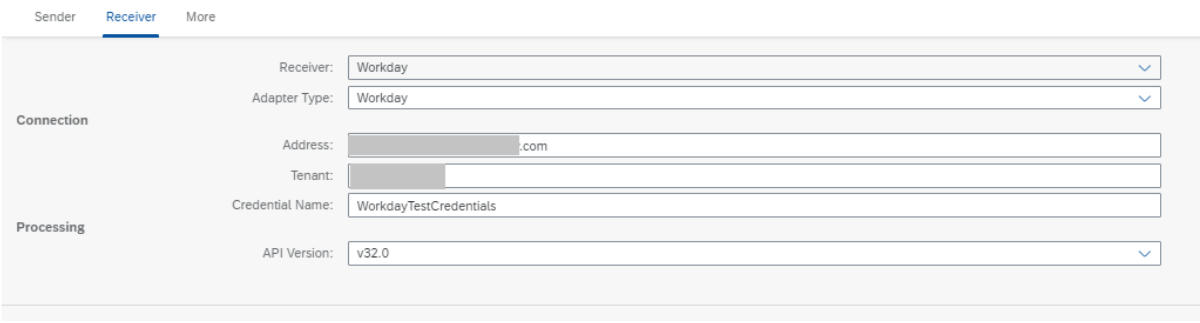

Figure 4.9 Configure Receiver Workday

The description of each of the fields in Figure 4.9 is presented in the table below.

Parameter	Description
Address	Specify the hostname of your Workday tenant. Example.: https://dev11111.workday.com
Tenant	Specify the ID of your Workday tenant. Example: mytenant
Credential Name	Specify the name of a deployed User Credentials artifact that holds the username and password used to authenticate with Workday. This was discussed in Section 4.3.1.2.1.
API Version	Specify the Workday API version.

Table 4 Configure Receiver Workday

6. Configure the "Receiver" connector named "Email_Handler". See Figure 4.10.

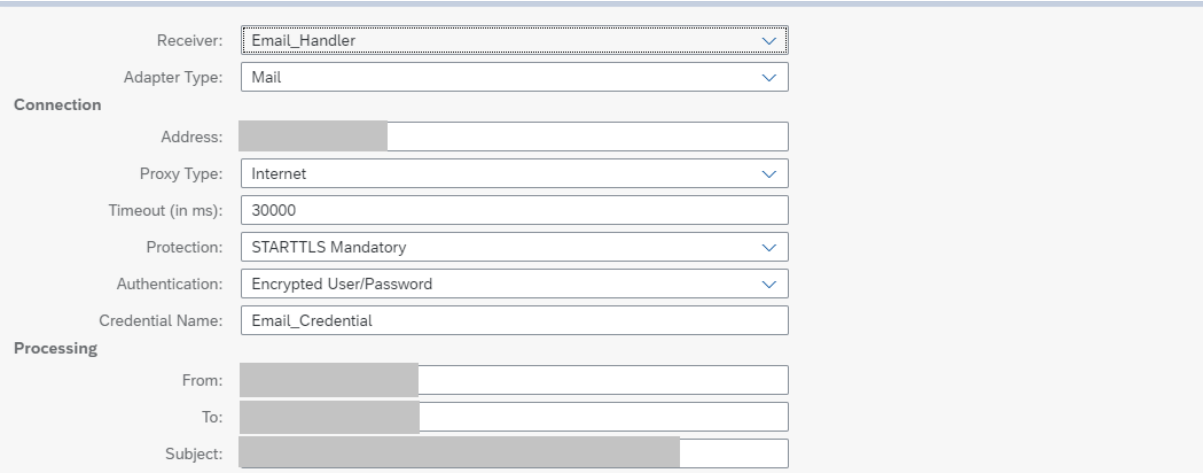

Figure 4.10 Configure Receiver Mail Server

The description of each of the fields is in Figure 4.10. is presented in the table below.

Parameter	Description
Address	Specify a combination of the hostname and port of your email Server. Example.: smtp.gmail.com:587
Basic Credential Name	Specify the name of a deployed User Credentials artifact that holds the Username and Password used to authenticate with the mail server.
From	Specify the email address from which the exception notification should come from.
To	Specify the email address where to sent the exception notification to.
Subject	Specify the template to be used as a subject of your email.

