



ADMINISTRATION GUIDE | PUBLIC
2018-11-30

SAP Revenue Accounting and Reporting Add-On 1.3 FP07

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1 Getting Started

1.1 About this Document

This document is a single source of information for the implementation of SAP Revenue Accounting and Reporting 1.3. It contains implementation information as well as security and operation information, and is divided into the following main sections:

- Introduction with references to related documents and relevant SAP Notes
- System Landscape
- Installation Information
This chapter gives you an overview of the installation components and the sequence in which they are installed.
- Security Information
This chapter provides you with the information needed to use SAP Revenue Accounting and Reporting 1.3 securely.
- Operation Information
This chapter provides you with the most relevant information needed to use SAP Revenue Accounting and Reporting 1.3.

i Note

We strongly recommend that you use the document available on the SAP Help Portal at <http://help.sap.com/revacc>.

The guide will be updated according to updates of the software.

1.2 Related Information

1.2.1 Planning Information

For more information about implementation topics not covered in this guide, see the following content on the SAP Support Portal and SAP Help Portal:

Content	Location
Latest versions of guides	http://help.sap.com/revacc
General information about SAP Revenue Accounting and Reporting	http://help.sap.com/revacc

Content	Location
Sizing, calculation of hardware requirements - such as CPU, disk and memory resource-with the Quick Sizer tool	https://www.sap.com/about/benchmark/sizing.quick-sizer.html#quick-sizer
Released platforms and technology - related topics such as maintenance strategies and language support	To access the Product Availability Matrix directly, enter https://support.sap.com/pam
Network Security	http://help.sap.com/
High Availability	https://help.sap.com/erp_fao_addon10/helpdata/en/08/5748f74ae611d1894f0000e829fbbd/frameset.html
Performance	https://www.sap.com/about/benchmark/sizing/performance.html
Information about Support Package Stacks, latest software versions and patch level requirements	https://support.sap.com/sp-stacks
Information about Unicode technology	http://www.sdn.sap.com/irj/sdn/i18n

1.2.2 Further Useful Links

The following table lists further useful links on SAP Service Marketplace:

Content	Location on SAP Service Marketplace
Knowledge Base & Incidents	https://support.sap.com/incident
SAP Notes search	https://support.sap.com/notes
SAP Software Distribution Center (software download and ordering of software)	https://support.sap.com/swdc
SAP Online Knowledge Products (OKPs)-role-specific learning maps	https://support.sap.com/support-programs-services/get-involved-early/early-knowledge-transfer.html

1.2.3 Related Guides

You can find more information about the relevant applications in the following documents:

Title	Location
<i>SAP Sales and Distribution Integration with SAP Revenue Accounting and Reporting</i>	http://help.sap.com/erp > SAP ERP Add-Ons > SAP Revenue Accounting and Reporting >
SAP NetWeaver 7.0	http://help.sap.com/NW70 > Planning > Master Guide – SAP NetWeaver 7.0 >
SAP NetWeaver 7.3	http://help.sap.com/NW73 > Planning > Master Guide – SAP NetWeaver 7.3 incl. Enhancement Package 1 >
SAP NetWeaver 7.4	http://help.sap.com/NW74 > Planning > Master Guide – SAP NetWeaver 7.4 incl. SR1 >
SAP ERP 6.0	http://help.sap.com/erp > SAP ERP 6.0 > Planning > Master Guide for SAP ERP 6.0 >
SAP Enhancement Package 5 for SAP ERP 6.0	https://help.sap.com/viewer/product/SAP_ERP/6.05.18/en-US > SAP ERP 6.0 > SAP Enhancement packages for SAP ERP 6.0 > SAP Enhancement package 5 for SAP ERP 6.0 > Master Guide SAP Enhancement package 5 for SAP ERP 6.0 >
SAP Enhancement Package 6 for SAP ERP 6.0	https://help.sap.com/viewer/product/SAP_ERP/6.06.21/en-US > SAP ERP 6.0 > SAP Enhancement Packages for SAP ERP 6.0 > SAP Enhancement Package 6 for SAP ERP 6.0 > Master Guide SAP Enhancement Package 6 for SAP ERP 6.0 >
SAP Enhancement Package 6 for SAP ERP 6.0 (SAP HANA version)	https://help.sap.com/viewer/product/SAP_ERP/6.16.12/en-US > SAP ERP 6.0 > SAP Enhancement Packages for SAP ERP 6.0 > SAP Enhancement Package 6 for SAP ERP 6.0 (SAP HANA version) > Administrator's Guide for SAP ERP 6.06 (SAP HANA version) >


Title	Location
SAP Enhancement Package 7 for SAP ERP 6.0 (SAP HANA version)	https://help.sap.com/viewer/product/SAP_ERP/6.17.16/en-US > SAP ERP 6.0 > SAP Enhancement Packages for SAP ERP 6.0 > SAP Enhancement Package 7 for SAP ERP 6.0 > Master Guide SAP Enhancement Package 7 for SAP ERP 6.0
Simple Finance	http://help.sap.com/erp > SAP ERP Add-Ons > SAP Simple Finance, On Premise Edition > SAP Simple Finance Add-On 1.0 > Administrator's Guide for SAP Simple Finance Add-On 1.0
Simple Finance	http://help.sap.com/erp > SAP ERP Add-Ons > SAP Simple Finance, On Premise Edition > SAP Simple Finance, On-Premise Edition 1503 > Administrator's Guide for SAP Simple Finance Add-On 2.0

1.3 Important SAP Notes

You must read the following SAP Notes before you start the installation. These SAP Notes contain the most recent information on the installation, as well as corrections to the installation documentation.

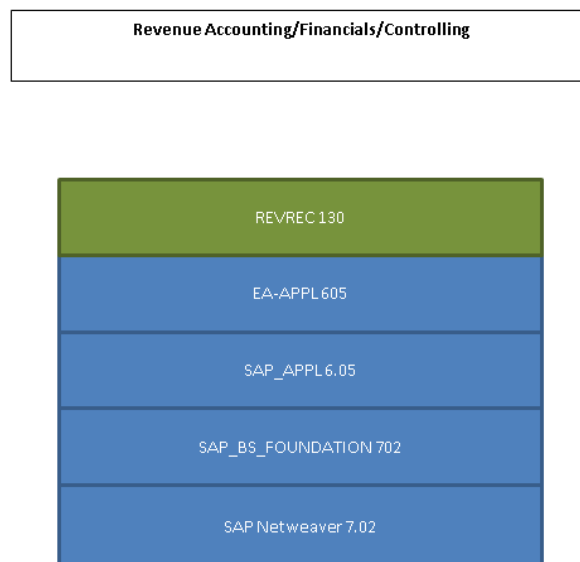
Make sure that you have the most up-to-date version of each SAP Note, which you can find on the SAP Support Portal at <https://support.sap.com/notes>.

SAP Note Number	Title	Description
2386978	Release strategy for the ABAP add-on REVREC 130	This note provides information about planning the installation and REVREC 130 add-on upgrades.
2382402	SAP Revenue Accounting 1.3: Release Information Note	This Release Information Note (RIN) contains information and references about the product version SAP Revenue Accounting 1.3.
1992006	CO-PA Activation for Add-On "Revenue Accounting and Reporting"	Implement this note if CO-PA is used.
1767933	CD: Extended authorization check	

SAP Note Number	Title	Description
2289833 	Error message KI249 at Revenue Recognition	

1.4 Technical System Landscape

The following diagram provides an overview of the system landscape for *SAP Revenue Accounting and Reporting 1.3*.



SAP Revenue Accounting and Reporting 1.3 is delivered as product version SAP REVENUE ACCOUNTING 1.3 which includes instance Revenue Accounting with software component version REVREC 130. Instance Revenue Accounting needs at least an SAP ERP 6.0, Enhancement Package 5 environment and is compatible with all higher Enhancement Package Stacks. Instance Revenue Accounting always needs to be installed on top of your Financials system.

SAP Revenue Accounting and Reporting 1.3 is not a standalone product. It needs to be integrated into operational components which send order and billing information to Revenue Accounting. With Version 1.3, the following operational components or products support integration to Revenue Accounting:

- SAP Sales and Distribution (SD)
- SAP Hybris Billing (also known as “Billing and Revenue Innovation Management” or “BRIM”)
- SAP Customer Relationship Management (CRM)

i Note

Please be aware that not all available processes of these products are supported yet.

As Revenue Accounting also supports remote communication, it is possible to deploy Revenue Accounting on a different system from the operational component. In this case, you have to consider the Data Harmonization requirements listed below.

Instance Revenue Accounting can be installed on SAP ERP 6.0 Enhancement Package 5 and higher. If your Financials system is a lower version, you first need to upgrade to at least SAP ERP 6.0 Enhancement Package 5.

The following is a list of the required alternative product versions, instances and minimum Support Package Stacks for Revenue Accounting:

Product Version	Instance	Support Package
EHP5 FOR SAP ERP 6.0	Central Applications	10
EHP6 FOR SAP ERP 6.0	Central Applications	06
EHP6 FOR SAP ERP 6.0 ON HANA	Central Applications	01
EHP7 FOR SAP ERP 6.0	Central Applications	01
EHP8 FOR SAP ERP 6.0	Central Applications	Initial Shipment Stack
SAP SFINANCIALS 1.0	Central Applications	Initial Shipment Stack
SAP SFINANCIALS 1503	Central Applications	Initial Shipment Stack
SAP S/4HANA ON-PREMISE 1511	SAP S/4HANA Server	Initial Shipment Stack
SAP S/4HANA FINANCE 1605	Central Applications (FIN)	Initial Shipment Stack
SAP S/4HANA 1610	SAP S/4HANA Server	Initial Shipment Stack

The following software components are either mandatory or optional, as indicated below, for the technical implementation of Revenue Accounting and Reporting 1.3.

Component	Mandatory	Optional
REVREC 130	yes	

For the integration with Sales and Distribution, SAP Sales Integration with SAP Revenue Accounting and Reporting 1.0 (SAP SALES INTEGR SAP RAR 1.0) SP 10 needs to be installed on top of your Sales and Distribution instance. It contains instance Revenue Accounting Integration (software component REVRECSO) which was previously bundled with Revenue Accounting and Reporting 1.0. SAP Sales Integration with SAP Revenue Accounting and Reporting 1.0 must be installed with at least support package level 10 in order to integrate with Revenue Accounting and Reporting 1.3. If you upgrade from Revenue Accounting and Reporting 1.0, you have to either install SAP Sales Integration with SAP Revenue Accounting and Reporting 1.0 with support package level 10 or upgrade software component REVRECSO to support package level 10. To simplify future upgrades it is strongly recommended to install SAP Sales Integration with SAP Revenue Accounting and Reporting 1.0.

The following is a list of the required alternative product versions, instances and minimum Support Package Stacks for SAP Sales Integration with SAP Revenue Accounting and Reporting 1.0:

Product Version	Instance	Support Package
SAP ERP 6.0	SAP ECC Server	15
EHP2 FOR SAP ERP 6.0	Central Applications	06
EHP3 FOR SAP ERP 6.0	Central Applications	05
EHP4 FOR SAP ERP 6.0	Central Applications	05
EHP5 FOR SAP ERP 6.0	Central Applications	03
EHP6 FOR SAP ERP 6.0	Central Applications	01
EHP6 FOR SAP ERP 6.0 ON HANA	Central Applications	01
EHP7 FOR SAP ERP 6.0	Central Applications	01
EHP8 FOR SAP ERP 6.0	Central Applications	Initial Shipment Stack
SAP SFINANCIALS 1.0	Central Applications	Initial Shipment Stack
SAP SFINANCIALS 1503	Central Applications	Initial Shipment Stack
SAP S/4HANA ON-PREMISE 1511	SAP S/4HANA Server	Initial Shipment Stack
SAP S/4HANA FINANCE 1605	Central Applications (FIN)	Initial Shipment Stack
SAP S/4HANA 1610	SAP S/4HANA Server	Initial Shipment Stack

For the integration with SAP Hybris Billing, you need to upgrade to the following product versions:

Product Version	Instance	Support Package
EHP7 FOR SAP ERP 6.0	Utilities/Waste&Recycl./Telco	09
EHP8 FOR SAP ERP 6.0	Utilities/Waste&Recycl./Telco	Initial Shipment Stack

Product Version	Instance	Support Package
EHP3 FOR SAP CRM 7.0	CRM Application Server ABAP	09
EHP4 FOR SAP CRM 7.0	CRM Application Server ABAP	Initial Shipment Stack
EHP6 FOR SAP ERP 6.0	Central Applications	16
EHP7 FOR SAP ERP 6.0	Central Applications	09
EHP8 FOR SAP ERP 6.0	Central Applications	Initial Shipment Stack
SAP S/4HANA ON-PREMISE 1511	SAP S/4HANA Server	Initial Shipment Stack
SAP S/4HANA 1610	SAP S/4HANA Server	Initial Shipment Stack

The integration with SAP Hybris Billing also requires SAP Sales Integration with SAP Revenue Accounting and Reporting 1.0.

