SAP Business ByDesign and Concur Integration Guide

THE BEST RUN **SAP**

Content

1 SAP Business ByDesign and Concur Integration Guide

This integration guide describes the steps required to integrate SAP Business ByDesign with SAP Concur Expense Professional Edition.

As both the SAP solutions are cloud-based, they are directly supporting this integration without the need to install additional add-ons or to check system requirements. However, you must contact your SAP Concur Client Executive as this integration is subject to additional contractual agreement and client-individual activation from SAP Concur.

Overview

By following the steps in this guide, you can enable the following data flow between SAP Business ByDesign and SAP Concur Expense:

- Replicate cost objects from SAP Business ByDesign to SAP Concur Expense
- Replicate employees from SAP Business ByDesign to SAP Concur Expense
- Transfer cash advances and expense reports from SAP Concur Expense to SAP Business ByDesign and send an acknowledgement and posting feedback back to SAP Concur Expense

You can replicate the following cost objects to SAP Concur Expense using this integration:

- Cost centers
- Project tasks
- Service order items
- Sales order items
- Customer contract items
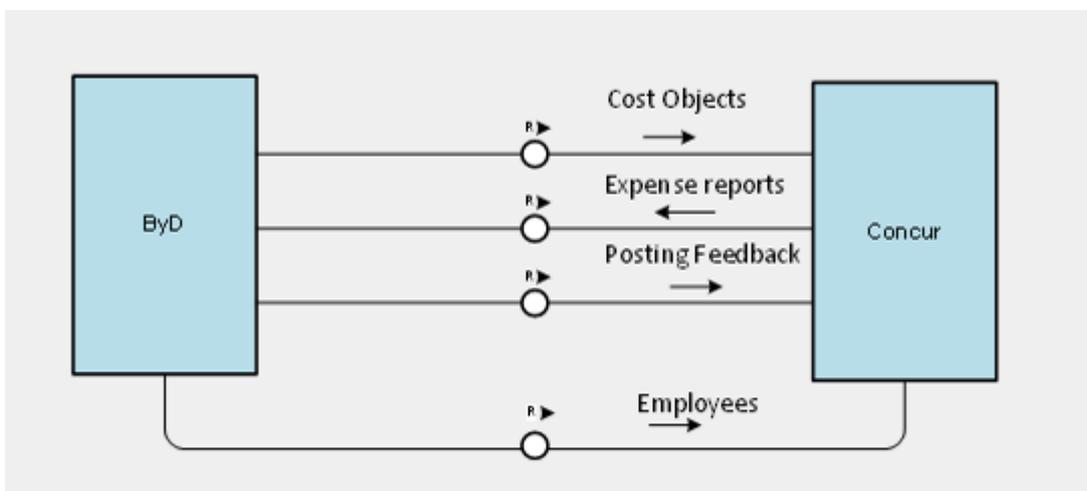
Integration of SAP Business ByDesign with Concur

This guide assumes that SAP Business ByDesign is the default system of record for employee and cost objects master data. The employee IDs and cost objects referenced in the expense reports must be created in SAP Business ByDesign and then replicated to SAP Concur Expense. We recommend the use of SAP Business ByDesign cost object and employee replications to keep the master data in synchronization.

> **i Note**
> - This guide assumes that SAP Business ByDesign is the default HCM system of record. If you are using a different HCM system – for example, Employee Central – you need to replicate employees from your HCM system to both SAP Concur Expense and SAP Business ByDesign
> - You can connect one SAP Business ByDesign tenant with only one SAP Concur Expense instance. However, this SAP Concur Expense instance can also be connected with other SAP financial systems such as SAP ERP, SAP S/4 HANA, SAP Business ByDesign etc.
> - All communication is based on synchronous web service calls and it is SAP Business ByDesign that initiates the communication.

1.1 System of Record

To ensure data consistency and integrity across the integrated solutions, all predefined integration scenarios between SAP solutions follow a system of record paradigm.

Each of the master data records has a dedicated system of record, that is, specific data records must be maintained in specific systems and are then automatically replicated to the other systems where this data is relevant. This paradigm is required to avoid concurrent changes on the same data in different systems, which would cause inconsistency. Therefore, the maintenance of these data records is not allowed in the receiver systems.

For the integration between SAP Business ByDesign and SAP Concur Expense, the system of record is handled as follows:

- SAP Business ByDesign: System of record for cost objects and employee master data
- SAP Concur Expense: System of record for expense reports as well as the expense data, and expense receipts contained therein
- If SAP Concur Expense is connected to more than one ERP system, a filter in SAP Concur ensures data privacy for the expense reports. This filter takes care of only those expense reports that gets replicated from SAP Concur Expense to the SAP Business ByDesign instance from which cost objects and employees originates.

2 Before you Start

Before you start integrating SAP Business ByDesign with SAP Concur Expense, you must follow the steps mentioned in this section.

- Contact your SAP Concur Client Executive to check if your existing or planned SAP Concur Expense instance meets your technical and integration scenario requirements. Currently, this integration solution supports:
  - Integration between SAP Business ByDesign and SAP Concur Expense Professional or Premium Edition
  - Usage of private (IBIP – Individually Billed Individually Paid) and corporate (CBCP – Corporate Billed and Corporate Paid) credit card scenarios
  - Reimbursement of expenses through SAP Business ByDesign

> **i Note**
>
> This integration scenario has been tested for companies residing in DE, UK, and US. This integration solution may also work for other countries. You must test your specific use cases in a separate test environment.

- This integration solution **does not** support the following:
  - SAP Concur Expense Standard Edition
  - SAP Concur Invoice
  - Replication of SAP Concur Travel-related employee master data to SAP Concur
  - Replication of SAP Business ByDesign free cost objects
  - Replication of cost object-specific approver
  - Replication of currency exchange rates from SAP Business ByDesign to SAP Concur Expense
  - Transfer of expense receipts or attendee lists from SAP Concur to SAP Business ByDesign
  - Reimbursement through SAP Concur Expense Pay
  - Reimbursement of expenses through payroll
  - Reimbursement of travel expenses directly onto a credit card account. This scenario is called IBCP (Individually Billed, Company-Paid) credit card scenario.
  - Navigation from SAP Business ByDesign to the original expense report in SAP Concur.
  - Full tax and multiple non-deductible taxes with NAV handling.
  - Transfer of negative CBCP credit card transactions to SAP Business ByDesign.
    Your SAP Concur Implementation Project Manager must create an audit rule to block expense reports with negative CBCP card transactions. In SAP Business ByDesign you must create a correction statement for this transaction.
- Check whether your SAP Concur instance is integrated with another financial system. If yes, you should be aware that some configuration settings in SAP Concur (such as tax administration with its tax codes and rates) cannot be maintained for each financial system individually. For more information, the section *Configure Tax Codes* in this guide.
- All employee IDs and all login IDs (email addresses) need to be globally unique so that SAP Concur can use them to create the required user profiles. Therefore, you should check in SAP Business ByDesign whether you have created test or dummy employees that are sharing the same email address. You should also check whether your SAP Concur entity already contains user profiles that were manually created, for

example, for test or demo purposes and that are using a login ID (email address) that is also in SAP Business ByDesign.

- When you are planning to replicate employee records from different SAP Business ByDesign source systems into a single SAP Concur entity, it is likely that the same employee ID exists in both SAP Business ByDesign systems but they belong to different users with different email addresses. In this case, the employee replication for the second user fails.
- If you are an existing SAP Concur user, you should be aware that this integration solution uses its own connected list for cost objects. You can discuss the implications with your SAP Concur Implementation Project Manager.
- You must align the implementation activities with your SAP Concur Implementation Project Manager as there are dependencies with other configuration activities in SAP Concur. Your SAP Concur Implementation Project Manager uses a separate SAP Concur Integration Guide.
  For more information about data security, see SAP Business ByDesign Security Guide available at the SAP Help Portal.
- Define your implementation strategy regarding testing and the roll-out to your production landscape. For change project creation in your SAP Business ByDesign system and its migration to the production system you can follow the standard procedure:
  - **Test Phase: SAP Business ByDesign test tenant - SAP Concur test entity**
    Production Phase: SAP Business ByDesign production tenant - SAP Concur production entity
    We recommend this approach. You can contact your SAP Concur client executive as the provisioning of a SAP Concur test entity might be charged separately. If your SAP Concur test entity contains user profiles, you should make sure their employee IDs and login IDs are consistent with the employee master data records in the SAP Business ByDesign test tenant to avoid replication errors.
    You can configure your production systems once you are done with testing.
  - **Test Phase: SAP Business ByDesign test tenant - SAP Concur production entity**
    Production Phase: SAP Business ByDesign production tenant - SAP Concur production entity
    We recommend this approach only for the net new SAP Concur implementations. You can run your complete test cycle in this test/production landscape. Once you are done with testing your SAP Concur Implementation Project Manager purges all transactional data in the SAP Concur entity.

> ⚠ Caution
>
> Before your SAP Concur production tenant gets purged, you should suppress the master data replication from your SAP Business ByDesign test tenant to SAP Concur. If you continue to replicate employee master data from your SAP Business ByDesign tenant would overwrite the user profile details from your productive SAP Business ByDesign tenant.

You can find a section at the end of this guide that explains the option to deactivate the integration activities in your SAP Business ByDesign test tenant.

> **i** Note
>
> We do not recommend working with manually created test users in SAP Concur (users with activated flag Is Test User) as you cannot use them for an end-to-end test scenario. You cannot test most of the fully automated integration processes.

- This integration solution is released for Germany, United Kingdom and United States of America. The implementation for other countries is possible but SAP cannot be held responsible in case the financial postings do not comply with the tax rules and regulations in other countries.

- During the configuration process in SAP Business ByDesign you are asked to provide SAP Concur-specific information that is required to establish and maintain the system connectivity and the data exchange between SAP Business ByDesign and SAP Concur. This information can be:
  - SAP Concur Key
  - SAP Concur Secret
  - SAP Concur Copany ID
  - URL of your SAP Concur entity you should connect to
  - SAP Concur User ID (a web services-enabled user with administrator rights in Concur)
  - Password for this SAP Concur User ID

2.1 Application Support

In case you receive an error during the setup or the operation of this integration solution that cannot be resolved with the information provided in the error messages, you can create an SAP support ticket.