Table 5 Configure Receiver Mail Server

7. Configure “More” as shown in Figure 4.11.

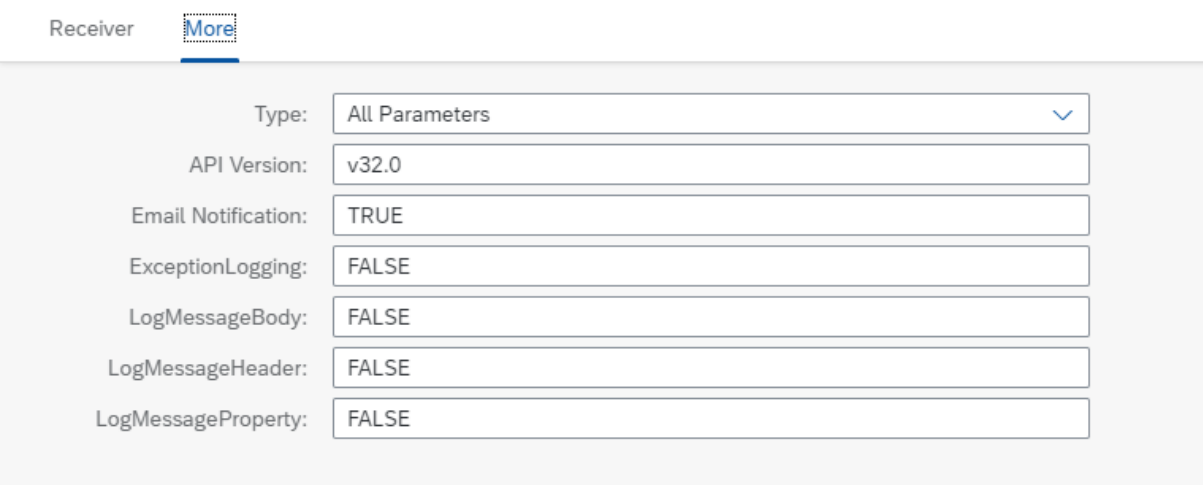

Figure 4.11 Configure More options

The description of each of the fields in Figure 4.11 is presented in the table below.

Parameter	Description
LogMessageBody	Possible values “TRUE” / “FALSE”. Specify “TRUE” to log the Message Body (Not recommended in a live environment). Use “FALSE” as a default value.

LogMessageHeader	Possible values “TRUE” / “FALSE”. Specify “TRUE” to log Message Headers. Use “FALSE” as a default value.
LogMessageProperty	Possible values “TRUE” / “FALSE”. Specify “TRUE” to log Message properties (Not recommended in a live environment). Use “FALSE” as a default value.
ExceptionLogging	Possible values “TRUE” / “FALSE”. Specify “TRUE” to log Exception Message. Use “FALSE” as a default value.
Email Notification	Possible values “TRUE” / “FALSE”. In case the value is set to “TRUE”, the integration Flows will send a notification to the email address specified in the To field of the Mail server. See Table 2. The notification is sent in case an exception occurs.
API Version	Specify the Workday API version.

Table 6 Configure More options

8. Save and deploy.

4.3.2.3 Integration Message Mapping

In case your organization uses custom fields in Workday, you might need to customize the provided integration flow and adapt it to your needs. Users should update the existing solution by creating a new XSD using the Eclipse Workday Workbench Plug-in, change this schema in the message mapping, and add custom connections as needed.

5 Appendix

5.1 Generating Schema from Eclipse Plug-in and Replacing Standard Schema Used in Integration Flow

Currently, the integration package uses standard fields and properties provided in Workday. In case other custom fields are needed; a new XSD must be generated with the Workday Eclipse Plug-in, the default XSD on mapping must be replaced by the created one, and these fields should also be mapped.

Steps to create an XSD:

1. Open Eclipse.
2. Go to Windows > Perspective > Open Perspective > Other.
3. Select Workday Adapter and click Open.
4. Go to XSD Generator.
5. Select a Version.
6. Select an Operation. First Create, then Update.

7. Select the Workday “Request Operation Tag”.
8. Select Request XSD for both the Create and Update Operations.
9. Click on Save XSD and select a folder.
10. Replace default XSD from mapping in SAP Cloud Integration to the recently created XSD.