Migration tools for SAP Hybris Billing customers are available with the following product versions:

Product Version	Instance	Support Package
EHP7 FOR SAP ERP 6.0	Utilities/Waste/Telco	12
EHP8 FOR SAP ERP 6.0	Utilities/Waste/Telco	02
EHP3 FOR SAP CRM 7.0	CRM Application Server ABAP	12
EHP4 FOR SAP CRM 7.0	CRM Application Server ABAP	02
EHP7 FOR SAP ERP 6.0	Central Applications	12
EHP8 FOR SAP ERP 6.0	Central Applications	02
SAP S/4HANA ON-PREMISE 1511	SAP S/4HANA Server	Feature Pack 1605
SAP S/4HANA 1610	SAP S/4HANA Server	Initial Shipment Stack

For the integration with the SAP Customer Relationship Management (CRM) service, you need to upgrade to the following product versions:

Product Version	Instance	Support Package
EHP4 FOR SAP CRM 7.0	CRM Application Server ABAP	02
EHP8 FOR SAP ERP 6.0	Central Applications	02

Some CRM integration scenarios also require SAP Sales Integration with SAP Revenue Accounting and Reporting 1.0.

Data Harmonization Requirements

If Revenue Accounting is not installed on the same system as the operational component, it is required that the master data and configuration of all systems are harmonized. This is because neither key-mapping nor value-mapping functions are supported by Revenue Accounting and Reporting 1.3. It is important that the following data and settings are harmonized in all systems:

- Company Codes, including company code currencies and currency settings
- CO-PA configuration (structures, value fields and operations concern) if used
- Customers, Business Partners
- Accounts and Account Assignments (such as Profit Centers and Business Areas)

2 Installation Information

Preparation

Before you install the Revenue Accounting software component, ensure that the following notes are installed:

Note	Title
1992006	CO-PA Activation for Add-On "Revenue Accounting and Reporting" if CO-PA is used
2153391	Error F5 800 when posting from the revenue accounting engine (revenue recognition)
1767933	CD: Extended authorization check
2289833	Error message KI249 at Revenue Recognition
2242051	Revenue Accounting: Update COSB for Revenue Corrections (for the integration of Revenue Accounting with Results Analysis)

Installation Sequence

Read all necessary information for the technical installation of instance Revenue Accounting 1.3 in the following notes:

Note	Title
2386978	Release Strategy Note
2382402	SAP Revenue Accounting 1.3: Release Information Note

i Note

Please also consider additional notes from the previous release that are needed for the upgrade.

Related Guides

Upgrade and Update Guide for SAP ERP 6.0	http://help.sap.com/erp
Upgrade and Update Guide for SAP ERP 6.0 Enhancement Package 5	https://help.sap.com/viewer/product/SAP_ERP/6.05.18/en-US
Upgrade and Update Guide for SAP ERP 6.0 Enhancement Package 6	https://help.sap.com/viewer/product/SAP_ERP/6.06.21/en-US
Upgrade and Update Guide for SAP ERP 6.0 Enhancement Package 7	https://help.sap.com/viewer/product/SAP_ERP/6.17.16/en-US
Installation & Upgrade Guide SAP Netweaver 7.0	http://help.sap.com/NW70
Installation & Upgrade Guide SAP Netweaver 7.0 Enhancement Package 2	http://help.sap.com/NW702
Installation & Upgrade Guide SAP Netweaver 7.3	http://help.sap.com/NW73
Installation & Upgrade Guide SAP Netweaver 7.4	http://help.sap.com/NW74

Post-Installation

In transaction `SICF`, activate all Web Dynpro applications that begin with `FARR_`, for example, `FARR_JOB_MONITOR`. Webdynpro applications are activated in `SICF` under `default_host/sap/bc/webdynpro/sap`.

Revenue Accounting Integration and Revenue Accounting communicate by using remote function call (RFC) function calls. If these two instances are installed in different systems, you need to define a remote function call destination with connection type 3 (connection to ABAP System) in the system where Revenue Accounting Integration is installed, connecting to the system where Revenue Accounting is installed. The solution tries to establish a `bgRFC` connection as the preferred connection type. You should therefore create a remote function call destination that supports the `bgRFC` protocol. To do this, run transaction `SM59`, choose the Special *Options* tab, and then select *Classic with bgRFC* as the Transfer Protocol.

3 Migrating Data to SAP Revenue Accounting and Reporting

Migrating data that is relevant to Revenue Accounting is described in detail on the SAP Help Portal. You'll find the documentation in the [Migration](#) chapter within the Application Help for SAP Revenue Accounting and Reporting.

i Note

Please carefully follow the instructions in the Application Help that are specific to your implementation scenario, for example, integration with SAP Sales and Distribution or Third Party Sender integration.

Recommendations

If you want to migrate data from SAP Sales and Distribution, please use the latest version of the software component `REVRCCSD` and implement all relevant SAP Notes.

The details for migrating data using an API provided can be found in SAP Note [2392956](#)

Verifying the migration and Data Validation

In addition to the individual migration tests for smaller data sets, SAP recommends that you test the migration procedure for your full data set. This procedure should ideally be performed on a dedicated test environment.

As the business rules can vary for different company code and accounting principle combinations, SAP recommends that you test and validate the entire data set (or at least a significant portion representing all business scenarios) in the migration procedure. The testing should include the reconciliation of data between the data source and the SAP Revenue Accounting and Reporting system.

For further details on data reconciliation, please refer to the [Reconciliation](#) chapter within the Application Help for SAP Revenue Accounting and Reporting.

i Note

In many cases, the migrated data (initial load) can be reset at application level – please refer to the [Testing Migration](#) chapter for details.

Further recommendations

If you have a high volume of data, such as in telecommunications, SAP recommends that you technically optimize your data for the Revenue Accounting system, for both initial data loading, as well as daily data transfers.

SAP recommends that you test the performance of the data migration, and if the runtimes are too long, perform the technical bottle-neck analysis. In this scenario, you can, for example, adjust the overall number of batch work processes in the system, or assign migration jobs to the corresponding servers or the size of intervals – see the [Parallel Processing Framework \[page 18\]](#) chapter for more details.

4 Parallel Processing Framework – Optimizing the Processing

Processing a high volume of documents is supported via batch processing which uses the Parallel Processing Framework.

You can choose the number of batch processes, the number of intervals and the server group for batch processing.

i Note

The number of parallel batch processes should not be larger than the number of available background work processes on the system or the target logon/server group.

The number of intervals should be considerably larger than the number of parallel processes. This allows for a balanced load between the parallel threads of processing.

Select the number of intervals so that the processing of each interval is 5-10 minutes.

The best parameterization of parallel processing is determined during volume tests.

5 GoLive Checks

This chapter refers to setting Revenue Accounting and Reporting solution live as a whole, as well as for the *GoLive* of additional groups of contracts, for example, additional company codes or market units.

To prepare the GoLive checks, please follow the detailed steps described in the [Transition](#) chapter within the Application Help for SAP Revenue Accounting and Reporting.

Further recommendations

It's important that you test the end-to-end processing of data within Revenue Accounting. The processing should proceed as follows:

1. Creation of revenue accounting items
2. Transfer Revenue
3. Calculate Contract Liabilities and Assets
4. Revenue Posting Run

The focus of the testing activities should also involve [Inflight Checks \[page 37\]](#) and [Data Validation \[page 65\]](#).

Please refer to these chapters under *Operation Information* for the relevant error categories.


The results of the testing activities should also provide detailed information regarding the exact timing of the cut-over procedure.

Inflight Checks

See SAP Note [2533254](#) 

Ensure that the *Inflight Checks* are activated while testing Revenue Accounting.

You can find the relevant SAP Notes by using the search term `FARR_INFLIGHT_CHECK` and the corresponding software components, for example, `REVREC/130/SAPK-13003INREVREC`.

Inflight Checks can be limited to dedicated users within the BADI `FARR_BADI_EXTENDED_CHECK`. For more details, see SAP Note [2476987](#) 

Data Validation

See SAP Note [2463880](#) 

The *Data Validation Checks* help to detect data inconsistencies within Revenue Accounting to avoid storing wrong data before it is written permanently to the database.

SAP recommends that you schedule the Data Validation Checks regularly during the testing phase and the preparation for the GoLive phase.

You can find the relevant SAP Notes by using the search term `FARR_CONTR_CHECK` and the corresponding software components, for example, `REVREC/130/SAPK-13003INREVREC`.

i Note

The Data Validation Checks are intended to identify data inconsistencies to avoid storing wrong data before it is written permanently to the database. Validating data on systems with uncertain data quality, such as Sandbox, may result in data inconsistencies with no relevance to the data quality in the production system. The Data Validation Checks provide the best results if they are executed on near-production systems, such as on a copy of the production system.

6 Upgrade Information

6.1 Introduction

SAP Revenue Accounting and Reporting 1.3 is enhanced in the following ways:

- A new reconciliation key status *P/Transferred* has been added. The new status *P/Transferred* means that the *Transfer Revenue* program has been executed and revenue has been transferred to the posting table.

6.2 Preparation


If you upgrade from Revenue Accounting and Reporting 1.0, you also have to follow the steps in the upgrade guides for Revenue Accounting 1.1 and Revenue Accounting 1.2. In this case, the activities that are needed to upgrade from 1.0 to 1.1, and from 1.1 to 1.2, need to be carried out before the activities that follow in this document.

6.3 Quick Guide


If you upgrade from release 1.0 to 1.3, proceed as follows:

Implement pre-check Notes

Activity

Implement Note [2163395](#)  (Migrate SDBP billing plan items to SDPI and aggregated SDOI items).

Implement Note [2119123](#)  and execute report `FARR_NOTE_2119123`.

Implement Note [2114560](#) .

Run pre-check program

Activity

Run program FARR_DATA_MIGRATION_PRECHECK.

Upgrade from release 1.0 to 1.3

Activity

Upgrade from release 1.0 to 1.3.

Upgrade Reconciliation Key Table

Activity

Run program FARR_RK_MIG_TO_RA11 to upgrade the reconciliation key table.

Run program FARR_RK_MIG_TO_RA11_SET_STATUS.

Regenerate revenue accounting item classes.


Set completion status for performance obligations.

Implement pre-check Notes

Activity

Implement Note [2360465](#)  and execute report FARR_NOTE_2360465.

Implement Note [2458978](#) .

Implement Note [2460741](#) .

Run pre-check program

Activity

Run program FARR_MIGRATE_TO_RA13_PRECHECK.

Upgrade Reconciliation Key Table

Activity

Run program FARR_MIGRATE_TO_RA13 to upgrade the reconciliation key table.


Run program FARR_MIGRATE_RA13_SET_STATUS.


If you upgrade from release 1.1 or 1.2 to 1.3, proceed as follows:

Implement pre-check Notes

Activity

Implement Note [2360465](#)  and execute report FARR_NOTE_2360465.

Implement Note [2458977](#) .

Implement Note [2461408](#) .

Run pre-check program

Activity

Run program FARR_MIGRATE_TO_RA13_PRECHECK.

Upgrade from release 1.1 or 1.2 to 1.3

Activity

Upgrade from release 1.1 or 1.2 to 1.3.

Implement Notes

Activity

Implement Note [2460741](#) .

Upgrade Reconciliation Key Table

Activity





Run program `FARR_MIGRATE_TO_RA13` to upgrade the reconciliation key table.

Run program `FARR_MIGRATE_RA13_SET_STATUS`.

6.4 Upgrade Process

The following section describes the activities that follow on from the technical upgrade, either from 1.0 to 1.3 or from 1.1/1.2, to 1.3.

After you have successfully completed the technical upgrade from 1.0 to 1.3 (the installation of software component REVREC 130), proceed as follows to complete the data upgrade:

1. Maintain the parallelization settings for the migration program `FARR_RK_MIG_TO_RA11` under  [Revenue Accounting](#)  [Revenue Accounting Postings](#)  [Configure Parallel Processing for Revenue Posting](#) . The application type for this step is `FARR_RARK`.
2. Run program `FARR_RK_MIG_TO_RA11` to migrate table `FARR_D_RECON_KEY`. The program sets the contract ID for all non-closed reconciliation keys

Note

This program will first backup the reconciliation key table into a backup table `FARR_L_RECKEY_BK`.