Instead of the proposed support component, you can also use the following components, depending on the actual integration use case where the error occurred:

- AP-INT-GEN - for generic configuration setup problems
- AP-INT-CO - ByD Integration Cost Objects
- AP-INT-EE-OUT - ByD Integration Employee Data Outbound
- AP-FMD-EER Accounting View of External Expense Report

2.2 Set up SAP Concur Expense

You must perform the steps mentioned in this section to set up SAP Concur Expense before you integrate it with SAP Business ByDesign.

Your SAP Concur Implementation Project Manager can access the SAP Concur Integration Guide for the integration with SAP Business ByDesign using this link : https://www.concurtraining.com/customers/tech_pubs/Integration/_CCC_SAP_Integrations.htm ↗ .

2.2.1 Activate SAP Concur Expense Interfaces

Before you can use the integration between SAP Business ByDesign and SAP Concur Expense, the integration interfaces in your SAP Concur Expense entity must be activated. This can only be done by your SAP Concur Technical Consultant.

You should contact your SAP Concur Implementation Project Manager for this activation. You should receive all the data that is required to connect your SAP Business ByDesign tenant with your SAP Concur Expense.

There are two Gateways to SAP Concur. **The SAP Concur standard Gateway** is for all master data replications, transfer of all expense reports and posting notifications.

The SAP Concur API Gateway is additionally required to ensure data privacy, for example, when you are connecting multiple financial systems to SAP Concur. For more information, see the section *Register client for OAUTH Web Services* in this guide.

The following information is required to set up communication arrangement and communication system.

Standard Gateway:

- Consumer Key
- Secret
- Concur Company ID
- URL of SAP Concur instance you must connect to
- SAP Concur login ID and password

API Gateway:

- Client ID
- Client Secret
- Company UUID
- URL of SAP Concur instance you must connect to

This information is required to set up communication arrangement and communication system.

2.3   Set up SAP Business ByDesign

You can carry out the steps mentioned in this section, if you have the administrator rights in SAP Business ByDesign. You need to ensure that you are assigned to the *Business Configuration* and *Application and User Management* work centers.

2.3.1 Installation of SAP Concur Certificates

To establish a secured system connection, you need to download and install the SAP Concur SSL certificates in your SAP Business ByDesign.

The number of required certificates depends on your integration scenarios and whether you are integration one or multiple financial systems with SAP Concur. For more information, see *Activate SAP Concur Expense Interfaces* section of this guide.

1. Open the SAP Concur login website http://www.concursolutions.com ↗ in your browser.
2. Add this website to your list of trusted sites in your web browser. In MS Windows, you can find the list of trusted sites in ▌ *Internet Properties* ❯ *Security* ❯ *Trusted Sites* ❚.
3. Do not log on, click on the padlock icon in the address bar of your browser. In Internet Explorer® you can find it on the right end and in Chrome®, on the left end of the address bar.
4. View certificate details:
   - **Internet Explorer®** : Click on the padlock icon and select *Security Reports*. From *Security Reports*, select *View Certificates*.

- ○ **Chrome**® : Click on the padlock icon and select *Certificate* from *View site information*. From *Certificate*, select *Valid* and then *Show certificate*.
- ○ **Both Browsers**: Go to *Certificate Path* tab.
5. Mark the *DigiCert* certificate then click *View Certificate*.
6. On the *Certificate* window, go to *Details* tab and choose *Copy to File*. In the *Certificate Export Wizard*, choose *Next*. In the step *Export File Format*, choose *Base-x64 encoded X.509* file (*.cer file format). Then choose *Next* and export the file, for example, to your local hard drive. Choose a descriptive file name such as *DigiCert Concur.cer*.
7. After exporting *DigiCert Concur.cer*, close this *Certificate* pop-up.
8. On the other *Certificate* pop-up, mark the *GeoTrust RSA CA 2018* certificate and click *View Certificate*.
9. Repeat the steps to export the *GeoTrust* certificate mentioned in step 6.
10. Mark the **.concursolutions.com* certificate and go to the *Details* tab. You should then choose *Copy to File* repeat the steps to export this certificate to your local hard drive.
11. Upload these three certificates to SAP Business ByDesign.
In SAP Business ByDesign, go to *Application and User Management* work center and select *Edit Certificate Trust List* from *Common Tasks*. Select *Upload* to upload the SAP Concur certificate.
12. On the *Certificate Trust List* screen, you can see these three certificate as a three-level hierarchy.

Repeat these steps for the certificates you can find on the API Gateway servers.

Your SAP Concur Integration Project Manager guides you in selecting on of the URLs that you should take:

- US Production: https://us.api.concursolutions.com/ ↗
- EU Production:https://emea.api.concursolutions.com ↗
- US Implementation:https://us-impl.api.concursolutions.com ↗
- EU Implementation: https://emea-impl.api.concursolutions.com ↗

You may encounter a **404 Not Found** error when you try to open one of these URLs with your browser. However, you can download the *DigiCert*, the *DigiCert SHA2 High Assurance Server CA* and the **.api.concursolutions.com* certificates. We recommend using **Google Chrome**® browser for this activity.

2.3.2 Business Configuration Scoping

In SAP Business ByDesign, you need to activate the application integration business package for the integration from SAP Business ByDesign to SAP Concur Expense.

1. In the Business Configuration work center, Implementation Projects view, select your current implementation project.
2. Click *Edit Project Scope*.
3. On the guided activity, click *Next* to go to the *Scoping* step. Expand *Communication and Information Exchange*, select *Integration with External Applications and Solutions* and then select *Integration Scenarios for Cloud Solutions from SAP*.
   1. To enable replication of cost objects and employee data, expand *Communication and Information Exchange*, select *Integration with External Applications and Solutions* and then select *Integration of Master Data*.
   2. To enable replication of expense reports from SAP Concur Expense to SAP Business ByDesign, expand *Financial and Management Accounting*, select *General Ledger* and then select *Concur Integration*.
   3. If in case you have not activated *Personnel Administration*, you need to make sure that *Employees* is enables under *Employees and Services Agents* in *General Buisness Data*.

4. Click *Next* to go to the *Questions* step. Expand *Communication and Information Exchange* and select *Integration with External Applications and Solutions*. Select *Integration Scenarios for Cloud Solutions from SAP* and answer the scoping question *Do you want to enable integration with Concur Solutions?*.
   1. For replication of cost objects and employee data, expand *Communication and Information Exchange* and select *Integration with External Applications and Solutions*. Select *Integration of Master Data* and answer the scoping questions *Do you want to replicate cost object data from the SAP Business ByDesign system into Concur?* and/or *Do you want to replicate employee data from the SAP Business ByDesign system into Concur?*.
   2. For replication of expense reports from SAP Concur Expense to SAP Business ByDesign, expand *Financial and Management Accounting* and select *General Ledger*. Select *Concur Integration* and answer the scoping question *Do you want to integrate with Concur to fetch and post expense reports?*.
5. Complete the guided activity.

> **i Note**
>
> When you progress from step *4 Questions* to step *5 Review*, SAP Business ByDesign may show a notification that you haven't reviewed all the decision-relevant questions for your solution scope. If you have followed all configuration steps as described in this document, you can choose "Yes" from the pop-up.
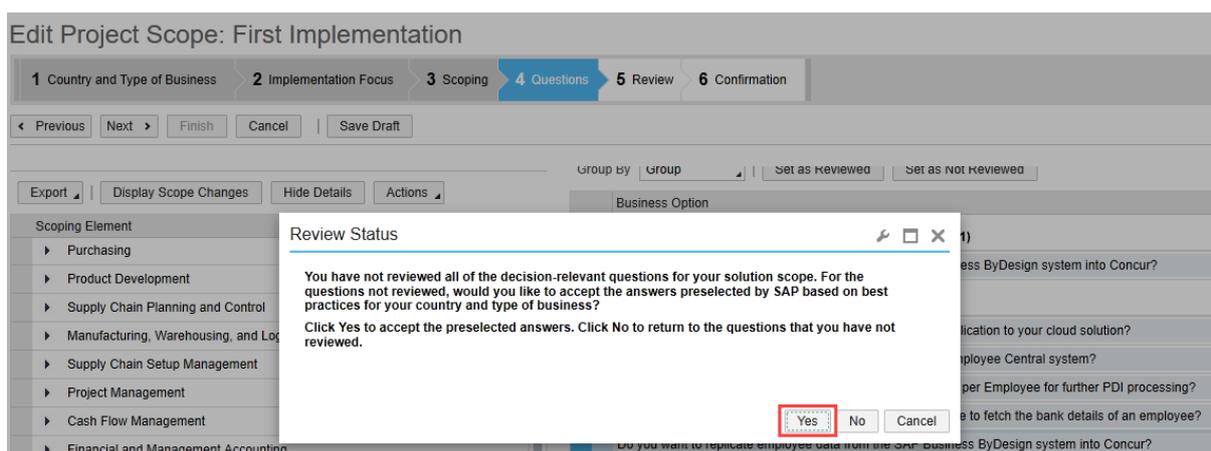
2.3.3 Register Client for OAUTH Web Services

Using the following steps you are going to connect SAP Business ByDesign with two different SAP Concur servers in order to control the data flow and to make sure your SAP Business ByDesign tenant fetches the right documents from SAP Concur.

These two different types of SAP Concur servers require two different sets of credentials. In both cases you need *Client ID*, *Client Secret*, and *Company ID*, but the credentials for the application server have a different format than the credentials for the API server. You must not mix them up.

The connection to the **Concur Application Server** is required as you use this connection to replicate the master data records and to fetch the expense report documents.

The connection to the **Concur API Server** is required as it is used to set the filter criteria in SAP Concur that makes sure expense reports cannot be retrieved by the wrong system.

You **must not** set up this filter in case you are connecting another SAP financial system with Concur and you have configured the relevance filter that uses a different filter criteria than Logical System. In this case you must skip the configuration step as described below.