3. If there are system dumps or error messages, you can also run the program `FARR_MIGRATE_RA11_ROLLBACK` to reverse the changes made to the reconciliation key table (copy the

backup data from `FARR_L_RECKEY_BK` to `FARR_D_RECON_KEY`). Then you can run the program `FARR_MIGRATE_TO_RA13` again.

i Note

Be aware that the program `FARR_RK_MIG_TO_RA11_ROLLBACK` has no selection screen, which means that it starts the rollback immediately when you execute it.

- If everything is correct, then you run the program `FARR_RK_MIG_TO_RA11_SET_STATUS` to mark the migration as *Completed*. In the controlling table `FARR_C_MIG_RA11`, the entry `MIGRATION_STATUS` is set to "C".
- Upgrade the status rules of BRFplus.
There is a new parameter `FLAG_INVOICE` in function `FARR_FC_POB_STATUS` of BRFplus template `FARR_POB_STATUS_TEMPLATE`.
If you copied template `FARR_POB_STATUS_TEMPLATE`, you need to choose one of the following steps:
 - Adjust your BRFplus rule.
 - Copy the template and implement the function `FARR_FC_POB_STATUS` according to your BRFplus rule.
- Run program `FARR_MIGRATE_TO_RA13` to migrate table `FARR_D_RECON_KEY`. The program updates the reconciliation key status from *Open* to *Transferred* if the contract has recognized revenue or recognized cost in the posting table.

i Note

This program will first backup the reconciliation key table into a backup table `FARR_L_RECKEY_BK`.

- If there are system dumps or error messages, you can run the program `FARR_MIGRATE_RA13_ROLLBACK` to reverse the changes to the reconciliation key table (copy the backup data from `FARR_L_RECKEY_BK` to `FARR_D_RECON_KEY`). You can then run program `FARR_MIGRATE_TO_RA13` again.

i Note

Be aware that the program `FARR_MIGRATE_RA13_ROLLBACK` has no selection screen, which means it starts the rollback immediately when you execute it.

- If everything is correct, then you run the program `FARR_MIGRATE_RA13_SET_STATUS` to mark the migration as *Completed*. In the controlling table `FARR_C_MIG_RA11`, the entry `MIGRATION_STATUS` is set to "S".

But if you perform the technical upgrade from 1.1 or 1.2 to 1.3 (the installation of software component REVREC 130), you only need to proceed as follows to complete the data upgrade:

- Upgrade the functionality of BRFplus.
There is a new parameter `FLAG_INVOICE` in function `FARR_FC_POB_STATUS` of BRFplus template `FARR_POB_STATUS_TEMPLATE`.
If you have copied template `FARR_POB_STATUS_TEMPLATE`, you need to choose one of the following steps:
 - Adjust your BRFplus rule.
 - Copy the template and implement the function `FARR_FC_POB_STATUS` according to your BRFplus rule.
- Run program `FARR_MIGRATE_TO_RA13` to migrate table `FARR_D_RECON_KEY`. The program updates the reconciliation key status from *Open* to *Transferred* if the contract has recognized revenue or recognized cost in the posting table.

i Note

This program will first backup the reconciliation key table into a backup table `FARR_L_RECKEY_BK`.

3. If there are system dumps or error messages, you can run the program `FARR_MIGRATE_RA13_ROLLBACK` to reverse the changes to the reconciliation key table (copy the backup data from `FARR_L_RECKEY_BK` to `FARR_D_RECON_KEY`). You can then run program `FARR_MIGRATE_TO_RA13` again.

i Note

Be aware that program `FARR_MIGRATE_RA13_ROLLBACK` has no selection screen, which means it will reverse all combinations of company codes and accounting principles when you execute it.

4. If everything is correct, then you should run program `FARR_MIGRATE_RA13_SET_STATUS` to mark the migration as *Completed*. In the controlling table `FARR_C_MIG_RA11`, the entry `MIGRATION_STATUS` is set to "S".

6.5 Checks for Upgrading

Please follow the upgrade process carefully and read the relevant release notes thoroughly before upgrading to a higher release.

SAP recommends that you always use the most recent version of the Administrator's Guide according to your version of the SAP Revenue Accounting and Reporting solution.

Testing scope for a release upgrade

When you upgrade your SAP Revenue Accounting system to a higher release, you need to validate all relevant functions used in the specific implementation in the test environment before the new release is deployed in the production system, just as you would for a release upgrade for other SAP software components.

The same recommendations apply here as for the *GoLive* case (including Inflight Checks, Data Validation Checks, and testing Period End Closing) – see the [GoLive Checks \[page 19\]](#) chapter.

You also need to consider customizing and modifications. In general, all customizing and modifications should follow the rules as described in the [Development Guidelines for Greenfield Implementation in sync with SAP Custom Code Management](#).

Updating the Support Package Stack

You should update a Support Package Stack regularly.

Keeping the software components up-to-date for the entire stack, such as `SAP_BASIS` or `SAP_ABA`, enables you to maintain your system correctly and specifically for SAP Revenue Accounting and Reporting.

This will automatically update any corrections for all known errors found for the product.

To implement a Support Package Stack, you first need to test the critical Revenue Accounting and Reporting functions.

6.6 Follow-up Activities

6.6.1 Regenerating Revenue Accounting Item (RAI) Classes

Revenue Accounting adds new fields to the interface components that have already been delivered. These fields are needed for new features of the new release.

You need to update all revenue accounting item classes in order to make these new fields available. By doing this, you can unleash the whole potential of the new release. To do so, you need to take the following steps:

- Start transaction `FARR_RAI_CONF`.
- Mark a Revenue Accounting Item Class.
- Press the *Selected entries* button.

The system checks whether the configuration of the revenue accounting item class contains all fields that are available in the interface components.

If none of the applied interface components were enhanced, it is not necessary to update the configuration and the configuration keeps the status active. In such a case, you can stop here and immediately proceed with the next revenue accounting item class.

If an interface component was enhanced during the upgrade, the system detects this and automatically updates the configuration. In this case, the configuration of the revenue accounting item class sets the status to *Modified*. You then need to take the following steps:

1. Save the updated configuration of your revenue accounting item class.
2. Activate the configuration. Afterwards you can see that the status of the configuration of the revenue accounting item class is active.
3. Start transaction `FARR_RAI_GEN` by choosing **Environment** > **Generation**.
4. Mark the updated revenue accounting item class and press *Generate*.
5. Choose *Yes* when you are asked whether you want to run the generation immediately.
6. Choose *No* when you are asked whether you want to delete revenue accounting items.

i Note

You cannot delete revenue accounting items in production systems. You are therefore not asked whether you want to delete revenue accounting items that are available in production systems. Once this step is complete, you will receive a popup with the generated results. All status icons should be green.

7. Repeat these steps for all revenue accounting item classes.

6.6.2 Exchange Rate Difference

In Revenue Accounting, the exchange rate difference is calculated from contract level to performance obligation level, so it is necessary to migrate the existing data if you upgrade from Revenue Accounting 1.0 or 1.1.

i Note

Refer to Note 2336665 for how to maintain the exchange rate difference account.

Run report `FARR_UPG_EXRATE_DIFF_TO_RA12` to migrate the exchange rate difference from contract level to performance obligation level. It can be executed in the background. You can select specific company codes, accounting principles, and contract IDs. Contracts that need to be updated include the following:

- Contracts with status *Not Completed*
- Contracts with a balance of exchange rate difference at contract level that is not equal to 0.

You do not need to run this program during the upgrade process. It can be started afterwards. Nevertheless, it should be run before the next period close. The program writes entries to the application log with object "FARR", and subject "DATA_MIGRATION". Please check the log and re-run the program if any errors occur.

The report will create posting entries in table `FARR_D_POSTING`. These entries will then be passed to general ledger in the next posting run.

Example

Before upgrading, the exchange rate difference entries are displayed in the posting table, as follows:

RECON_KEY	CONTRACT_ID	POB_ID	POST_CAT	SHKZG	BETRH	HWAER
2014007026	00000000016 852	0000000000 000000	ED	H	300,00	EUR
2014007026	00000000016 852	0000000000 000000	RA	S	300,00-	EUR

After upgrading, the amounts at contract level are reversed, as follows:

RECON_KEY	CONTRACT_ID	POB_ID	POST_CAT	SHKZG	BETRH	HWAER
2016004002	00000000016 852	0000000000 000000	ED	S	300,00-	EUR
2016004002	00000000016 852	0000000000 000000	RA	H	300,00	EUR

In the meantime, the amounts are posted at performance obligation level with updated condition types.

RECON_KEY	CONTRACT_I D	POB_ID	COND	POST_CAT	SHKZG	BETRH	HWAER
2014007026	000000000 16852	000000000 0063724	EXDF	ED	H	200,00-	EUR
2014007026	000000000 16852	000000000 0063724	EXDF	RA	S	200,00	EUR
2014007026	000000000 16852	000000000 0063725	EXDF	ED	H	100,00-	EUR
2014007026	000000000 16852	000000000 0063725	EXDF	RA	S	100,00	EUR

If you do not follow the above steps, the following problems may occur:

- When you perform the contract combination, the exchange rate difference of the source contract is incorrect.
- The account assignment of the exchange rate difference is inconsistent with that of the corresponding performance obligations.
- If the profitability segment is on the exchange rate difference, it will not be posted to Profitability Analysis (CO-PA).

i Note

The migration report will generate correction entries in the posting table with the reconciliation key which can be posted by the program *Revenue Posting Run*. It differentiates the following three types of periods:

- Migration period
The exchange rate difference at contract level in the migration period has to be reversed to the same key at contract level. The exchange rate difference at contract level in migration period then has to be distributed to the same key at performance obligation level.
- Revenue Accounting *Closed* productive period
The exchange rate difference at contract level in the productive period has to be reversed in the first open Revenue Accounting period at contract level. The exchange rate difference at contract level in the productive period then has to be distributed to the first open Revenue Accounting period at performance obligation level.
- Revenue Accounting *Open* productive period
The exchange rate difference at contract level in the productive period has to be reversed to its own period at contract level. The exchange rate difference at contract level in the productive period then has to be distributed to its own period at performance obligation level.

6.6.3 Fiscal Year and Period Migration in Posting Table Entries

As of Revenue Accounting 1.2, data source 0FARR_RA_1.0, which loads data from FARR_D_POSTING, can support aggregation that is directly based on the requested fields. However, there is no fiscal year and period

information in the posting table. From a performance point of view, it is very time-consuming if you want to check the posting data aggregated by period. So these two columns are extended on the posting table. You need to execute `FARR_RECONKEY_TO_GJAHR_POPER` to set the two values for existing data in the posting table. For the newly created posting entries in the table, they have already carried these two values.

The change will not have any influence on reporting figures. It just allows the data source to run faster in future releases.

6.6.4 Contract Acquisition Cost Performance Obligations

As of Revenue Accounting 1.2, performance obligations with the following attributes were interpreted as dedicated contract acquisition cost performance obligations:

- `EVENT_TYPE="CC"`
The event type is for contract acquisition cost.
- `FULFILL_TYPE="T"`
The fulfillment type is time-based.
- `START_DATE_TYPE="1" or "2"`
The start date type can either be "1" or "2". Start date type 1 indicates that the start date is available when you create a performance obligation, and 2 indicates that the start date is available after you have created a performance obligation.

In release 1.3, the field `POB_CATEGORY` is introduced in table `FARR_D_POB` in order to identify such performance obligations. This upgrade report therefore provides functionalities to upgrade performance obligations with the above-mentioned attributes from release 1.2 to release 1.3 and sets `POB_CATEGORY` accordingly. In release 1.3, the field `POB_CATEGORY` of the contract acquisition cost performance obligation will be "C".

To perform the upgrade, you need to do the following:

1. Execute report `FARR_UPG_COAC_POB`.
2. Check the performance obligations that are to be upgraded. You can do this by selecting the company codes, accounting principles, and performance obligation IDs, and running the report in *Test Run* mode. The result will be a list of performance obligations that can or cannot be upgraded. In order to upgrade these performance obligations, you first need to change their start date type.
3. Perform the upgrade by selecting *Execute Upgrade*.

If any memory issues occur, you can influence the number of performance obligations that are processed for each step by using the *Package Size* parameter.

6.6.5 Optional: Switch on Parallel Buffering for Number Range Object RF_BELEG

As of release 1.2, Revenue Accounting supports parallel posting to the general ledger and controlling. It is beneficial if the number of items to be posted is very large. This step is purely optional and it should be checked if the number range buffering is feasible for you. Refer to note 1398444.

To enable buffering, perform the following activities:

1. Run transaction code `SNRO`.
2. Input number range object `RF_BELEG`.
3. Click change button in the bottom page and switch on Parallel Buffering. Then set number in Buffer to 1.

In additional, the company code and accounting principle should be configured in the IMG. Choose: [► Revenue Accounting](#) [► Switch on Posting Optimization](#) [► New Entries and set the post optimization on](#) [►](#).