Be aware, you bear full responsibility if you are configuring the relevance filter for the Concur expense reports in the other SAP system. If you choose a filter setting other than "Logical System" you need to make sure that all connected SAP financial systems that are retrieving expense reports from this Concur entity are using filter values that are unique for each retrieving SAP system. If you are not registering the service provider *CONCUR_INTEGRATION_OAUTH2*, you must integrate SAP Business ByDesign with SAP Concur through middleware and modify the service call to retrieve the expense reports from Concur in order to accommodate your project-specific filter settings.

> **i Note**
>
> It is strongly recommended to discuss the implications of using deviating filter criteria with your Concur Implementation Project Manager and your SAP Business ByDesign Implementation Partner.

1. In the *Business Configuration* work center, *Implementation Projects* view, search for the recurring activity *Integration with Concur Solutions*.

   > **i Note**
   >
   > In case you do not find the activity, choose *Show All Activities* and add the activity to your project. A recurring activity is not visible in a local change project prior to the merge.

2. Click *Edit*.
3. Select service provider *CONCUR_INTEGRATION_OAUTH* and click *Register Client*.
4. 4. On the pop up screen, enter the *OAUTH* client credentials for the application server of your SAP Concur Expense entity. You receive these credentials from your SAP Concur Implementation Project Manager.
   1. *OAUTH Client Settings*
      1. *Client ID*: enter the Consumer Key
      2. *Client Secret*: enter Secret
   2. *OAUTH Server Settings*
      1. *Authentication Server URL*: enter the SAP Concur Application Server URL
      2. *API Server URL*: enter the SAP Concur Application Server URL (For a list of possible Application Server URLs see below.)
      3. *Company ID*: enter the Concur Company ID
      4. *Account Name Origin*: leave blank
      5. *SAML NameID Format*: leave blank

   Possible Server URLs
   Your SAP Concur Implementation Project Manager provides you with the required URLs. You can use one of the following URLs:
   ○ https://www.concursolutions.com ↗
   ○ https://implementation.concursolutions.com ↗
   ○ https://eu1.concursolutions.com ↗
   ○ https://eu1imp.concursolutions.com ↗

   These are dependent on the type of SAP Concur Expense system (production or test) and the geo location of the data center. You must ensure that you enter the complete URL including the https:// prefix.

In the next step, you configure the SAP Concur API Gateway. You must skip these steps and proceed with chapter *Set up Communication System* if you have already set the Concur expense report filter in another SAP integration solution with this Concur entity to a different filter criteria than Logical System. For more details see beginning of this chapter.

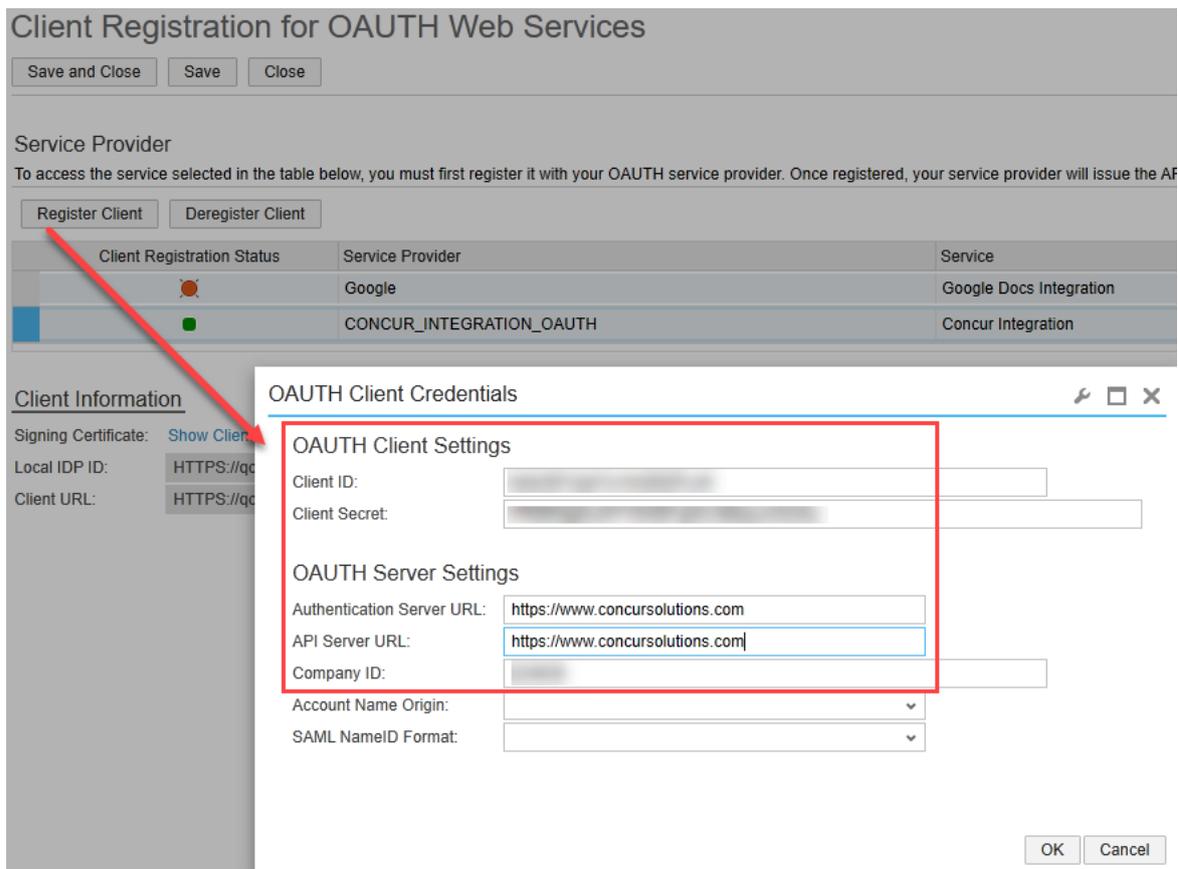5. On the screen *Business Configuration – Client Registration for OAUTH Web Services*, select service provider *CONCUR_INTEGRATION_OAUTH2* and click *Register Client*.

6. On the pop up screen, enter the *OAUTH* client credentials for the API gateway of your SAP Concur Expense entity. You have receive these credentials from your SAP Concur Implementation Project Manager.

  1. *OAUTH Client Settings*
      1. *Client ID*: enter the Client ID
      2. *Client Secret*: enter the Client Secret
  2. *OAUTH Server Settings*
      1. *Authentication Server URL*: enter the SAP Concur API Server URL
      2. *API Server URL*: enter the SAP Concur API Server URL (For a list of possible Application Server URLs see below.)
      3. *Company ID*: enter the Company UUID
      4. *Account Name Origin*: leave blank
      5. *SAML NameID Format*: leave blank

Possible API Gateway Server URLs

Your SAP Concur Implementation Project Manager provides you with the required URL. You can use one of the following URLs:

- https://us.api.concursolutions.com

- https://us-impl.api.concursolutions.com ⤤
- https://emea.api.concursolutions.com ⤤
- https://emea-impl.api.concursolutions.com ⤤

These are dependent on the type of SAP Concur Expense system (production or test) and the geo location of the data center. You must ensure that you enter the complete URL including the https:// prefix.

2.3.4 Set up Communication System

You can follow the steps mentioned in this section to set up your communication system.

1. Go to the *Application and User Management* work center, *Communication Systems* view.
2. Click *New* to create a new communication system.
3. On the new screen, enter the following details that you have received from your SAP Concur Implementation Project Manager.
   - *ID* : Concur
   - *Host Name* : Enter the URL of your SAP Concur entity (Your SAP Concur Implementations Project Manager provides you this URL. You can enter the URL in the formats such as concursolutions.com ⤤ , implementation.concursolutions.com ⤤ , eu1.concursolutions.com ⤤ or eu1imp.concursolutions.com ⤤ and implementation.conciusolutions.com ⤤)
   - *System Access Type* : Internet
4. Save the changes.
5. Under *Actions*, set the communication system to Active.

2.3.5 Set up Communication Arrangement

You can follow the steps mentioned in this section to set up your communication arrangement.

1. Go to the *Application and User Management* work center, *Communication Systems* view.
2. Click *New* to create a new communication system.
3. In the step *1 Select Scenario*, select scenario *Concur Integration User Credentials* and click *Next*.
4. In the step *2 Define Business Data*, enter *System Instance ID* as CONCUR. Click *Next*.
5. In the step 3 Define Technical Data, enter the following basic outbound communication details:
   - *Application Protocol* : Http
   - *Authentication Method* : User ID and Password
   - *User ID* : SAP Concur User ID (Provided by your Concur Implementation Project Manager)
   - Click *Edit Credentials* and enter the password of the SAP Concur User ID.
   - Click *Next*.
6. Complete all the remaining steps in the guided procedure and close the set-up.

> **i Note**
>
> Even though the Application Protocol is listed as *Http*, the communication takes place using the *https* protocols.

In the *Communication Arrangement Overview* screen, under *My Communication Data*, in *My System* field, you can see the logical system ID of your SAP Business ByDesign tenant. This Source System ID is the first level of your connected list in SAP Concur that contains the cost objects from all the connected SAP Business ByDesign tenants. With this Source System ID, you can identify from which SAP Business ByDesign tenant the cost objects are coming. You can see the levels below this source system.

2.3.6 Register User for OAUTH Web Services

These step are required if you want to allow selected administration users to trigger replication runs on request in addition to the regularly scheduled runs.

> **i Note**
>
> An entry with user SAP_SYSTEM gets created automatically if you have enabled scoping in the section *Installation of Concur Certificates*. This user is mandatory for the scheduled jobs and must not be deleted.

1. Go to the *Application and User Management* work center, *User Registration for OAUTH2 Web Services* view.
2. On the *Overview* screen, select service *CONCUR_INTEGRATION_OAUTH* and click *Switch Edit Mode*.
3. On the pop-up screen, enter the *Client Secret* for the Concur application server. (For more information, see chapter Register Client for OAUTH Web Services).
4. Click *Add Row*. You can choose the employee from the drop-down list in the field *User Logon Name*. In the field *User Account* you can enter the employee's name or any other descriptive text. Click *OK*.
   When you add a new employee to the list of registered users, you will see the *User Logon Name* and the *User Account* text in the columns *User ID* and *Description*.
5. Repeat step 4 for all other SAP Business ByDesign users who should be allowed to manually run master data replication or retrieve expense report.