6.6.6 Optional: Refresh Bindings in BRFplus Structures

As of Revenue Accounting 1.2, there are new fields that can be used as source fields in BRFplus rules. The new fields are listed as follows:

- Application `FARR_AP_PROCESS_TEMPLATE` and `FARR_AP_CA_PROCESS_TEMPLATE` (and all applications copied from the templates)

Structure `IS_SD01_BRF`, `IS_RAI_BRF`, and `LOCAL_S_SD01_BRF`

<code>KOSTL</code>	Cost center
<code>AUFNR</code>	Internal order number
<code>PS_POSID</code>	Work breakdown structure element
<code>FINAL_DATE</code>	Finalization date (UTC)
<code>COOBJNR</code>	Technical CO object number in case of Results Analysis integration
<code>CORA_INTEG_TYPE</code>	Integration type in case of Results Analysis integration

Structures `ES_RAI_ACC_ASS_BRF`

<code>KOSTL</code>	Cost center
<code>AUFNR</code>	Internal order number
<code>PS_POSID</code>	Work breakdown structure element

- Application `FARR_AP_SD_PROCESS_TEMPLATE` (and all applications copied from that template)

Structure `IS_SD01_BRF` and `LOCAL_S_SD01_BRF`

<code>KOSTL</code>	Cost center
<code>AUFNR</code>	Internal order number

Structure IS_SD01_BRF and LOCAL_S_SD01_BRF

PS_POSID	Work breakdown structure element
FINAL_DATE	Finalization date (UTC)
VBELV	Sales order number (cost object)
POSNV	Sales order number (cost object)
COOBJNR	Technical CO object number in case of Results Analysis integration
CORA_INTEG_TYPE	Integration type in case of Results Analysis integration

For applications FARR_AP_PROCESS_TEMPLATE, FARR_AP_CA_PROCESS_TEMPLATE, and FARR_AP_SD_PROCESS_TEMPLATE (and all applications copied from that template), the following structures are also extended to support more granular cost recognition:

- Input structures

Structure IS_COMP_GRP_POB and IS_COMP_GRP_POB_SSP

NO_COST_RECOGNITION	No cost recognition
---------------------	---------------------

- Output structures

Structure ES_POB_BRF and FARR_S_POB_BRF

NO_COST_RECOGNITION	No cost recognition
---------------------	---------------------

As of Revenue Accounting 1.3, there is a new field which indicates simplified invoice performance obligations. It can also be used in BRFplus rules. In order to do so, you have to update the following DDIC bindings in BRFplus.

For application FARR_AP_PROCESS_TEMPLATE, FARR_AP_CRM_PROCESS_TEMPLATE and FARR_AP_CA_PROCESS_TEMPLATE (and all applications copied from that template), the new fields are listed in the following table:

Structures IS_SD01_BRF, IS_RAI_BRF, and LOCAL_S_SD01_BRF

SIMPLIFY_INVOICE	Simplified invoice performance obligation
------------------	---

For application FARR_AP_SD_PROCESS_TEMPLATE, the new fields are listed in the following table:

Structures IS_SD01_BRF and LOCAL_S_SD01_BRF


SIMPLIFY_INVOICE	Simplified invoice performance obligation
------------------	---

If you need any of the new fields listed above in your BRFplus rules, refresh the DDIC binding of the corresponding structures mentioned above. You can then use the attributes in your decision tables or in your rules in general. If the new fields are irrelevant and you do not need to enhance your rules, you also do not need to refresh the bindings.

6.6.7 Optional: Adjust own BRFplus applications copied from template application FARR_POB_STATUS_TEMPLATE

With Revenue Accounting 1.3, the BRFplus template application FARR_POB_STATUS_TEMPLATE was changed as follows:

- The call mode of function FARR_FC_POB_STATUS was changed to *Event Mode*
- The function FARR_FC_POB_STATUS was called by a new rule set FARR_RULESET_POB_STATUS
- The rule set FARR_RULESET_POB_STATUS has the rule: Change FARR_POB_STATUS after processing decision table: FARR_DT_POB_STATUS
- The interface of FARR_FC_POB_STATUS uses a new DDIC structure FARR_S_POB_DATA_BRF for the component FARR_POB_DATA_NEW and FARR_POB_DATA_OLD in the context.
- The content in the sample decision table FARR_DT_POB_STATUS was cleaned up.

To adjust the template, you can refer to the attachment in Note [2367437](#) 

FARR_POB_STATUS_TEMPLATE.XML and update the template by uploading the XML file again.

In order to improve performance, it is beneficial (but not required) to adjust your performance obligation status application which is copied from the template application FARR_POB_STATUS_TEMPLATE in the same way. Use the template application as a reference

7 Configuration Information

7.1 Revenue Accounting and Reporting IMG Paths

The majority of the Customizing activities required for this solution are available in the following locations:

For SAP Revenue Accounting and Reporting: ► [IMG](#) ► [Financial Accounting \(New\)](#) ► [Revenue Accounting](#) ►

7.2 Revenue Accounting Roles

Revenue Accounting 1.3 is designed to run with SAP NetWeaver Business Client (NWBC) and provides a set of standard PFCG roles (with prefix `SAP_SR_FARR_REV`) tailored for SAP NWBC.

→ Recommendation

Important

It is technically possible to allow these roles to use SAP Easy Access. However, certain features do not work in SAP Easy Access. Therefore, we strongly recommend that users with Revenue Accounting roles use SAP NetWeaver Business Client (NWBC, minimum version 4.0), instead of using SAP Easy Access.

For a detailed list of NWBC roles delivered for Revenue Accounting 1.3, see the [Security Information \[page 109\]](#) chapter in this document.

7.3 CO-PA Integration

Revenue Accounting integrates with CO-PA using the SD entry to CO-PA, which means that it behaves like SD billing documents. The actual value flow is therefore defined by an assignment of condition types to value fields, similar to SD billing documents. This assignment uses the same Customizing as SD billing documents:

► [IMG](#) ► [Controlling](#) ► [Profitability Analysis](#) ► [Flow of Actual Values](#) ► [Transfer of Billing Documents](#) ► [Assign Value Fields](#) ► [Maintain Assignment of SD Conditions to CO-PA Value Field](#) ►

i Note

Revenue Accounting does not provide quantities to CO-PA.

⚠ Caution

As Revenue Accounting delivers positive and negative values to CO-PA, the *Transfer +/-* indicator must be set for assigning the condition type to the value field, at least for the reserved condition types configured

for Revenue Accounting. Please read the field documentation for this indicator carefully and consider possible implications for existing data.

You also need to manage the following settings:

- For the condition type that represents the cost of sales (condition category **G**, for example, VPRS), the *Transfer +/-* flag must not be set.
- If you use right of returns, you have to assign your own value fields for the right of return cost and revenue adjustments.

7.4 Parallel Processing

Most of the processing in Revenue Accounting can be parallelized. To enable parallelization for different processing tasks, you must maintain required entries in one of the following Customizing activities: [Revenue Accounting > Inbound Processing > Revenue Accounting Item Management > Define Job Distribution for Parallel Processing](#) or [Revenue Accounting > Revenue Accounting Postings > Configure Parallel Processing for Revenue Posting](#)

Then you need to maintain the following entries for individual processing tasks:






Application Type	Processing Task
FARR_CHECK	Check Transfer of Revenue Accounting Items
FARR_CLCA	Calculate Contract Liabilities and Assets
FARR_MIPST	Upgrade to 1.1: Set performance obligation completion status
FARR_POST	Post Revenue to General Ledger
FARR_REV_TRANSFER	Transfer Revenue
FARR_RAGL	Reconciliation of Revenue Postings with GL
FARR_RAI0	Transfer of Revenue Accounting Items
FARR_RAI2	Processing of Revenue Accounting Items
FARR_RAI2I	Processing of Revenue Accounting Items for Initial Load
FARR_RARK	Upgrade to 1.1: Migrate Reconciliation keys
FARR_RECON	Reconciliation of Revenue Accounting Items with Performance Obligations
FARR_CONTR	Contract Consistency Check Program

Application Type	Processing Task
FARR_CPRP	Transition: Comparative Report Data Selection
FARR_RAI4T	Transition: Copy of Accounting Principle
FARR_TRANS	Transition: Cumulative Catchup
FARR_RAICK	Revenue Accounting Item Consistency Check Program

For each entry, specify the server name (optional) and server group (optional) that are used for parallel processing, and the number of tasks to be assigned.

7.5 Browser Requirements

Depending on your Business Suite release, see the following notes regarding browser requirements and restrictions:

Note	Title
1566444 	Main Browser Note for BS7i2010
1574357 	Main Browser Note for BS7i2011
1853989 	Main Browser Note for BS7i2013
1853989 	Main Browser Note for SAP Business Suite
1098009 	WebDynpro ABAP – List of known Restrictions and Browser Support

8 Operation Information

8.1 Introduction

This document provides you with the most important information on how to use SAP Revenue Accounting and Reporting.

8.2 Inflight Checks

This detailed chapter on Inflight Checks is designed to provide you with a comprehensive overview of the functionality.

Inflight Checks are proactive runtime checks that are implemented in the SAP Revenue Accounting & Reporting solution to validate data before committing it to the database. There are currently 27 different error categories which each represent a common threat to data integrity.

The software also contains post database commit checks which validate data that is already written to the database tables. This part of the solution is called *Data Validation* which implements verifications of equivalent error categories.

The error categories for the Inflight Checks use the prefix *C*, while those for Data Validation use the prefix *E*.

i Note

Both Inflight Checks and Data Validation Checks may be updated by SAP, as and when required. This means that more error categories can be added by SAP depending on whether further common patterns are discovered. SAP recommends that you monitor these on a regular basis.

Currently, only category 17 differs in meaning between pre- and post- database commit verifications. All other categories are equivalent to each other. However, Data Validation Checks currently only cover error categories 1 to 19, 22 and 25.

It is also worth mentioning that categories 10, 11, 12, 14, 16 and 20 are not implemented within the Inflight Check framework due to the technical limitations imposed on verification using data buffers rather than database tables. So there are 21 different active Inflight Checks at the time of writing.

This detailed document on Inflight Checks is designed to provide you with a comprehensive overview of the functionality.

In this chapter, a revenue accounting contract will be referred to simply as a 'contract'.

Context

Inflight Checks are designed to prevent data inconsistencies from occurring at all, while Data Validation Checks detect them once they are written permanently to the database.

So, checking for data consistencies before the data is committed avoids storing the wrong data in the database. Below are the main reasons for running Inflight Checks:

1. Inconsistent data in a production environment can cause problems with recognized revenue or can have an impact on the balance sheet. It can also cause issues with manual activities in revenue accounting contracts. Inconsistent data can result from issues in functional SAP Revenue Accounting and Reporting modules (Integration Component, Inbound Processing and Revenue Accounting Engine), wrong configuration in the sender components and BRF+, incorrect BAdI implementations or insufficient data quality of migrated or operational data.
2. It is difficult to analyze the root cause of inconsistent data. When data inconsistencies are found, they often have to be traced back days or months in order to find the root cause. With Inflight Checks, the inconsistencies are detected on the spot – before they are written to the database.
3. It can be difficult and time-consuming to correct inconsistent data once it has been written to the database as there are several tables in Revenue Accounting. Usually, corrections have to be done manually or a custom report has to be written. When data is detected within an Inflight Check, it is stopped from being written to the database and can simply be reprocessed correctly in the system, once the root cause has been fixed.

Overview of the Inflight Check functionality

Revenue Accounting handles the business logic. There are three options available to send data to Revenue Accounting:

1. Create revenue accounting items via the operational system.
2. Update (and delete) revenue accounting items via the operational system.
3. Manually edit contracts.

Data resulting from the creation or update process is first stored in a data buffer which can be written permanently to the database at a later stage (if no errors occurred). Inflight Checks validate the constraints between the data buffers. The Inflight Checks are completed before the database commit, and database commit is only executed if no inconsistencies are found.

System response: Transactions are stopped for contracts with errors. Other contracts without errors can continue.

Triggering Inflight Checks

Currently, Inflight Checks are implemented for the following processes and will be triggered when you perform one of the following:

1. Revenue accounting item (RAI) processing
 1. Processing RAIs for creating and changing order items

2. Processing invoice RAIs leading to price reallocation
3. Processing fulfillment RAIs (for event-based POBs)
2. Manual user interface interaction
 1. Reprocessing contracts using the *Reprocess Contract* button
 2. Changing a contract
 3. Changing attributes of a performance obligation (POB)
 4. Adding a POB to a contract manually
 5. Changing the price allocation manually
 6. Setting review reasons and status on the regular monitoring worklist
 7. Resolving the conflict on a POB attribute and on price allocation
 8. Fulfilling a POB manually

The BAdI for Inflight Checks gives you the flexibility to:

- Switch Inflight Checks on/off
- Create an exceptional list for excluding certain contracts from the preventative checks
- Customize specific checks

In some cases, you can also redefine the logic for Inflight Checks by extending the BAdI.

i Note

Refer to SAP Note [2476987](#) - BAdI FARR_EXTENDED_CHECK for Inflight Check.

If the process is triggered by the RAI processing in Revenue Accounting, the RAI processing is stopped and the RAIs affected have an error status recorded.

If the process is triggered by manually editing a contract, the you will get an error message and will not be able to save the contract in question.

No Inflight Checks are performed during the following business activities:

- Processing invoice RAIs that don't lead to price reallocation
- Transferring revenue
- Calculating the contract liabilities and contract assets
- Performing a posting run

This means that if a contract receives an Inflight Check error, the above business activities are not blocked.

You can view the errors in the *Analyze Application Log* using transaction `SIG1` and the following selection parameters: object `FARR` and subobject `CONTR_MGMT`.

Procedure for fixing detected inconsistencies

Should the error pop up when you create or update revenue accounting items, it is possible to reprocess the revenue accounting item (for example, via the RAI monitor using transaction `FARR_RAI_MON`).

Should the error pop up when you manually edit a contract, it is possible to log in to the appropriate system and reproduce the exact steps in debugging mode.

i Note

When you edit an erroneous contract manually, the *Save with Error* functionality will no longer work with Inflight Checks.

→ Recommendation

If any potential issues are spotted, and you cannot identify the root cause for this error, you need to do the following:

1. Ensure that the latest version of Inflight Checks is installed in your solution. You can find the latest notes for Inflight Checks by searching for the notes containing the key term: `FARR_INFLIGHT_CHECK`
2. Create an incident with component `FI-RA-VAL` and mention the key term 'Inflight Check C[Number of Inflight Check]' in the header text.
3. Open the system, and then provide the access data to the system and steps to reproduce the problem.

SAP Support will then analyze the root cause based on the data validation results and provide guidance on how to proceed.

8.3 Technical Definition

The Inflight Check framework is implemented in the `CL_FARR_DATA_EXTENDED_CHECK` class of the `FARR_CONTRACT_MAIN` package. It consists of the three main programs:

1. Revenue Accounting Contracts Inflight Check: This program analyzes contract data and runs all error category checks.

i Note

Error category 23 is only run if it is activated separately.

`IF_FARR_DATA_EXTENDED_CHECK~CHECK_CONTRACT`

2. Invoice Mass Update: This program performs an invoice check during mass update processes and only runs the checks for error categories 7, 19 and 21.

`IF_FARR_DATA_EXTENDED_CHECK~CHECK_INVOICE_MASS_UPDATE`

3. Manual Spreading: This program is called during manual spreading for a single contract and only runs the checks for error categories 2, 3, 4, 22 and 23.


i Note

Error category 23 is only run if it is activated separately.

`IF_FARR_DATA_EXTENDED_CHECK~CHECK_MANUAL_SPREADING`

In addition to the three main programs, there is one separate method (inflight check) for each error category.

Customizing via the BAdI

Implement BAdI `Extended Check Before Saving to Database` (Note [2476987](#) .





SAP recommends that you create a new class as a subclass of `CL_FARR_DATA_EXTENDED_CHECK`, and implement redefinitions of the following methods to suit your needs and add your logic:


- Switch individual inflight checks on/off: `INIT_NO_CHECK_SETTINGS`
- Use the exceptional list to exclude contracts: `CHECK_CONTRACT`
- Customize specific checks: `CHECK_CONTRACT`

You can find the BAdI in the SAP IMG Menu. Choose: [Revenue Accounting](#) > [Revenue Accounting Contracts](#) > [Business Add-Ins](#) >

Notes

The following table shows the required notes for customers who have never installed Inflight Checks before.

Note No.	Description
2476987 	BAdI <code>FARR_EXTENDED_CHECK</code> for Inflight Check
2485621 	UDO Report for Note 2476987
2543299 	Adding long texts to the Inflight Check messages
2533254 	Inflight Check Documentation

To view all the notes that are currently available, please visit support.sap.com  and use the *Access Expert Search* functionality. Enter the following parameters:

Component: `FI-RA`

Search Term: `FARR_INFLIGHT_CHECK`

A list with all current notes for the Inflight Checks will be displayed. SAP may release enhancements and bug fixes in the form of notes. SAP recommends that you implement notes which address problems that you encounter individually.

8.4 Error Categories

Before each category is elaborated on in detail below, here is a summary of all the checks that are performed.

The error categories check that:

- the total sum of allocation effects for all performance obligations within a revenue accounting contract is zero and the total allocated price of a contract is equal to the total transaction price.

- the allocated amount of a performance obligation is equal to the total amount of all the periods from the revenue schedule for this performance obligation in the deferral item table.
- the effective quantity of the performance obligation is equal to the total quantity of all fulfillments for an event-based performance obligation, if the performance obligation is fully fulfilled; the effective quantity of the performance obligation is equal to the total quantity of all fulfillments for a time-based performance obligation.
- the effective quantity of a time-based performance obligation is equal to the scheduled quantity from the deferral item table and fulfillment table.
- the latest deferral item flag is set correctly.
- the total number of posted revenues is equal to the scheduled number in the deferral item table.
- the total number of posted invoice corrections is equal to the invoiced amount in the deferral items.
- the special indicator is populated correctly.
- the allocation effect of a performance obligation is equal to the allocated amount minus the transaction price of this performance obligation.
- the transferred invoice amount in the invoice data buffer is equal to the posted invoice amount in the posting data buffer.
- there aren't any performance obligations without deferral items.
- the transaction currency and local currency have different signs.
- the profitability segment is correctly maintained according to the settings in CO-PA.
- the deferral items are created, updated, or deleted with the correct reconciliation keys.
- there are the following inconsistent situations during revenue accounting item processing for contracts with a fixed exchange rate method:
 - the fixed rates of the contracts are missing.
 - the currency keys in posting entries are different from those in the corresponding contracts.
 - the currency key settings at contract level are different from those at company code level.
 - the exchange rate difference is missing during invoice processing.

Technical details

The purpose of this section is to introduce some basic technical information to help you to understand the descriptions of the error categories below.

The following table provides you with the technical field names corresponding to the descriptions and terms used in this chapter. The technical field names will help you to check values in database tables or to debug code.

Description	Technical Field Name
Allocated price	ALLOC_AMT
Allocation effect	ALLOC_DIFF
Amount from original document	DOC_AMT_CUMULATE
Amount from prospective change	PRO_AMT_CUMULATE

Description	Technical Field Name
Condition	CONDITION_TYPE
Effective quantity	EFFECTIVE_QTY
Exchange rate 1	EXCHANGE_RATE
Exchange rate 2	EXCHANGE_RATE2
Exchange rate 3	EXCHANGE_RATE3
Fulfillment type	FULLFILL_TYPE
Invoice amount delta	INV_AMT_DELTA
Latest entry flag	LATEST_DEFITEM
Local currency 1	HWAER
Local currency 2	HWAE2
Local currency 3	HWAE3
POB ID	POB_ID
Posting category	POST_CAT
Posted revenue in transaction currency	BETRW
Posted revenue in local currency 1	BETRH
Posted revenue in local currency 2	BETR2
Posted revenue in local currency 3	BETR3
Profitability segment number	PAOBJNR
Reconciliation key	RECON_KEY
Remaining standalone selling price	REMAINING_SSP
Reported quantity	REPORTED_QTY
Revenue amount delta	REV_AMT_DELTA
Revenue quantity delta	REV_QTY_DELTA
Special indicator	SPEC_INDICATOR
Standalone selling price	SSP
Transaction currency	WAERS

Description	Technical Field Name
Transaction price	TRX_PRICE
Creation flag	CRT_FLAG
Update flag	CHG_FLAG
Deletion flag	DEL_FLAG

The latest entry flag

The latest entry flag, technical name `LATEST_DEFITEM`, is a field in the deferral item buffers marking the most recent entry. It is a character string of length one with the following value range:

Value	Description
X	true
[blank]	false

The deferral item special indicator field

The special indicator, technical name `SPEC_INDICATOR`, is a field in the deferral item buffers. It is a character string of length one with the following value range:

Value	Description
C	Main Cost
D	Allocation Difference
P	Main Price
[blank]	Normal Entry

This means that for every main price condition type from the sender component, the special indicator field must be populated with value *P*. For each reconciliation key and performance obligation, there must be one condition indicated as the main price condition.

8.4.1 C01: Incorrect Balance of Allocation Effects

The allocated amount of a performance obligation (POB) is calculated based on the standalone selling price (SSP), which is derived from BRF+ or comes from the sender component.

The allocation effect is the difference between the transaction price and the allocated amount. The sum of the allocation effects for all POBs within a contract must be zero. Therefore, if the allocation effect balance is not equal to zero, an error occurs. The total amount (transaction price) of the contract must not be changed after allocation. The check is executed at contract level. A possible root cause for triggering the inflight check could be issues with the price allocation BAdI.

❖ Example

In the table below, the contract has two performance obligations: POB1 and POB2. The total of the allocation effects doesn't amount to 0. As the allocation effect is the difference between the allocated price and the contractual price, this means that the total allocated price differs from the total contractual price. This is incorrect because the contractual price must always be distributed over the POBs within the contract and total the same amount.

POB ID	Transaction Price (EUR)	Allocated Price (EUR)	Allocation Effect (EUR)
POB1	100	120	+20
POB2	200	190	-10
Total	300	310	+10 (Incorrect)

Buffers checked:

- Deferral item buffer: MTS_DEFITEM_LATEST_NSTAT_PRICE

8.4.2 C02: The allocated amount is not equal to the revenue schedule of a POB

For time-based performance obligations (POB), the total scheduled amount of a POB must be equal to the allocated amount.

❖ Example

Period	Revenue (EUR)
1	100
2	200
3	100
Total	400 (Incorrect)

However, the allocated price of the POB is EUR 350.

POB ID	Allocated Amount (EUR)
POB1	350 (Incorrect)

Exceptional cases:

1. A POB without start date for start date type = 2 (meaning: even if there is an allocated amount, it is not possible to do revenue recognition for this POB)
2. A POB not fully fulfilled for start date = 3 (meaning: revenue recognition should be triggered by a fulfillment event – without being fully fulfilled means that there is no revenue recognition)
3. A POB not fully fulfilled for compound structure
4. Suspend revenue = ABAP_TRUE (meaning: revenue is pending, no revenue recognition done)

Buffers checked:

- Deferral item buffer: MTS_DEFITEM_NSTAT_PRICE
- Performance obligation buffer: MTS_POB_DATA_BUFFER

8.4.3 C03: The POB quantity is not equal to the fulfilled quantity for a fully fulfilled POB

The check is only performed for fully fulfilled event-based performance obligations (POB) or distinct time-based POBs. When a POB is fully fulfilled, its effective quantity must be equal to the fulfilled quantity (reported quantity from the fulfillment buffer). The fulfilled quantity consists of quantities from posting. If the performance obligation is soft deleted, the fulfilled quantity must be zero.

For time-based POBs, the fulfillment is created upon contract creation. This means that the check can be performed at any time. The check is performed at performance obligation level.

i Note

The quantity check is based on the numerator/denominator of the quantity.

Example

POB ID	Effective Quantity
POB1	1 (Incorrect)

At the same time, POB1 has fulfillments in four consecutive periods which do not total 1.

Period	Quantity
1	0.25
2	0.25
3	0.25

4	0.27
Total	1.02 (Incorrect)

Exceptional cases:

1. A POB without start date for start date type = 2
2. A POB with start date = 3
3. A fulfillment entry has a pending status
4. A POB with event type Goods Issue (GI) and cost recognition with over-fulfillment (more goods issued than planned)

Buffers checked:

- Fulfillment buffer: MTS_FULFILLMENT_BUFFER
- Performance obligation buffer: MTS_POB_DATA_BUFFER

8.4.4 C04: The fulfilled, unsuspended quantity is not equal to the fulfilled deferral item quantity for a time-based POB

For time-based, distinct performance obligations (POB), the fulfilled deferral item quantity must be equal to the unsuspended fulfilled quantity. Fulfilled quantity here means the quantity that has already been calculated by revenue accounting for the respective period.

The check only considers the main price condition quantities and not the cost condition quantities in the case of distinct performance obligations. For linked performance obligations without a price condition, the allocated amount quantities are used. The check is executed at performance obligation level.

i Note

The quantity check is based on the numerator/denominator of the quantity.

Example

A POB has fulfillments in four consecutive periods which total to 1.02.