> **i Note**
>
> If you have set up the client for the Concur API Server (OAUTH2) in chapter *Register Client for OAUTH Web Services* you must carry out the following steps. If you have not set it up, you can skip these steps and proceed with the next chapter.

6. On the *Overview* screen, select service *CONCUR_INTEGRATION_OAUTH2*.
7. Check that the user SAP_SYSTEM is registered for this service provider. If not, click *Switch Edit Mode* and follow the steps 3-4 to register this user.

> **i** Note
>
> The traffic light in the column *Access Permission Status* turns green after this user has successfully triggered the data exchange the first time.

2.3.7 Business Configuration Fine-Tuning for Master Data Replication

This section guides you in setting up the code list mapping for regions and configure standard and additional fields for concur employee integration.

2.3.7.1 Code List Mapping for Regions

When an employee record is replicated to SAP Concur, the employe/user has to be assigned to the appropriate region in the country of employement in SAP Concur Expense.

SAP Concur Expense uses the two digit country code and two or three digit state or province code. For example, Washington State, United States is US-WA.

You can create your own code list mapping by following these steps:

1. Go to the *Business Configuration* work center, *Implementation Projects* view.
2. Search for the fine-tuning activity *Code List Mapping for Integration with External Applications and Solutions*, and open it.
3. Click on *Maintain Code List Mapping*.
4. Under *Code List Mapping Definition*, choose the mapping group *ByD Concur Integration* for Local Data Type Name *RegionCode*.
5. In the section *Code List Mapping Rule* add a new row, choose the mapping rule *Map Individual Codes* and in the field *Local Context*, choose the country for which you want to create this rule.
6. In the *Code List Mapping* section, add a new row for each region in this country. You can choose the region from the drop-down list in the field *Local Code*. In the field *External Code* enter the region code that SAP Concur uses for this region. For example, for Aberdeenshire in UK, the region code in SAP Business ByDesign system is AB. However, it is ABD in SAP Concur.

2.3.7.2 Configure Standard Fields for SAP Concur Employee Integration

You can check the list of proposed field mappings between SAP Business ByDesign and SAP Concur Expense.

You can choose the standard fields that should be transferred in the employee replication. To do so:

1. Go to the *Business Configuration* work center, *Implementation Projects* view.
2. Search for the fine-tuning activity Employee Replication into SAP Concur.
3. Click on *Employee Replication into SAP Concur* to check or edit the settings.
4. Click on *Configure Standard Fields for Concur Employee Integration*. You can choose the fields that should be transferred in employee replication, by setting or unsetting the flag in the columns *To Be Transferred* and *Mandatory*

If a field is set to mandatory and this field is empty for a certain employee, the employee is not sent to SAP Concur Expense. Some fields cannot be de-selected since they are mandatory in the SAP Concur API.

2.3.7.3 Configure Additional Fields for SAP Concur Employee Integration

You can add additional field mappings, if there is additional information that you want to replicate to SAP Concur Expense and is not available in the standard field mappings.

To perform this step, you need to have knowledge of SAP Business ByDesign and the SAP Concur Expense. You can add additional fields for the SAP Concur Employee integration using the following steps:

1. In the fine-tuning activity *Employee Replication into SAP Concur* in the *Business Configuration* work center, click on *Configure Additional Fields for Concur Employee Integration*.
2. Add field mappings between SAP Business ByDesign and SAP Concur Expense.

2.3.8 Activate Work Centre Views for Admin Users in SAP Business ByDesign

Admin users who are responsible for configuring, executing and monitoring the master data replication must have access to specific work centre views.

1. In the *Application and User Management* work center, *User Access Management* view, select the *Business Users* sub-view.
2. Assign the following views to all business users who works on the cost object replication:
   - *Cost Object Outbound Configuration* view under *Master Data Replication* work center
   - *Cost Object Outbound Runs* view under *Master Data Replication* work center
3. Assign the following views to all business users who works on the employee replication:
   - *Employee Outbound Configuration* view under *Master Data Replication* work center
   - *Employee Outbound Runs* view under *Master Data Replication* work center
4. Assign the following views to all business users who works on the expense reports replication:
   - *Expense Reports* sub-view under *Concur* view in *General Ledger* work center
   - *Get Expense Reports Run* sub-view under *Concur* view in *General Ledger* work center
   - *Acknowledge Expense Reports Run* sub-view under *Concur* view in *General Ledger* work center
   - *Post Expense Reports Run* sub-view under *Concur* view in *General Ledger* work center

2.3.9 Integration via Middleware

We recommend running a direct point-to-point integration of SAP Business ByDesign and SAP Concur Expense if this integration covers your integration requirements and match you SAP Concur configuration.

If the connected list structure, field mapping or the data format is not compatible, we recommend integrating via SAP Cloud Platform Integration services. It provides you with the required flexibility for customer specific field and value mapping. For more information on default mapping that is used with this standard integration, see the section *Configure SAP Concur Forms and Fields*.

In case, you decide to use a middleware instead of running a direct point-to-point connection, you need to do the settings mentioned in this section in addition to the settings mentioned in the previous sections.

2.3.9.1   Set up Communication System

You can use the steps mentioned in this section to set up your communication system.

1. Go to the *Application and User Management* work center, *Communication Systems* view.
2. Click *New* to create a new communication system.
3. On the new screen, enter the following details that you have received from your Concur Implementation Project Manager
   - *ID* : CONCURROUTETHROUGH
   - *Host Name* : Enter the host name of your SAP CPI System for example: <my-cpi-instance>.sap.hana.ondemand.com
   - *System Access Type* : Internet
4. Save the changes.
5. 5. Under *Actions*, set the communication system to Active.

2.3.9.2   Set up Communication Arrangement

You can use the steps mentioned in this section to set up your communication arrangement.

1. Go to the *Application and User Management* work center, *Communication Arrangements* view.
2. Click *New* to create new communication arrangement.
3. In the step *1 Select Scenario*, select scenario *Concur Integration Middleware* and click *Next*.
4. In the step *2 Define Business Data*, enter *System Instance ID* as *CONCURROUTETHROUGH*. Click *Next*.
5. In the step 3 Define Technical Data, enter the following basic outbound communication details:
   - *Application Protocol* : Http
   - *Authentication Method* : User ID and Password
   - *User ID* : CPI User ID
   - Click *Edit Credentials* and enter the password of the CPI User ID
   - Click *Next*.
6. Click *Edit Advanced Settings* and enter the following details:
   - Uncheck *Use Basic Settings*
   - *Port*: 0
   - *Path*: /http/byd/concur/passthrough
   - Click *Next*.
7. Complete all the remaining steps in the guided procedure and close the set-up.

> **i** Note
>
> Even though the Application Protocol is listed as Http, the communication takes place using the https protocols.

2.3.9.3 Deploy SAP Cloud Platform Integration Flow

In your SAP Cloud Platform Integration instance, go to the Discover area. Search for the package *SAP Business ByDesign to SAP Concur Integration*.

Copy the package to your workspace and deploy the Integration Flow *Integrate SAP Business ByDesign with SAP Concur - route through*.

For more information – especially regarding the customer specific message mapping – please refer to the following:

- API hub info on CPI pass-through integration
- API hub info on CPI extension scenarios

3   Master Data Replication

You can replicate cost objects and employee data using the detailed steps mentioned in this section.

3.1   Replicate Cost Objects

This section explains how you can configure the companies and cost object types and the cost object information that gets replicated.

3.1.1 Replicated Cost Object Information

Cost objects are replicated into a connected list in SAP Concur Expense.

The name of the connected list is ByDCostObject and it has the following four levels after the replication of the first data records:

- Level 1: Source system ID and source system name
- Level 2: Company ID and company name
- Level 3: Cost object type (e.g. CC = cost centre, PRO = project task, SRV = service order item, SLS = Sales Order or CUST = Customer Contract) and description of the cost object type
- Level 4: Cost object ID and cost object name

> **i Note**
>
> Ensure that your SAP Concur Implementation Project Manager has created the connected list before you start replicating the master data. The default name is ByDCostObject. You can choose a different name. The name must not contain a prefix such as an asterisk (*).

3.1.2 Configure Companies and Cost Object Types for Cost Object Replication

The cost object replication is not necessarily done for all companies and cost object types in SAP Business ByDesign.

You can include selected companies and cost object types for the automatic replication to SAP Concur Expense.

1. Go to the *Master Data Replication* work center and from *Common Task*, select *Edit Cost Object Outbound Configuration* view.

2. In the *Connected List Details* section, you can maintain the connected *List Name* used in SAP Concur Expense to store the cost objects and the *Tenant Description* that you can see in the first level of the connected list in SAP Concur Expense. The name is editable until the first successful replication has taken place.

3. Click *New*, and select *Configuration*. The *Cost Object Outbound Configuration* screen gets displayed with the *Company Cost Object Types*.

4. In the *Company* drop-down list, select the company from which you want to replicate cost objects to SAP Concur Expense.

5. Select the relevant cost object types for the selected company to enable them for replication.

6. You can also replicate cost objects from other companies. To do this, click *Add Row* and repeat steps 3 and 4.

> **i Note**
>
> o   Ensure that master data exists for the selected company and cost object type. Only objects with status Active are replicated with the initial load.
> o   Default status for cost center is active when a new company is added. You cannot deactivate it.

7. Save your changes.

3.1.3 Monitor and Execute Cost Object Outbound Runs

The system automatically executes cost object replication with a scheduled daily run. You can check the application log for details of the replication run.

You can manually trigger the replication as mentioned below:

1. Go to the *Master Data Replication* work center, *Replication to Concur* view, *Cost Object Outbound Runs* sub-view.

2. Select *SAP_COMMON* and click *Start Immediately*.

3. Click *Refresh* in the section *Details: Concur Cost Object Outbound Run SAP_COMMON*. In the table you can see your job created under *Created By <Your user name>* with the status *In Process*.