Period	Reported Quantity
1	0.25
2	0.25
3	0.25
4	0.27
Total	1.02 (Incorrect)

At the same time, the POB has four deferral items which record revenues for later recognition which only total to 1.0.

Period	Revenue Quantity Delta
1	0.25
2	0.25
3	0.25
4	0.25
Total	1.00 (Incorrect)

❁ Example

A POB has four deferral items corresponding to two periods with two different condition types each. The deferral item for period 1 and condition type `PR00` has a quantity of 0.25 but the deferral item for that same condition type in period 2 has a quantity of 0.3. This is incorrect because the quantities must be the same for the same condition type. The same holds true for condition type `CORR`.

Period	Condition	Quantity
1	PR00	0.25
1	CORR	0.25
2	PR00	0.30 (Incorrect)
2	CORR	0.25 (Incorrect)

Exceptional cases:

The following cases are excluded from the check:

1. A POB with transaction price = 0
2. A POB with allocated price = 0
3. A fulfillment entry has pending status

Buffers checked:

- Fulfillment buffer: `MTS_FULFILLMENT_BUFFER`
- Deferral item buffer: `MTS_DEFITEM_DATA_BUFFER`

8.4.5 C05: The latest entry flag for a deferral item is incorrect or missing

To ensure that deferral items are handled consistently in revenue accounting, the latest deferral item flag must be populated correctly.

In the deferral item table, there are entries at condition level for each performance obligation (POB) and the relevant reconciliation keys. The latest deferral item entry for each condition of a performance obligation (the highest reconciliation key from a time perspective) must be populated. The check is executed at performance obligation level.

8.4.5.1 C0501: Some deferral items do not have the latest entry flag

❖ Example

The performance obligation POB1 has three deferral items corresponding to three consecutive periods. The periods can be seen via the reconciliation key. None of the deferral items have the latest entry flag. This is incorrect because the deferral item with the reconciliation key corresponding to the most advanced period must have the latest entry flag.

Reconciliation Key	POB ID	Condition	Amount from Original Document (EUR)	Latest Entry Flag
2015012000001	POB1	PR00	100	
2016001000001	POB1	PR00	100	
2016002000001(largest)	POB1	PR00	100	<blank> (Incorrect – should be X)

Exceptional cases:

1. A fulfillment of the POB is pending due to the status being either *Suspend Revenue Posting*, *Conflict* or *Error*.
2. A POB is marked as soft-deleted.

Buffers checked:

- Deferral item buffer: MTS_DEFITEM_DATA_BUFFER_WO_DEL
- Performance obligation buffer: MTS_POB_DATA_BUFFER

8.4.5.2 C0502: More than one or no deferral item has the latest entry flag for each condition type

There must be exactly one deferral item with the latest entry flag for each condition type.

❖ Example

The performance obligation POB1 has three deferral items corresponding to three consecutive periods. The periods can be seen via the reconciliation key. Two of the deferral items have the latest entry flag. This is

incorrect because only the deferral item with the reconciliation key corresponding to the most advanced period must have the latest entry flag.

Reconciliation Key	POB ID	Condition	Amount from Original Document (EUR)	Latest Entry Flag
2015012000001	POB1	PR00	100	
2016001000001	POB1	PR00	100	X (Incorrect)
2016002000001(largest)	POB1	PR00	100	X (Correct)

Buffers checked:

- DEFITEM BUFFER: MTS_DEFITEM_DATA_BUFFER_WO_DEL

8.4.6 C06: The scheduled revenue amount is not equal to the posted revenue amount

The scheduled revenue amount of a performance obligation (POB) to be posted in a specific period is different from the actual posted revenue amount for the same reconciliation key. Only deferral items with a reconciliation key that have a status other than Open are considered for the check. Deferral items with an open reconciliation key can have scheduled revenue for which no postings exist yet.

The check is performed for transaction currencies and is performed at POB level.

In addition to the main check condition above, C06 checks the following special case:

For a POB that has a revenue recognition block, the scheduled revenue in the deferral items for non-statistical price conditions, and with open reconciliation keys, **must** be cleared. The only exceptions to this rule are:

- There has been a prospective split resulting from a contract modification and the deferral item to be checked is affected by this split. In this case, the deferral item can have revenue despite the POB having a revenue recognition block.
- The deferral item in question has a deletion flag.
- If there is an impairment of asset, revenue is recognized immediately even if there is no fulfillment. This means that even if the POB has a revenue recognition block, the revenue must be recognized and thus the deferral items can have revenue to be recognized.

❖ Example

The performance obligation POB1 has a deferral item for a scheduled revenue of EUR 100 in the period January 2016.

Reconciliation Key	POB ID	Condition	Revenue Amount Delta (EUR)
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2016001000001	POB1	PR00	100
---------------	------	------	-----

At the same time, POB1 has posted revenue with a total of EUR 120 for the same period. This is incorrect because the scheduled revenue and the posted revenue must be equal.

Reconciliation Key	POB ID	Condition	Posting Category	Posted Revenue in Transaction Currency (EUR)
2016001000001	POB1	PR00	RV	120

Buffers checked:

- Deferral item buffer: MTS_DEFITEM_DATA_BUFFER
- Posting data buffer: MT_POSTING_DATA_INST
- POB data buffer: MTS_POB_DATA_BUFFER

8.4.7 C07: The scheduled invoice amount is not equal to the posted invoice amount

The scheduled invoice amount of a performance obligation (POB) to be posted in specific periods, is different from the actual posted invoice amount. The check is performed for transaction currencies and executed at performance obligation level.

❖ Example

The performance obligation POB1 has a deferral item for a scheduled revenue of EUR 100 in the period January 2016.

Reconciliation Key	POB ID	Condition	Invoice Amount Delta (EUR)
2016001000001	POB1	PR00	100

At the same time, POB1 has posted revenue with a total of EUR 120 for the same period. This is incorrect because the scheduled revenue and the posted revenue must be equal.

Reconciliation Key	POB ID	Condition	Posting Category	Posted Revenue in Transaction Currency (EUR)
2016001000001	POB1	PR00	IC	120

Buffers checked:

- Deferral item buffer: MTS_DEFITEM_DATA_BUFFER

- Posting buffer: MT_POSTING_DATA_INST

8.4.8 C08: The special indicator flag is incorrect or missing

All deferral items with the latest entry flag can only have, at most, one main price, one cost condition, and one allocation difference.

To ensure that deferral items are handled consistently in revenue accounting, the special indicator flag must be populated correctly. For each leading or distinct performance obligation (POB), there must be exactly one condition indicated as the main price condition. In this case, the special indicator must be set to *P*. For each leading or distinct performance obligation (POB), there must not be more than one allocation difference condition with the special indicator *D*. The check is performed at POB level.

i Note

This check will not be performed for linked POBs, performance obligations that are added manually with no main price condition, with no transactional price from SD or that have a transactional price with an excluded allocation price.

❖ Example

The performance obligation POB1 has two deferral items corresponding to the same period but with different condition types. Both deferral items are indicated as the main price. This is incorrect because only one deferral item must carry the main price condition.

Reconciliation Key	POB ID	Condition	Special Indicator	Latest Entry Flag
2016001000001	POB1	PR00	P	X
2016001000001	POB1	PR01	P	X

Buffers checked:

- Deferral item buffer: MTS_DEFITEM_DATA_BUFFER

8.4.9 C09: The transaction price, allocated amount and allocation effect of a POB are inconsistent

The allocation effect of a performance obligation (POB) must be equal to the allocated price of a POB, minus the transaction price. In this comparison, the transaction price and allocated amount are derived from the POB master data and the allocation effect is calculated based on the corresponding allocation effect condition in the deferral item. This means that the amount from the original document as well as the amount from the prospective change are added together for the deferral item with the latest entry flag to form the allocation effect.

The check is performed at POB level.

i Note

This check will not be performed for the following cases:

- Bill of material (BOM) cases in which the amount of header performance obligation is distributed to sub-item performance obligations.
- At least one of the POBs in the contract is set to an error status in contract management.

❖ Example

The performance obligation POB1 has a deferral with a value of EUR 10 coming from the operational document and a value of EUR 10 coming from a prospective change. The deferral item value totals EUR 20. This value represents the allocation effect of POB1.

Reconciliation Key	POB ID	Condition	Amount from Original Document (EUR)	Amount from Prospective Change (EUR)
2016001000001	POB1	CORR	10	10

In the master data, POB1 has an allocated amount of EUR 100 and a transaction price of EUR 90. The allocation effect works out to be only EUR 10 rather than EUR 20 – which is incorrect.

POB ID	Allocated Price (EUR)	Transaction Price (EUR)
POB1	100	90

i Note

The error can arise from either the deferral item or with the POB master data, or both.

Buffers checked:

- Performance obligation buffer: `MTS_POB_DATA_BUFFER`
- Deferral item buffer: `MTS_DEFITEM_LATEST_NSTAT_PRICE`

8.4.10 C13: The transferred invoice amount is not equal to the posted invoice amount in the transaction currency

The total value of all invoices sent to contract management for a performance obligation (POB) must be equal to the total amount of posted invoice corrections for this performance obligation. The check is executed at performance obligation level for the transaction currency.

❖ Example

The performance obligation POB1 has an invoice with condition type PRO0 which was transferred in January 2016 and with a value of EUR 10. The period can be seen via the reconciliation key.

Reconciliation Key	POB ID	Condition	Invoice Amount Delta (EUR)
2016001000001	POB1	PROO	10

At the same time, POB1 has a posted invoice in the same period and has the same condition type but with a value of EUR 15. This is incorrect as the values on the transferred and posted invoices should be equal for the same reconciliation key and condition.

Reconciliation Key	POB ID	Condition	Posted Revenue in Transaction Currency (EUR)
2016001000001	POB1	PROO	15

Exceptional cases:

1. A non-distinct performance obligation
2. A performance obligation in a bill of material (BOM) structure

Buffers checked:

- Posting buffer: MT_POSTING_DATA_INST
- Invoice buffer: MTS_INVOICE_DATA_BUFFER

8.4.11 C15: A POB does not have a deferral item

Each performance obligation (POB) in contract management should have one or more deferral items which include all necessary information for the revenue schedule of the POB. This means that without deferral items, it is not possible to post revenues for the POB. The check is executed at POB level.

Exceptional cases:

1. A distinct type is a compound
2. A POB refers to the bill of material (BOM) header
3. A POB is a linked POB, and is excluded from allocation
4. A POB is deleted, soft deleted or marked to be deleted
5. A POB has a transaction price of zero
6. A POB has an allocated price of zero
7. At least one of the POBs in the contract has an error status in contract management

Example

The performance obligation with ID 1234 has an allocated amount of EUR 100 and an original price of EUR 200.

POB ID	Allocated Price (EUR)	Transaction Price (EUR)
--------	-----------------------	-------------------------

1234	100	200
------	-----	-----

When the POB was created, no deferral items were created at all. This is incorrect because deferral items must always be created when a POB is created.

Buffers checked:

- Performance obligation buffer: MTS_POB_DATA_BUFFER
- Deferral item buffer: MTS_DEFITEM_DATA_BUFFER

8.4.12 C17: When invoice correction and posted revenue amounts are generated, they do not display the same sign in all currencies

The amount in the transaction currency (BETRW), the amount in local currency (BETRH) and the amounts in the second (BETR2) and third (BETR3) local currencies are checked for the same sign (mathematical).

❖ Example

Posting data buffer

POB ID	Posting Category	BETRW (USD)	BETRH (EUR)	BETR2 (EUR)	BETR3 (EUR)
1234	100	200	300	300	-300

The performance obligation with ID 1234 has an amount of EUR -300 in BETR3. However, it should be EUR 300.

Buffers checked:

- Posting data buffer: MT_POSTING_DATA_INST

8.4.13 C18: The profitability segment of the posting entry is not the same as that of the POB

This error is raised when the performance obligation (POB) relating to a posting entry has a different value for the profitability segment to the posting entry itself. The profitability segment number (PAOBJNR – from CO-PA) is compared. An error is also triggered if no performance obligation is found relating to an entry in the posting data buffer.

This check is only valid and will only be performed for the following posting categories:

- Revenue (RV)
- Exchange rate difference (ED)
- Invoice correction (IC)

- Cost (CO)
- Cost correction (CC)/ Exceptional cost correction (CE)

❁ Example

The performance obligation with ID 1234 has the profitability segment number 34125 in its POB master data.

POB ID	Profitability Segment Number
1234	34125

A posting entry for POB 1234 uses a different profitability segment number. This is incorrect – they must both be the same.

POB ID	Posting Category	Posted Revenue in Transaction Currency (USD)	Profitability Segment Number
1234	RV	200	34521

Exceptional cases:

The check is not performed if the posting category is Exchange Rate Difference (ED) and the account is not maintained as a cost element.

Buffers checked:

- Posting data buffer: MT_POSTING_DATA_INST, MT_POSTING_DATA_UPD
- Performance obligation buffer: MTS_POB_DATA_BUFFER

8.4.14 C19: Created, updated or deleted deferral item has an invalid reconciliation key

A reconciliation key is associated with a deferral item using the contract identification, the reconciliation key identification, the accounting principle and the company code. A C19 error is raised when a deferral item is either created, deleted or changed but the reconciliation key status is neither *Open* (O) nor *Migration* (M). Hence, reconciliation key statuses which are invalid and lead to an error for a deferral item that is either created, updated or deleted, are: *Closed* (C), *Time-based* (T), *Liability* (L), *Failed* (F), *Canceled* (A), *Simulation* (S) and *Replaced* (R).

i Note

Only the deferral item data buffer can indicate whether a deferral item is created, updated or deleted. The deferral item data buffers carry three flags to indicate whether the deferral item was either created, updated or deleted.

❁ Example

The system wants to update a deferral item of the performance obligation with ID 1234. This deferral item has reconciliation key 201601000001.

Contract ID	POB ID	Reconciliation Key	Creation Flag	Update Flag	Deletion Flag
001	1234	201601000001		X	

You can see in the reconciliation key table that this key is already closed (status = C). A closed reconciliation key is invalid for a deferral item which is to be updated.

Contract ID	Reconciliation Key	Status
001	201601000001	C

Exceptional cases:

1. You can delete the non-transferred deferral item of a time-based performance obligation (`TM_CONVERT = false`) when the reconciliation key status is set to *Migration*.
2. You can delete the deferral item of a performance obligation with deletion flag `DEL_FLAG = true`, provided that no invoices have been issued and no revenue has been recognized for this performance obligation, yet.
3. You can change the latest entry flag of the deferral item.
4. You can change `DOC_AMT_DELTA`.
5. If the fulfillment is pending, you can change `REV_QTY_POSTED` as well as the numerator and/or denominator.
6. For a changed deferral item, the corresponding reconciliation key is in a later period than the end date of the time-based performance obligation.
7. If all amounts for a deferral item are zero, the check will not be performed.

Buffers checked:

- Deferral item: `MTS_DEFITEM_DATA_BUFFER`
- POB data buffer: `MTS_POB_DATA_BUFFER`
- Fulfillment buffer: `MTS_FULFILLMENT_PENDING`

8.4.15 C21: The posted amount in a local currency is not consistent with the amount calculated using the fixed exchange rate

A contract can contain up to three different local currencies. The fixed exchange rate for each currency is saved with the contract master data. They are used for converting the transaction price, which may have another currency, into the local currencies.

This Inflight Check recalculates the posted amounts for a contract using the fixed local currency exchange rates from the contract master data. The resulting values are then compared to the respective amount in the posting data. If they are not equal, an error will be raised.

This check is performed at contract level.

Constraints:

The posting category must be *RA* (Receivables Adjustment).

Additional checks:

1. Are the currency key settings of the company code consistent with those of the contract?
2. Are the currency key settings of the posting entries consistent with those of the contract?
3. Is the exchange difference missing for the contract ID in the local currency?
4. Is the fixed rate maintained for an existing posting entry?
5. Is the contract header exchange rate saved in the posting management rather than in the contract management, and is the posting category Invoice Correction?

Example

The contract `CONTRACT1` uses the local currencies EUR, HKD and USD with fixed exchange rates 1.0, 5.4 and 2.0, respectively. The transaction price is EUR 360. As the transaction currency and the first local currency are both in EUR, the first fixed exchange rate equals 1.0. The second fixed exchange rate then corresponds to EUR -> HKD and the third fixed exchange rate corresponds to EUR -> USD.

Contract ID	Exchange Rate 1	Exchange Rate 2	Exchange Rate 3	Transaction Price (EUR)
CONTRACT1	1.0	5.4	2.0	360

The posting data for `CONTRACT1` contains the amounts in all four currencies (transaction currency and three local currencies). The last posting entry is incorrect because the amount in `BETR3` is USD 300, but with the corresponding exchange rate from the contract master data it works out to be $120 * 2.0 = 240$.

Contract ID	BETRW	WAERS	BETRH	HWAER	BETR2	HWAE2	BETR3	HWAE3
CONTRAC T1	120	EUR	120	EUR	648	HKD	240	USD
CONTRAC T1	120	EUR	120	EUR	648	HKD	240	USD
CONTRAC T1	120	EUR	120	EUR	648	HKD	300	USD

Buffers checked:

- Posting data table: `MT_POSTING_DATA_INST`
- Contract data buffer: `MTS_CONTRACT_DATA`

8.4.16 C22: POB attributes are inconsistent

This check consists of various attribute checks at performance obligation (POB) level. It is only executed for performance obligations which have neither a soft-deletion flag nor are marked as deleted, but have one of the following conflict flags:

1. Pending conflict

2. Attribute conflict
3. Spreading conflict

The error is raised if:

- C2201. The spreading has not been done manually for the performance obligation but there is still a spreading conflict present.
- C2202. The manual spreading flag of the performance obligation is not set despite corresponding manual change records for manual spreading being present.
- C2203. The manual spreading flag of the performance obligation is set but the corresponding manual change records for manual spreading are missing.
- C2204. The manual change records for a performance obligation indicate a conflict but at the same time the performance obligation has no spreading conflict flag.
- C2205. The manual change records for a performance obligation do not indicate a conflict but at the same time the performance obligation has a spreading conflict flag.
- C2206. A performance obligation is marked for pending conflict resolution but the corresponding contract is not.
- C2207. A contract is marked for pending conflict resolution but none of the performance obligations included in this contract are.
- C2209. A performance obligation has a spreading conflict but the allocated amount is equal to zero.
- C2210. A performance obligation has a spreading conflict but no posting period is open.
- C2211. The transaction price of a performance obligation is updated via a manual change item without a condition type.

Buffers checked:

- Fulfillment data buffer: `MTS_FULFILLMENT_BUFFER`
- Contract data buffer: `MTS_CONTRACT_DATA`
- Manual change data buffer: `MTS_MANL_CHNG_DATA`
- POB data buffer: `MTS_POB_DATA_BUFFER`

8.4.17 C23: The POB should not have a spreading conflict

This error is raised when a performance obligation (POB) indicates a spreading conflict but the total scheduled revenue equals the allocated amount of the performance obligation. The check recalculates the revenue schedule and evaluates the total scheduled revenue amount. The value calculated is then compared to the allocated amount of the performance obligation.

If the values are not equal, the spreading conflict flag is presumed to be false and further processing of the concerned contract is halted.

The check is only performed for performance obligations which are neither soft-deleted nor marked for deletion.

i Note

Inflight Check C23 includes complex calculation processes and may pose a significant impact on system performance. The check is not activated in the SAP standard BAdI implementation. If need be, Inflight Check C23 can be activated within a custom BAdI implementation.

❖ Example

The performance obligation POB1 has an allocated amount of EUR 360 and it's marked as having a spreading conflict.

POB ID	Allocated Amount (EUR)	Spreading Conflict
POB1	360	X (incorrect)

The revenue spreading is listed as follows over three periods:

Period	Revenue (EUR)
1	100
2	100
3	160
Total	360

The total scheduled revenue amounts to EUR 360 which equals the allocated amount of POB1. Thus, there is no spreading conflict present and the spreading conflict flag in the POB master data is incorrect.

Buffers checked:

- Fulfillment data buffer: MTS_DEFITEM_DATA_BUFFER
- POB data buffer: MTS_POB_DATA_BUFFER
- Contract data buffer: MTS_CONTRACT_DATA
- Fulfillment data buffer: MTS_FULFILLMENT_BUFFER

8.4.18 C24: Remaining SSP is not equal to zero for a POB with the end date in a previous period during a contract modification

For a time-based performance obligation (POB) with the end date in a previous period, the remaining standalone selling price (SSP) should be zero. This check is triggered during a contract modification given the following criteria:

1. *Contract Change Mode* is neither *External Retrospective* nor empty
2. The revenue accounting contract is not soft-deleted

The C24 error is raised when a performance obligation is found with remaining SSP that is not equal to zero, and the end date of the performance obligation is in an earlier period than the current period in which the contract modification was performed.

Exceptional cases:

1. A performance obligation with start date type 3 (this is always the event date)
2. A performance obligation with pending fulfillment entries

3. A performance obligation with non-zero fulfillment entries in the current contract modification period or in a future period

❖ Example

The time-based performance obligation POB1 has a standalone selling price of EUR 500 and was ended in June 2015.

POB ID	Fulfillment Type	End Date	SSP (EUR)
POB1	time-based	06/30/2015	500

During a contract modification, change data for POB1 is created as follows:

POB ID	Remaining SSP (EUR)	Timestamp
POB1	100 (incorrect)	11/20/2017

This is incorrect because as POB1 was ended in a previous period, the remaining standalone selling price must now be zero.

Buffers checked:

- Change type buffer: `MTS_CHANGE_TYPE_BUFFER`
- POB data buffer: `MTS_POB_DATA_BUFFER`

8.4.19 C25: Incorrect or missing source of price flag

This check will prevent contracts containing a performance obligation (POB) with an incorrect or missing *source of price* flag from being written to the database.

The source of price flag is created and maintained within the contract management of revenue accounting. This check ensures that this flag is set correctly at specific stages, later in the lifecycle of a contract.

A contract must always have at least one POB for which the source of price flag is set. There are several rules for setting this flag.

A POB must have the source of price flag if it has the latest deferral item for a main price and whenever a price condition (except a reversed condition type, such as SSP) is provided for a revenue accounting item. This is true for the following cases:

1. Normal POB ('standalone POB', not part of any structure):
The POB must have the source of price flag if it has either a latest deferral item for a main price.
2. *Leading* POB
3. *Compound group* POB (only lower level POBs)
4. *BOM*-related POB (distinct and compound BOM)

In the following cases, the POB must never have the source of price flag:

1. Linked POB
2. Manually added POB
3. Compound group header POB

POBs which are already marked for deletion are excluded from the check.

❖ Example

The distinct performance obligation POB1 is not part of any POB structure or hierarchy. It does not have the source of price flag.

POB ID	Distinct Type	Higher Level POB	BOM Header POB	Source of Price
POB1	D (distinct)	[blank]	[blank]	[blank] (incorrect)

However, there is a corresponding deferral item for a main price and a condition type assigned to POB1.

Reconciliation Key	POB ID	Condition	Special Indicator	Category	Latest Entry Flag
2017012001	POB1	PR00	P (main price)	P (price)	X

Condition type

POB ID	Condition	Category
POB1	PR00	P (price)

This is incorrect because POB1 must carry the source of price flag.

Buffers checked:

- Condition type buffer: MT_COND_TYPE_DATA_BUFFER
- POB data buffer: MTS_POB_DATA_BUFFER
- Deferral item buffer: MTS_DEFITEM_DATA_BUFFER_LATEST

8.4.20 C26: An error occurred during contract modification

The check is only performed for performance obligations (POBs) which are currently in *Change Mode*. Depending on how you configured the Customizing activity *Configure Accounting Principle-specific Settings* (FARR_VC_ACCT_PR) for a company code and accounting principle, either a prospective or a retrospective contract change is applied when the scope of a contract is changed.

POBs that are to be deleted are excluded from the check.

This check is performed at POB level.

Prospective change

A POB that is unit-distinct must have the HAS_PRO_CHANGE flag unless it is newly created within this contract modification.

If there is a prospective change, the system performs a prospective split on the deferral items. The deferral item which corresponds to an open reconciliation key in the period of the contract change is flagged with the prospective split flag (PRO_SPLIT = 'X'). This flag must be set on at least one POB in the period of the contract change. If this flag is missing, a C26 Inflight Check error is raised.

The split quantity (PRO_QTY_CUMULATE), that represents the revenue quantity posted in periods prior to the current change, is stored on all deferral items for this POB, condition type and deferral category, starting from the period in which the contract change was performed.

Retrospective change

There are no particular flags nor value fields to be checked but it is important that no attributes from the prospective change are present in a retrospective change.

Since change type records are kept within Revenue Accounting period-wise, there must be exactly one change type record for the POB with the fiscal year and period in which the contract modification has taken place. The change type record also indicates whether a prospective or a retrospective change has taken place.

Example

Example 1

The performance obligation POB1 has a prospective change but the field CHANGE_MODE determines a retrospective change.

POB ID	CHANGE_MODE	HAS_PRO_CHANGE
POB1	R	X

Example

Example 2

In this example, a contract modification was performed in period 2018/03. Thus, the split quantity is calculated and the prospective split flag is set. All deferral items, starting from the contract change period, are updated with the split quantity (PRO_QTY_CUMULATE).