4. Click *Refresh* until the processing status is *Finished*. Click on *Application Log ID* to check the job details.

5. Go to the *Results* tab to see more details.

> **i Note**
>
> •   The run is executed with the logon user. This user must be registered for OAUTH.
> •   The run ID *SAP_COMMON* is automatically created when the integration with SAP Concur Expense is enabled in your SAP Business ByDesign solution. The run is scheduled daily with user *SAP_SYSTEM*.

3.1.4 Check Cost Objects in SAP Concur Expense System

Depending on your project setup, this activity may be carried out by your SAP Concur Implementation Project Manager.

1. Log on to the SAP Concur Expense.
2. From *Administration*, navigate to *Expense*.
3. Under *Expense Admin*, click *List Management*.
4. Check the details of the replicated cost objects:
    1. Click on *ByDCostObject*.
    2. Expand the tree for details.

3.2 Employee Data Replication

This sections includes the steps that assist you in assigning employees to different expense policy groups and ledgers, in configuring companies for employee replication and shows the employee data that gets replicated.

3.2.1 Replicating Employee Data

The employee data such as emplyee ID, employee name, email address, reporting manager, assigned cost center ID etc. is replicated to the SAP Concur Expense.

The employee replication can run successfully if the referred cost objects have been replicated to SAP Concur Expense. If you want to trigger the initial replication of employee master data manually, you have to make sure the cost centers have been replicated from SAP Business ByDesign to Concur either manually or automatically by the nightly run.

> **i Note**
>
> - If you are using fields on the SAP Concur employee form that are not affected by the employee replication, you can manually maintain them in SAP Concur.
> - An employee can be replicated to SAP Concur if the workplace address and the email address is maintained in the ▌ *Personnel Adminsitration* ❯ *Employees* ❯ *Employment* ❯ *Workplace Contact Data* ❱.
> - In case you are not planning to use SAP Business ByDesign for employee replication, you must make sure that the user profile in Concur contains an employee ID that is identical with the employee ID in SAP Busines ByDesign. Also, the organizational assignment (Org Unit 1-4 fields) on the SAP Concur Employee Form must conrain the information as it is described in the section *Configure SAP Concur Forms and Fields* of this guide. If this is not possible, you can consider integrating through CPI to make the information transfer compatible with the native integration solution.

For more information on the complete list of employee data sent from SAP Business ByDesign and how they are mapped to the SAP Concur Expense user fields, see Appendix.

3.2.2 Assigning Employees to Different Expense Policy Groups and Ledgers in SAP Concur

During the initial replication of employee master data, SAP Business ByDesign assigns each employee to the default Expense Group "Group 1" and the default Ledger "DEFAULT" in Concur. Reassignments to other Expense Groups and Ledgers, to reflect your specific requirements regarding expense policies, have to be done manually in SAP Concur.

Most SAP Concur clients have various SAP Concur Employee/Expense Groups and various Ledgers in use, mostly to reflect country or company-specific expense policies, allowed expense types etc. In other cases, clients use these different SAP Concur Employee/Expense Groups to reflect different expense policies within one company for certain levels of employees (e.g. senior management etc.). You can maintain this assignment to Employee/Expense Group and Ledger in the SAP Concur User Administration in the user profile of the respective user.

There are different and client specific use cases that determines the appropriate Employee/Expense Group and Ledger for each employee.

To reassign to other Expense Groups and Ledgers, SAP Business ByDesign transfers this group and ledger information during the initial replication of employee master data. Employee master data updates should not contain a group or a ledger assignment to prevent your manual reassignments from getting overwritten.

You should discuss the following points with your SAP Concur Implementation Project Manager:

- You can discuss how to limit the amount of different Expense Groups in SAP Concur to reflect your needs for different expense policies and to minimize the manual work for group reassignments.
- You can make the default group appropriate for most of your SAP Concur users, if possible, to minimize the work of manual reassignments.
- You must ensure the group and ledger codes are maintained correctly. For the group the item code "Group 1" must be maintained in *Concur List Management*. For the ledger, the ledger code "DEFAULT" must be maintained in ▶ *Accounting Administration* ▶ *Accounting Structure* ▶.
- The fields on the employee form in SAP Concur (CUSTOM21 and LEDGER_KEY) that contains group and ledger assignments **must not** be mandated to let SAP Business ByDesign send the updates without this information.
- You can clarify who in your organization should be allowed to maintain these reassignments so that the authorizations and role assignments can be maintained accordingly in SAP Concur.

> ⚠ Caution
>
> If you delete the group or ledger assignment in the user profile, the user can no longer create expense reports that are compliant with your policies. These expense reports can lead to posting errors in SAP Business ByDesign. You should only change the assignments, but you must not delete them.

3.2.3 Configure Companies for Employee Replication

Similar to the cost object replication, the employee replication is not necessarily done for all companies maintained in SAP Business ByDesign. You can configure companies for employee replication.

1. Go to the *Master Data Replication* work center and from *Common Task*, select *Edit Employee Outbound Configuration* view.

2. Click *New*, and then *Configuration*.
3. In the new screen, add a new row to specify the company that is enabled for replication.
4. Save your changes.

> **i Note**
>
> There are dependencies between the different master data objects that you have replicated to SAP Concur. In SAP Concur, each employee has a home cost center assigned, and each employee has a line manager or cost center manager as default approver. You must ensure that all the required master data gets replicated.

Example

Before you replicate employees from company "A" you need to make sure all cost objects from company "A" have been replicated. If an employee in company "A" has a line manager which is assigned to company "B", make sure the master data from company "B" also gets replicated.

3.2.4 Monitor and Execute Employee Outbound Runs

The system automatically executes employee replication with a scheduled daily run. You can check the application log for details of the replication run.

You can manually trigger the replication as mentioned below:

1. Go to the *Master Data Replication* work center, *Replication to Concur* view, *Employee Outbound Runs* sub-view.
2. Select *SAP_COMMON* and click *Start Immediately*.
3. Click *Refresh* in the section *Details: Concur Employee Outbound Run SAP_COMMON*. In the table you can see your job created under *Created By <Your user name>* with the status *In Process*.
4. Click *Refresh* until the processing status is *Finished*. Click on *Application Log ID* to check the job details.

> **i Note**
>
> * The run is executed with the logon user. This user must be registered for OAUTH.
> * The run ID *SAP_COMMON* is automatically created when the integration with SAP Concur is enabled in your SAP Business ByDesign solution. The run is scheduled to run daily with user *SAP_SYSTEM*.

3.2.5 Check Employee Data in SAP Concur Expense

To ensure that all the employee master data has been replicated in the system, you can use the steps mentioned in this section.

1. Log on to the SAP Concur Expense.
2. From *Administration* navigate to ▶ *Company* ❭ *Company Admin* ❭ .

3. Under *User Administration*, click *User Administration*.
4. Check details of the replicated employees:
    1. Search for the replicated employee based on the selected search attribute.
    2. Click on the link in the search result.
5. Check the displayed employee properties.

4 Create and Replicate Expense Reports

This section provides you the details of how you can create, retrieve, acknowledge and post expense reports in the SAP Business ByDesign system.

4.1 Configuration in the SAP Concur Expense

Depending on your project setup, the configuration activities in this section that are done in SAP Concur can only be carried out by your SAP Concur Implementation Project Manager. However, most of these configuration activities need to be carried out collaboratively between SAP Business ByDesign and SAP Concur experts.

4.1.1 Assign Account to Expense Type

This section describes how to assign the SAP Business ByDesign G/L Account Group ID to the SAP Concur Expense Type.

When SAP Concur compiles the submitted expense report for SAP Business ByDesign, it stores the G/L Account Group IDs along with the expense types that have been used in this document so that SAP Business ByDesign can determine the appropriate G/L account ID during posting. You need to do this assignment manually for each SAP Concur expense type you are planning to use. There is no automatic process as each client has its own list of standard or client-specific expense types and G/L Account Group IDs.

1. In SAP Business ByDesign, go to the *Business Configuration* work center and select *Implementation Project*. Select your implementation project and click *Open Activity List*, search for the *Chart of Accounts, Financial Reporting Structures, Account Determination* fine-tuning activity. In the section *Account Determination Groups*, click *Edit*.
2. In the section *Group Types by Ledgers*, expand *Costs* and click *Groups for General Expenses*.
3. In SAP Concur Expense, under *Expense Admin* panel, click on *Accounting Administration*. Maintain the *Group ID* from SAP Business ByDesign, under *Account Code* to assign the account to a SAP Concur expense type.

4.1.2 Configure Tax Code

This section is relevant if you need to calculate and post for example VAT (Value Added Tax) in your financial system.

This section describes how to assign SAP Business ByDesign Tax Codes in SAP Concur Tax Administration. SAP Business ByDesign is the leading financial system. Therefore, you must ensure SAP Concur Expense uses the same tax (reclaim) codes to ensure successful financial posting in SAP Business ByDesign.

In SAP Business ByDesign, you can find the available tax codes for countries in the *Business Configuration* work center. The tax code group assignment for the expense types for each country are maintained in the country-specific *Expense Reporting* fine-tuning activity (e.g. *Expense Reporting – Germany*). You can find the corresponding tax codes in the fine-tuning activity *Tax on Goods and Services*, sub-activity *Tax Codes*. You can find the applicable tax rates in the fine-tuning activity *Tax on Goods and Services*, sub-activity *Tax Rate Schedules*. In SAP Concur, under *Expense Admin* panel, select *Tax Administration*.

For Non-Domestic Taxes

1. In the *Tax Authorities* tab, select the tax authority that you want to configure.
2. In the field Non-Domestic Code enter the tax code you are also using in SAP Business ByDesign for non-domestic purchases. In most cases this is a tax code without *Tax Rate Type* and without *Tax Deductibility* in SAP Business ByDesign.
3. Complete the guided activity in SAP Concur Expense. In the last step choose *Done*.
4. In the *Employee Related Configurations* tab, select the country you have just configured and make sure the checkboxes *Only Calculate Domestic* and *Reclaim Domestic Taxes* are ticked.

For Domestic Taxes

1. In the *Tax & Reclaim Groups* tab, select the tax authority that you want to configure.
2. Double click on each group name to maintain the reclaim tax code.
3. In the step *3 Tax Rates*, maintain a condition if required and leave the Tax Code field empty.
4. In the step *4 Reclaim Rates*, maintain the tax codes from SAP Business ByDesign for each reclaim configuration (if applicable) and for each reclaim condition. Copy the respective *Tax Code* from SAP Business ByDesign and enter this value in the column *Reclaim Tax Code* in SAP Concur Expense. The *Reclaim Type* as well as the *Reclaim Rate* you have configured for a *Reclaim Tax Code* in SAP Concur Expense must match the *Tax Rate Type* and the *Tax Deductibility* information you have maintained for the respective *Tax Code* in SAP Business ByDesign.

For more information, see the appendix.

Example

In SAP Business ByDesign, if the *Tax Code* 2 has a *Tax Rate Type* "1 – Standard" and *Tax Deductibility* "1 – Fully Deductible" then in SAP Concur Expense the *Reclaim Tax Code* 2 must have a *Reclaim Rate* of 100% and must be of *Reclaim Type* "Standard".

4.1.3 Configure Payment Types

This section describes how to configure payment types in SAP Concur.

You can modify the clearing account code as below:

1. In the SAP Concur Expense, under *Expense Admin* panel, select *Payment Types*.
2. Select the payment type and click the *Modify*.
3. Enter ID of an existing business partner from SAP Business ByDesign in the *Clearing Account Code field*.

Following are the supported *Payment Type Code*:

- *Company Billed/Company Paid (reimbursement offsets not used)*
  To handle credit card payments, you can maintain a business partner for the payment type Company Billed/Company Paid (reimbursement offsets not used) in the SAP Concur Expense. Assign an existing business partner from SAP Business ByDesign, to the clearing account code of Company Billed/Company Paid.
  When you post an expense report with this payment type, an open item is created against the business partner in SAP Business ByDesign. This open item can be viewed from the payables supplier account and can be later cleared.
- *Company Paid*
  To handle company paid expense, you can maintain a group ID (GL Alias code) for the payment type code Company Paid in the SAP Concur Expense. The group ID must be for Other Liabilities account type. The posting for the company paid expense is made against the Other Liabilities account.

4.1.4 Configure SAP Concur Forms and Fields

In this step, your Concur Implementation Project Manager configures the fields on the forms in SAP Concur and confirms that they contain the right information.

For *Employee Form* and *Expense Report Header Form*, the following mapping must be considered:

1. Org Unit 1 = Logical System
2. Org Unit 2 = Company
3. Org Unit 3 = Cost Object Type
4. Org Unit 4 = Cost Object ID

This mapping also represents the sequence of fields in your connected list in SAP Concur which contains the cost objects.

For the *Allocation Form*, you must consider the following field mapping:

1. Custom 1 = Logical System
2. Custom 2 = Company
3. Custom 3 = Cost Object Type
4. Custom 4 = Cost Object ID

For more information, see this link: https://www.concurtraining.com/customers/tech_pubs/Integration/_CCC_SAP_Integrations.htm .

4.2 Configuration in SAP Business ByDesign

This section guides you in configuring SAP Business ByDesign that aids in creating and replicating expense reports.

4.2.1 Code List Mapping for Expense Type Code

When a SAP Concur Expense report is processed in SAP Business ByDesign, the expense types in the expense report should be mapped to the appropriate SAP Business ByDesign expense types.

> **i Note**
>
> It is required to create code list mappings only if the expense type codes contained in the SAP Concur expense report differ from the expense type codes used in SAP Business ByDesign. If you are using expense types in SAP Concur that are unknown in SAP Business ByDesign, your SAP Concur Expense report can still be posted successfully in SAP Business ByDesign as long as the G/L Account Group ID has been maintained correctly in SAP Concur.

If you find that in such cases the expense type description from SAP Concur are not being transferred correctly to the journal entries in SAP Business ByDesign, you should maintain this code list mapping.

> **i Note**
>
> *Expense and Reimbursement Management* must be scoped in SAP Busines ByDesign in order to use this Expense Type Code Mapping.

To create your own expense type code mapping, you can follow these steps:

1. Go to the *Business Configuration* work center, *Implementation Projects* view.
2. Click *Open Activity List* and search for the fine-tuning activity *Code List Mapping for Integration with External Apllications and Solutions*, and open it.
3. Click on *Maintain Code List Mapping*.
4. Under *Code List Mapping Definition*, choose the mapping group *ByD Concur Integration* with local data type name *ExpenseReportExpenseTypeCode*.
5. Create the required code list mapping rule and mapping entries modification, and select the inbound indicator for the created code.

4.2.2 Code List Mapping for Tax Type Code

You can follow the steps mentioned in this section to perform code list mapping for tax type code.

1. Go to the *Business Configuration* work center, *Implementation Projects* view.
2. Click *Open Activity List* and search for the fine-tuning activity *Code List Mapping for Integration with External Apllications and Solutions*, and open it.

3. Click on *Maintain Code List Mapping*.
4. Under *Code List Mapping Definition*, choose the mapping group *ByD Concur Integration* for local data type name *ProductTaxationCharacteristicsCode*.
5. In the section Code List Mapping Rule choose an existing mapping rule or add a new row, choose the mapping rule *Map Individual Codes* and in the field *Local Context*, choose the country for which you want to create this rule.
6. In the section *Code List Mapping*, add a new row for each expense type. You can choose the local expense type code from the drop-down list in the field *Local Code*. In the field *External Code*, enter the code SAP Concur uses for this expense type.

4.2.3 Creating a Tax Code

You can use the steps mentioned in this section to create custom tax codes if in case the provided combination of Tax Rate and Tax Deductibility does not suit your business requirements.

1. Go to the *Business Configuration* work center and choose the *Implementation Projects* view.
2. Select your implementation project and click *Open Activity List*.
3. Select the *Fine-Tune* phase, then select the *Tax on Goods and Services* activity from the activity list. Select *Define Tax Codes* activity from the subsequent screen.
4. To create a tax code, click *Add Row*.
5. Select a country in which this tax code is valid from the dropdown list.
6. Enter an ID for the tax code of your specific tax use case.
7. Enter a description.
8. Enter a date for the start and the end of the validity period.
9. Select a tax event from the dropdown list that characterizes the business transaction from a taxation point of view.
   It is the result of tax determination and the key factor in financial accounting for tax returns. The tax event is based on the data that is transferred from the business transaction.
10. Select a tax type from the dropdown list that is used for this tax code, for example, Sales and Use Tax or VAT.
11. Select a tax rate type from the dropdown list that is used, for example, Standard Rate, Reduced Rate, or Zero Rate.
12. For deductible input tax, select an option from the *Tax Deductibility* dropdown list. For other types of tax, leave this field empty. If applicable, the tax deductibility to apply for deductible input tax in purchasing events, for example, 100% or 50% deductible.
13. Save your entries.

Example

To add a tax code, click *Add*.

- *Country*: DE
- *Tax Code*: DT50

- *Description*: Domestic Acquisition
- *Valid-From Date*: 01.01.2019
- *Valid-To Date*: 31.12.2019
- *Tax Event*: Domestic Acquisition (ID: 10)
- *Tax Type*: VAT
- *Tax Rate Type*: Standard
- *Tax Deductibility*: Not deductible

4.3 Create and Submit Expense Reports in SAP Concur Expense

When you create expense reports in the SAP Concur Expense and submit them, they are available for retrieval in SAP Business ByDesign.

Before you start, ensure that the users in SAP Business ByDesign that are responsible for retrieving Expense Reports from SAP Concur are registered for OAUTH web services in SAP Business ByDesign. For more information on user registration, see section Register User for OAUTH Web Services of this document.

The following four chapters describe how to configure SAP Business ByDesign to automatically retrieve expense reports from SAP Concur Expense.

4.4 Retrieve Expense Reports in SAP Business ByDesign

You can retrieve the expense reports created and submitted in the SAP Concur Expense from SAP Business ByDesign.

To retrieve the expense reports, you can use the following steps:

1. Go to the *General Ledger* work center, *Get Concur Documents Run* view.
2. Click *New*, and then *Get Concur Documents Run*.
3. Enter all the necessary details for the run.
4. Activate the run. You can either execute the run immediately or schedule it for a later time.

You can view all expense reports retrieved from the SAP Concur Expense in the *Expense Reports* view in the *General Ledger* work center. These expense reports are displayed with the status *New* and the acknowledgment status *No Acknowledgment Sent*. You can also retrieve single expense reports using the SAP Concur Expense report ID by clicking *Get Expense Report* in the *Expense Reports* view in the *General Ledger* work center.

4.5 Acknowledge Receipt of Expense Reports in SAP Business ByDesign

You can send an acknowledgment from SAP Business ByDesign to SAP Concur Expense once the expense reports have been received.

1. Go to the *General Ledger* work center, *Acknowledge Concur Documents Run* view.
2. Click *New*, and then *Acknowledge Concur Documents Run* .
3. Select *Send Acknowledgment* as the status.
4. Enter all the necessary details for the run.
5. Activate the run. You can either execute the run immediately or schedule it for a later time.

You can also send an acknowledgment for an expense report in the *Expense Reports* view. To do so, select a new expense report and click *Send Acknowledgment*.

Once the acknowledgments have been sent, the acknowledgment status of the expense reports is set to *Acknowledgment Sent*.

4.6 Post Expense Reports in SAP Business ByDesign

You can post the acknowledged expense reports using the steps mentioned in this section.

1. Go to the *General Ledger* work center, *Post Concur Documents Run* view.
2. Click *New*, and then *Post Concur Documents Run*.
3. Enter all the necessary details for the run.
4. Activate the run. You can either execute the run immediately or schedule it for a later time.

When the run is finished, the status of the successfully posted expense reports is set to *Posted* and journal entries gets created for these reports. You can review the business transactions and journal entries, and process the re-imbursements. After the re-imbursements are processed, the status of the expense reports in SAP Business ByDesign is set to *Paid*.

> **i** Note
>
> This integration solution is taking over the *Submit Date* from the SAP Concur expense report as posting date in SAP Business ByDesign.

4.7 Send Posting Confirmation to SAP Concur Expense

You can send posting confirmation of the expense reports back to SAP Concur Expense by using the steps mentioned in this section.

1. Go to the *General Ledger* work center, *Acknowledge Concur Documents Run* view.

2. Click *New*, and then *Acknowledge Concur Documents Run*.
3. Set the status to *Send Posting Confirmation*.
4. Enter all the necessary details for the run.
5. Activate the run. You can either execute the run immediately or schedule it for a later time.

When an expense report posting fails, a Financial Posting Failed notification is sent to SAP Concur Expense. The expense report processor in SAP Concur Expense can recall this expense report for correction. The corrected expense report should be re-submitted, that are then available for retrieval from SAP Business ByDesign.

5 Cash Advances

SAP Business ByDesign supports the retrieval and the financial posting of SAP Concur cash advances. It also supports the offsetting of theses cash advances in SAP Business ByDesign with the SAP Concur expense report that contains the allocation of these cash advances.

Before your employees can use the cash advances in Concur your SAP Concur Implementation Project Manager must activate this feature in SAP Concur and provide you with more details how to use this feature in SAP Concur.

You also need to make sure that each user in SAP Concur, who should be able to create cash advances, has a valid entry in the field *Cash Advance Account Code* in the SAP Concur user profile. This field must contain an Account Group ID which belongs to the group for *Other Current Assets* in SAP Business ByDesign.

5.1 Determining an Account Group ID for Concur Cash Advances

You can follow these steps to determine an Account Group ID for Cash Advances.

1. In SAP Business ByDesign, go to the *Business Configuration* work center and select *Implementation Project*. Select your implementation project and click *Open Activity List*, search for the *Chart of Accounts, Financial Reporting Structures, Account Determination* fine-tuning activity. In the section *Account Determination Groups*, click *Edit*.
2. In the section *Group Types by Ledgers*, expand *General Ledger* and click *Groups for Other Current Assets*.

Pick the appropriate Group ID.

5.2 Maintaining the Cash Advance Account Code in SAP Concur User Profile

At the moment, the employee replication in SAP Business ByDesign does not automatically assign the *Account Group ID* to the *Cash Advance Account Code* field in the SAP Concur user profile.

You have the following options to maintain this field in SAP Concur:

1. In SAP Concur you can maintain this field manually with the appropriate SAP Business ByDesign *Account Group ID* for each user who should be able to create cash advances.
2. Integrate SAP Business ByDesign with SAP Concur through middleware (for example SAP Cloud Platform Integration services) and use the provided extension iFlow to update the field *CashAdvanceAccountCode* according to your requirements.

5.3 Create and Submit Cash Advances in SAP Concur Expense

When you create cash advances in SAP Concur Expense and submit them, they are available for retrieval in SAP Business ByDesign.

Before you start, ensure that the users in SAP Business ByDesign that are responsible for retrieving Expense Reports from SAP Concur are registered for OAUTH web services in SAP Business ByDesign. For more information on user registration, see section Register User for OAUTH Web Services in this guide.

5.4 Retrieve Cash Advances in SAP Business ByDesign

You can retrieve the cash advances created and submitted in SAP Concur Expense from SAP Business ByDesign using the following steps:

1. Go to the *General Ledger* work center, *Get Concur Documents Run* view.
2. Click *New*, and then *Get Concur Documents Run*.
3. Enter all the necessary details for the run.
4. Activate the run. You can either execute the run immediately or schedule it for a later time.

You can view all cash advances retrieved from SAP Concur Expense in the *Cash Advance* view in the *General Ledger* work center. These cash advances are displayed with the status *New* and the acknowledgment status *No Acknowledgment Sent*.

5.5 Acknowledge Receipt of Cash Advances in SAP Business ByDesign

You can send an acknowledgment from SAP Business ByDesign to SAP Concur Expense once cash advances have been received.

1. Go to the *General Ledger* work center, *Acknowledge Concur Documents Run* view.
2. Click *New*, and then *Acknowledge Concur Documents Run*.
3. Select *Send Acknowledgment* as the status.
4. Enter all the necessary details for the run.
5. Activate the run. You can either execute the run immediately or schedule it for a later time.

You can also send an acknowledgment for a cash advance in the *Cash Advance* view. To do so, select a new cash advance and click *Send Acknowledgment*.

Once the acknowledgments have been sent, the acknowledgment status of the cash advance is set to *Acknowledgment Sent*.

5.6 Post Cash Advances in SAP Business ByDesign

You can post the acknowledged cash advances as below:

1. 1. Go to the *General Ledger* work center, *Post Concur Documents Run* view.
2. Click *New*, and then *Post Concur Documents Run*.
3. Enter all the necessary details for the run.
4. Activate the run. You can either execute the run immediately or schedule it for a later time.

When the run is finished, the status of the successfully posted cash advances is set to *Posted*, the journal entries gets created for these reports, and a posting confirmation gets sent to SAP Concur. You can also post a cash advance in the *Cash Advance* view. To do so, select an acknowledged cash advance and click *Post*.

5.7 Send Posting Confirmation to SAP Concur Expense

You can send posting confirmation of cash advances back to SAP Concur Expense as below:

1. Go to the *General Ledger* work center, *Acknowledge Concur Documents Run* view.
2. Click *New*, and then *Acknowledge Concur Documents Run*.
3. Set the status to *Send Posting Confirmation*.
4. Enter all the necessary details for the run.
5. Activate the run. You can either execute the run immediately or schedule it for a later time.

You can also send a posting confirmation in the *Cash Advance* view. To do so, select a posted cash advance and click *Send Posting Notification*.

5.8 Restrictions

Cash Advances must not be split across multiple expense reports in SAP Concur.

Your SAP Concur Implementation Project Manager must make sure the option *Allow user to carry a Cash Advance balance from one report to another* is inactive in the Group Configuration in SAP Concur.

If the amount of the cash advance exceeds the total amount of all expense items in this expense report, the traveler must create a Cash Advance Return item for the difference.

Cash withdrawals you have undertaken with a corporate credit card (CBCP credit cards) must not be converted into cash advances in SAP Concur and sent to SAP Business ByDesign.

6   Migration to your Production Landscape

After you have successfully implemented and tested your integration scenarios in your test landscape, you can start preparing your production systems.

6.1   Separate SAP Concur Test Entity

This section helps you in ensuring that you are in correct and separate concur test entity.

If you were using a SAP Business ByDesign test tenant along with a SAP Concur test entity, you do not have to take any actions in your test landscape before you prepare your production landscape. The SAP Concur URL you were using indicates if this entity is a SAP Concur test entity. The URLs https://implementation.concursolutions.com ↗ and https://eu1imp.concursolutions.com ↗ are SAP Concur test entity URLs.

6.2   SAP Concur Production Entity was used for Testing

You can use the details mentioned in this section if you have used SAP Concur production entity for testing.

If you were using a SAP Concur production entity for your test phase (typical URLs are https://www.concursolutions.com ↗ or https://eu1.concursolutions.com ↗) you definitely need to take actions to suppress the further replication of master data from your SAP Business ByDesign test tenant into your SAP Concur entity.

At the end of the testing phase, your SAP Concur Implementation Project Manager purges all transactional data in your SAP Concur entity. However, the user profiles will not be purged. The user profiles contain the organizational assignment to the organization structures of your SAP Business ByDesign test tenant. Once you start replicating employee data from your SAP Business ByDesign production tenant, these organizational assignments will be overwritten with data from your production tenant. If you do not suppress the data replication from your test tenant, employee master data changes in your test tenant gets overwrite the user profiles in SAP Concur.

6.2.1 Deactivating the Integration Activities in your SAP Business ByDesign Test Tenant

You can choose one of the actions to deactivate the integration activities.

- Delete your SAP Business ByDesign test tenant.

- Deactivate/delete all replication jobs, in particular those for the employee replication.
  In Communication Arrangement (Concur Integration User Credentials or Concur Integration Middleware) remove User ID and password in the credentials section.
  Deregister CONCUR_INTEGRATION_OAUTH and CONCUR_INTEGRATION_OAUTH2
  Revert the integration configuration settings in the SAP Business ByDesign business configuration.
  For more information, see the respective chapters of this guide.

7   Troubleshooting Guide

This section assists you in troubleshooting any typical integration errors such as system connectivity, errors ocurring while replicating employee or cost object master data and financial postings.

7.1   Typical Integration Errors and How to Resolve them

You can go through all the errors listed and use the troubleshotting steps mentioned here to identify and rectify them.

Whenever an error occurs with one of the integration processes, for example, in master data replication or in financial integration, SAP Business ByDesign and SAP Concur provides a description of this error. The description is normally sufficient to identify the root cause and to fix this error in the respective system. This section provides hints on how to deal with some typical integration errors. All errors listed below can be found in the Application Logs or in the Expense Reports view.

7.1.1 System Connectivity

You can use the below mentioned steps to troubleshoot system connectivity error.

You can see the error message **Fails to connect to Concur** in the *Application Log* of SAP Business ByDesign. You can see this message in the *Establish Connection With Target System* view of the ▶ *Master Data Replication* ▶ *Cost Object Outbound Runs or Employee Outbound Runs* ▶.

To exclude all potential sources of errors, you can check the following:

- Check all connectivity-related entries and confirm that everything from the installation of SAP Concur certificates to the setup of communication arrangement was carried out. You can consider whether you are connected to the SAP Concur production or the test entity.
- Check if you are using the correct Client ID, Secret and Company ID for OAUTH and OAUTH2. These IDs for OAUTH and OAUTH2 have different formats. If you have entered the wrong values, go to ▶ *Business Configuration* ▶ *Overview* ▶ and look for activity I*ntegration with Concur Solutions*. In the list of *Service Providers* select the entry with the wrong IDs, choose *Deregister Client*, then *Register Client* and enter the correct values.
- Make sure you have entered the https:// prefix with the URL.
- Check whether you are using the correct user and password. If you have copied both strings from another application, make sure there is no space at the end of the copied string.
- Try to logon to your SAP Concur entity through your browser to check the correctness of your credentials.
- Check with your SAP Concur Integration Project Manager if the user has the required *Web Services Administrator* role assigned.

7.1.2 Employee Master Data Replication

You can use the details mentioned here to troubleshoot any errors occuring while replicating the employee master data.

You can see the error message such as **Employee with Emp ID '12345' and Login ID '12345@sap.com' could not be updated because the Login ID was specified as '54321@sap.com'**. The cause for this error message can be because of the data inconsistency between SAP Concur and SAP Business ByDesign. You have either created or tried to create a user profile in SAP Concur with the affected employee ID or login ID.

To solve the concern, you can manually update the user profiles in SAP Concur so that they match employee master data in the SAP Business ByDesign. You must ensure that you search for *All* users from the drop-down list *User Status* on the SAP Concur *User Administration* screen. If you can't see these user profiles, this error is caused by a previous, unsuccessful attempt to create them. In this case, you should manually create these profiles in SAP Concur but only with the mandatory fields. These gets updated with the next replication run they with the complete data set from SAP Business ByDesign.

You can also encounter the **Save Failed** error message during the initial employee replication. This error occurs when, for example, the employee form in SAP Concur is not maintained correctly. To resolve this error, you must contact your SAP Concur Integration Implementation Project Manager and make sure that the employee forms that you are using in SAP Concur are assigned to the right group and contain all required fields. For more information, see the section *Create and Replicate Expense Reports* in this guide

7.1.3 Cost Object Master Data Replication

You can encounter the problem of a cost center not getting replicated to SAP Concur. To resolve this error, an organizational structure in the SAP Business ByDesign must fulfill the preconditions mentioned here for a successful replication as cost center.

- The Managerial Definition must be *Cost Center*.
- It must be valid and activated on the day of replication.
- It must be assigned to the company you have chosen in the ▶ *Master Data Replication* ❯ *Edit Cost Object Outbound Configuration* ❯ view.

In the ▶ *Organizational Management* ❯ *Edit Org Structures* ❯ view, you can check these preconditions. However, if the cost center still doesn't get replicated, you can change the name, for example, by adding one additional character at the end. You can then save and activate these changes. This creates a change pointer and the next replication run should include this object. In case this object still doesn't get replicated you should create a support incident.

7.1.4 Financial Posting

The expense report cannot be posted in SAP Business ByDesign as the period is closed. This expense report gets listed under *Erroneous Expense Reports*.

The cause of the error is that SAP Business ByDesign tried posting this expense report in a period that has been closed. The expense report remains in the Expense Report monitor with status *In Process*.

To resolve this concern, you can reopen this period in SAP Business ByDesign or post this expense report to the next period.

Other Posting Problems

You might get other posting errors and it might not be immediately obvious whether they are related to inconsistent configuration in both the systems (for example inconsistent use of tax codes). In this case you can analyze the content of the message SAP Business ByDesign has retrieved from SAP Concur Expense.

In SAP Business ByDesign, go to the *Expense Reports* view in the *General Ledger* work center and choose *Download Original JSON*. You can analyze this document with your SAP Concur Implementation Project Manager.

8   Appendix

You can find all the parameters and additional fields sent from SAP Business ByDesign to Concur.

8.1   Field and Value Mapping

Mapping of Employee Data in SAP Business ByDesign to SAP Concur Expense User Fields

The following table shows the list of parameters sent from SAP Business ByDesign to the SAP Concur User API.

SAP Concur User Field	SAP Business ByDesign Employee Attribute	Comment
Active	Internal Employee Indicator	'Y' if person is currently an internal employee, otherwise 'N'
CtryCode	Country of Workplace Contact Data	
CrnKey	Default Currency of Assigned Company	
EmailAddress	E-Mail (Communication Data) of Workplace Contact Data	
EmpId	Employee ID	
Custom21		'Group 1'
ExpenseApprover		'Y' if employee is currently a people manager, otherwiser 'N'
ExpenseApproverEmployeeID	Employee ID of the assigned people manager	
ExpenseUser		'Y'
FeedRecordNumber		Sequence number (ascending unique number per replication)
FirstName	First Name (Biographical Data)	
LastName	Last Name (Biographical Data)	
LedgerKey		'DEFAULT'

SAP Concur User Field	SAP Business ByDesign Employee Attribute	Comment
LocaleName	Language (Regional Settings) of assigned User + Country of Workplace Contact Data	Example: en_US
Mi	Middle Name (Biographical Data)	1st character
OrgUnit1		Logical System ID (from Tenant)
OrgUnit2	ID of assigned Company	
OrgUnit3		'CC'
OrgUnit4	ID of assigned Cost Centre	
Password	Employee ID	Defaulted only at first transmission with the employee ID of the respective user
CtrySubCode	Region of Workplace Contact Data	Uses code list mapping; sent as Country/Region combination Example: DE-BW
TripUser		'Y'
LoginId	Communication Data E-Mail of Workplace Contact Data	

For each of the above mentioned fields, you can decide if you want to transfer it to SAP Concur and if you want the system to consider it as mandatory. If mandatory fields are missing for an employee, the employee is not sent to SAP Concur.

Some of the fields are mandatory for the SAP Concur API, so they have to be considered as mandatory in the replication. In that case you cannot deselect the transfer indicator and the mandatory indicator.

Additional Fields

You can send a set of selected fields as custom fields to SAP Concur or to replace the content of standard fields. The list below shows fields of the SAP Business ByDesign payload that are available for mapping and can be entered in the configuration table.

Field in SAP Business ByDesign Payload Structure	SAP Business ByDesign Employee Attribute	Comment
IDENTITY_ID	User ID of User Data	

Field in SAP Business ByDesign Payload Structure	SAP Business ByDesign Employee Attribute	Comment
USER_ACCOUNT_ID	Technical ID of User Data	
GENDER_CODE	Gender (Biographical Data)	Uses Code List Mapping
JOB_ID	ID of assigned Job (Employment – Organizational Assignment)	
JOB_NAME-CONTENT	Name of assigned Job (Employment – Organizational Assignment)	
REPORTING_LINE_UNIT_ID	ID of assigned Reporting Line Unit (Employment – Organizational Assignment)	
COST_CENTRE_MANAGER_INDICATOR		'Y' if employee is currently a cost centre manager, otherwiser 'N'
COST_CENTRE_MANAGER_ID	Employee ID of the employee's cost centre manager	
PERM_ESTABLISHMENT_ID	ID of assigned Permanent Establishment (Organizational Structure)	

Example

1

You want to send the gender of the employee to Custom1 of the SAP Concur User API.

Maintain additional fields as follows:

- External System Field Name: unique field name, e.g. Gender
- External System Field Tag: Custom1
- SAP Business ByDesign Extension Field Name: GENDER_CODE
- Set mandatory flag, if you do not want an employee record to be sent without gender information

Example

2

You want the cost center manager to be the approver of the employee's expenses.

Maintain additional fields as follows:

- Record (1):
  - External System Field Name: e.g. CostCentreManagerID
  - External System Field Tag: ExpenseApproverEmployeeID
  - SAP Business ByDesign Extension Field Name: COST_CENTRE_MANAGER_ID
- Record (2)
  - External System Field Name: e.g. IsCostCentreManager
  - External System Field Tag: ExpenseApprover
  - SAP Business ByDesign Extension Field Name: COST_CENTRE_MANAGER_INDICATOR

9 Tax Code Mapping in SAP Concur in Accordance with Configuration in SAP Business ByDesign

This section provides some examples of configuration for Germany and the UK in SAP Business ByDesign, and the corresponding configuration in the SAP Concur Expense.

> **i Note**
>
> If in case the combiniation of Tax Rate and Tax Deductibility does not suit your business requirements, you can create a custom tax code as mentioned in the section Creating a Tax Code [page 31].

Configuration for DE (Germany) in SAP Business ByDesign:

Country	Tax code	Description	Tax Rate	Tax Deductibility
DE	2	Domestic Acquisition (Standard Rate)	Standard	Fully Deductible
DE	3	Domestic Acquisition (Reduced Rate)	Reduced	Fully Deductible
DE	4	Domestic Acquisition (Exempt)	Tax rate 0% (ZERO)	Fully Deductible
DE	6	IC Acquisition (Reduced Rate)	Reduced	Fully Deductible

SAP Concur Setup for DE – tax code (reclaim code) 4:

SAP Concur Setup for DE – tax code (reclaim code) 3:

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Configuration for UK in SAP Business ByDesign:

Country	Tax code	Description	Tax Rate	Tax Deductibility
GB	2	Domestic Purchase of Goods, Standard Rate, Fully Deductible	Standard	Fully Deductible
GB	3	Domestic Purchase of Goods, Standard Rate, 50% Deductible	Reduced	Partially Deductible
GB	4	Domestic Purchase of Goods, Standard Rate, non Deductible	Tax rate 0% (ZERO)	Not Deductible
GB	6	Domestic Purchase of Goods, Zero Rate	Zero	Fully Deductible

SAP Concur Setup for UK – tax code (reclaim code) 4, 6:

| Tax Authorities | Tax & Reclaim Groups | Employee Related Configurations | Export | Reports | Fringe Benefits |

1 Group Name **2** Expense Types **3** Tax Rates **4** Reclaim Rates

Reclaim Conditions: New Modify Remove **Reclaim Configurations:** New Remove

Tax Condition	Effective Date	End Date	Reclaim Condi...	Receipt Required	Reclaim Rate	Reclaim Type	Proportional C...	Reclaim Tax C...
100%								
	01/01/2010							
			Tax Receipt	Tax Receipt	100%	Standard	Always	2
			Receipt	. Receipt	0%	Standard	Otherwise	4
			Otherwise	No Receipt	0%	Standard	Otherwise	4
0%								
	01/01/2010							
			Tax Receipt	Tax Receipt	0%	Standard	Always	6
			Receipt	Receipt	0%	Standard	Otherwise	6
			Otherwise	No Receipt	0%	Standard	Otherwise	6

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