If the split quantity on the last deferral item in the contract change period (in this case, 2018/03) deviates from the split quantity on the latest deferral item, a C26 Inflight Check error is raised.

RECON_KEY	POB_ID	CONDITION_TYPE	REV_QTY_D ELTA	REV_QTY_P OSTED	PRO_QTY_C UMULATE	HAS_PRO_S PLIT	LATEST_DE FITEM
201801001	POB1	PR00	2	0	0	-	-
201802001	POB1	PR00	2	2	0	-	-
201803001	POB1	PR00	2	4	0	-	-
201803001	POB1	PR00	2	2	4	X	-
201804001	POB1	PR00	2	4	4	-	-
201805001	POB1	PR00	2	6	4	-	X

Buffers checked:

- POB data buffer : MTS_POB_DATA_BUFFER
- Change type buffer : MTS_CHANGE_TYPE_BUFFER

- Deferral item buffer : MTS_DEFITEM_NSTAT_PRICE
MTS_DEFITEM_LATEST_NSTAT_PRICE

8.4.21 C27: The total scheduled revenue is not equal to the posted revenue on the latest deferral item

For any performance obligation (POB), the total scheduled revenue should be equal to the posted revenue on the latest deferral item of the POB. Error category 27 is important because all scheduled revenue must eventually be posted, and the latest deferral item is supposed to contain all the revenue information at the end of the schedule. In case there has been a prospective split for that POB and condition type, then the split amount counts towards the posted revenue.

If the deferral items are inconsistent, then there is a high risk of posting the wrong amount to the subledger.

This check is performed at POB level and per condition type. This means that when a POB has multiple condition types, the check is performed for each of them. The check is triggered during any contract creation or change.

The C27 error is raised when a POB and condition type are found where the scheduled revenue does not match the posted revenue on the latest deferral item.

Exceptional cases:

1. A performance obligation is marked for deletion.
2. A performance obligation with pending fulfillment entries.

❖ Example

The time-based performance obligation POB1 has a scheduled revenue of EUR 500 in each period and undergoes a prospective split in period 10/2018.

POB ID	Condition Type	Reconciliation Key	Revenue Amount Delta (EUR)	Revenue Amount Posted (EUR)	Split Amount (EUR)	Latest Deferral Item
POB1	PR00	20180080000 101	500	0	0	
POB1	PR00	20180090000 101	500	500	0	
POB1	PR00	20180100000 101	500	0	1000	
POB1	PR00	201801100001 01	500	500	1000	
POB1	PR00	201801200001 01	500	500 (Incorrect)	1000	X

The total scheduled revenue over the five periods displayed is therefore EUR 2500 EUR. The posted revenue on the latest deferral item is:

Rev. amt. delta + Rev. amt. posted + Split amt. = 500 EUR + 500 EUR + 1000 EUR = 2000 EUR.

This is incorrect. The value in the column *Revenue Amount Posted* should be EUR 1000. The scheduled revenue from period 11/2018 was not added correctly.

Buffers checked:

- Deferral item buffer : MTS_DEFITEM_DATA_BUFFER
MTS_DEFITEM_DATA_BUFFER_LATEST
- POB data buffer : MTS_POB_DATA_BUFFER
- Fulfillment buffer : MTS_FULFILLMENT_PENDING

8.5 Data Validation

8.6 Data Validation

This detailed chapter on Data Validation is designed to provide you with a comprehensive overview of the functionality.

Data Validation Checks are post database commit checks which are implemented in the SAP Revenue Accounting & Reporting solution to validate data that is already written to the database tables. Data Validation Checks implement verifications of equivalent error categories.

There are currently 21 different error categories which identify inconsistencies in your data.

The error categories for the Data Validation Checks use the prefix *E*.

i Note

Both Inflight Checks and Data Validation Checks may be updated by SAP, as and when required. This means that more error categories can be added by SAP depending on whether further common patterns are discovered. SAP recommends that you monitor these on a regular basis.

All categories are equivalent to each other. However, the Data Validation Checks currently only cover error categories 1 to 19, 22 and 25.

This detailed document on Data Validation Checks is designed to provide you with a comprehensive overview of the functionality.

→ Recommendation

Please ensure that you have the latest version of the Data Validation Checks solution installed (**2635686 / RA - Data Validation / Improvements to Data Validation Check**).

In this document, a revenue accounting contract will be referred to simply as a 'contract'.

Context

In Revenue Accounting, Data Validation Checks play an important role in detecting data inconsistencies to avoid storing wrong data before it is written permanently to the database.

Inconsistent data in a production environment can cause problems with recognized revenue or can have an impact on the balance sheet. It can also cause issues with manual activities in revenue accounting contracts. Inconsistent data can result from issues in functional SAP Revenue Accounting and Reporting modules (Integration Component, Adapter Re-Use Layer (ARL) and Contract Management), wrong configuration in the sender components and BRF+, incorrect BAdI implementations or insufficient data quality of migrated data.

1. Data Validation Checks determine technical inconsistencies within the contract management database. This means that there is no reconciliation between different sender components from an end-to-end process. It doesn't reconcile the contract data against referencing documents in the sender components.
2. There is no check for the legacy data and statistical condition types.
3. Data Validation Checks do not support compound performance obligation (POB) scenarios in which order items are combined to compounds with non-distinct POBs based on BRF+ configuration for compound groups.
4. Data Validation Checks do not support handling errors made by users, for instance, when a POB is suspended incorrectly.
5. Data Validation Checks do not support cost recognition.
6. You can add additional checks by implementing the BAdI. This action provides extensible functionality for data validation.

If you have a large volume of data, it's possible to run the program with parallel jobs.

Overview of the Data Validation functionality

The Data Validation check framework is implemented in package `FARR_CONS_CHECK` which consists of two main programs:

- **Revenue Accounting Contracts Consistency Check:** This program analyzes contract data and stores error information in the consistency check table `FARR_D_CONS`. The Data Validation Checks are applied to massive data selection.
- **Revenue Accounting Consistency Check Monitor:** This program displays the error information. When it comes to correcting data, you can confirm whether the data correction has been run correctly. The monitoring program is also used for selecting contracts, but not for massive data transactions.

Executing the Data Validation Checks for Revenue Accounting Contracts

When you use transaction `FARR_CONTR_CHECK`, the screen below is displayed. The error log entries in the `FARR_D_CONS` table are created based on the company codes and accounting principles that you have selected. Each time that you run this transaction, the old data is replaced with new data.

It provides multiple users access which means that if one user runs the Data Validation Checks with one specific company code and the second user runs another company code, both company code entries will be updated in the `FARR_D_CONS` table.

❖ Example

In the `FARR_D_CONS` table, there are two company code entries, 0001 and 0002. If you only run company code 0002 in the Data Validation Checks, only the entries for company code 0002 are deleted and new

records are inserted in the database. All other entries (company code 0001) remain in the table without any updates. If two users access one company code, the program will be blocked by the first user and the second user receives an error message informing them that the company code is blocked by another user.

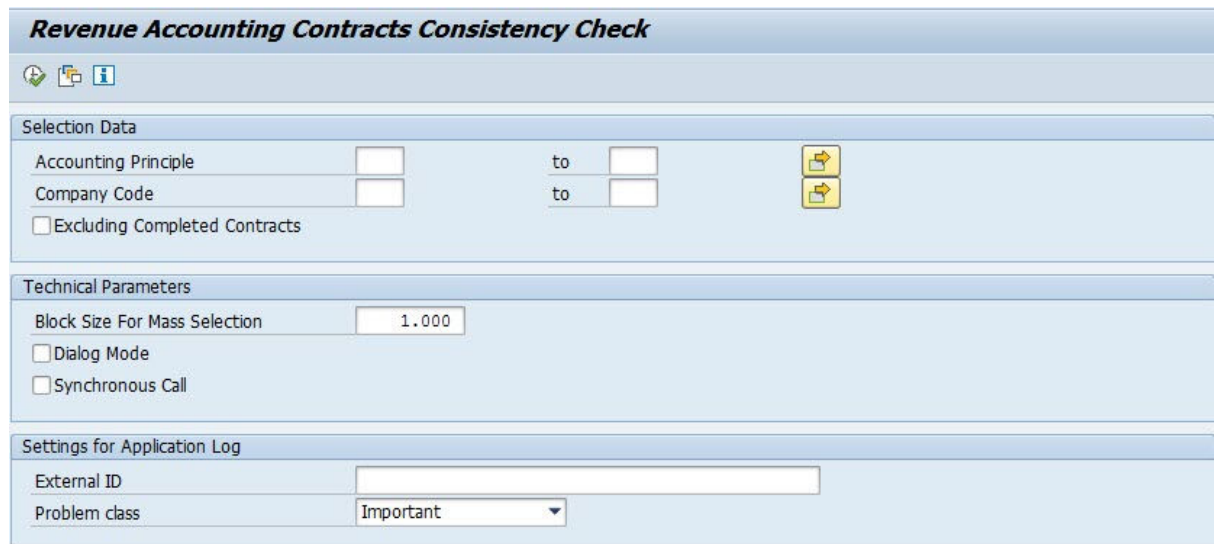
Parallelized Reporting: Dialog Mode

You select this parameter if you want to run the program in *Dialog Mode*. If you don't select *Dialog Mode*, the framework processes the data in batch mode. Intervals are processed in parallel batch jobs.

If you select the *Dialog Mode* parameter, the framework processes the data in *Dialog Mode* (without creating batch jobs). Intervals are processed one by one in one dialog process.

i Note

In *Dialog Mode*, the *Synchronous Call* indicator is set automatically by the system and cannot be changed.



Revenue Accounting Contracts Consistency Check			
Selection Data			
Accounting Principle	<input type="text"/>	to	<input type="text"/>
Company Code	<input type="text"/>	to	<input type="text"/>
<input type="checkbox"/> Excluding Completed Contracts			
Technical Parameters			
Block Size For Mass Selection	<input type="text" value="1.000"/>		
<input type="checkbox"/> Dialog Mode			
<input type="checkbox"/> Synchronous Call			
Settings for Application Log			
External ID	<input type="text"/>		
Problem class	<input type="text" value="Important"/>		

Executing the Revenue Accounting Consistency Check Monitor

When you use transaction `FARR_CONTR_MON`, the following screen is displayed. As mentioned above, the monitoring program is used for contract selections, not for a large volume of data.

You can use the *Processing* parameter to display the result from the Data Validation Checks. You can run the process based on reading data from the `FARR_D_CONS` table by selecting the *read data from error table* option. If an error occurs, you can also select *save result to error table* to save the data in the `FARR_D_CONS` table. The new result will be updated in the database without having to run the mass data transaction.

Alternatively, you can run the checks again based on the current database entries in the contract management tables by selecting the *read data online* option. This option can be used to verify that the data has been corrected.

RA - Consistency Check Monitor

Contract

Accounting Principle	<input type="text"/>	to	<input type="text"/>	<input type="button" value="→"/>
Company Code	<input type="text"/>	to	<input type="text"/>	<input type="button" value="→"/>
Revenue Accounting Contract	<input type="text"/>	to	<input type="text"/>	<input type="button" value="→"/>

Processing

Read data online
 Read data from error table
 Save result to error table

Technical Parameter

Max. batch size of Contracts	<input type="text" value="1.000"/>
Max. no. of POBs	<input type="text"/>

Execution Result

The three screenshots that follow are a general overview for each example of the execution result, as it would appear when you scroll across the screen from left to right. Each example shows a positive, expected result and the relevant fields for the relevant error category are highlighted.

On the left side of the screen (screenshot 1) is an overview of the contract with the performance obligation (POB) structure. You can see, for example, whether a POB is a leading or linked POB, a POB is a time-based or event-based POB, and whether the POB is suspended from posting or excluded from allocation. This information tells you whether allocation needs to be performed and how revenue should be posted, for example.

The middle part of the screen (screenshot 2) displays the quantity and amount fields which are compared during the Data Validation Checks. For example, the total allocation effect for the contract must equal zero. This is visible in the allocation effect (*AllocEffect*) column or the total amount of revenue schedule for each POB, and must be equal to the allocation amount of the same POB. This compares two relevant fields (*AfterAllocAm* and *SumRevSche*).

When you scroll to the far-right end of the execution result (screenshot 3), you'll find the error category information.

When a green light is displayed, this means that no inconsistencies were found in the data comparison for each check logic.

If a red light is displayed, this means that the data comparison found an inconsistency for each check logic.

i Note

If one error category displays an error in the execution result, this means that there is an inconsistency between two fields that have been compared. Thus, you have to identify the fields that have been populated incorrectly. For example, one POB has a scheduled amount of EUR 100 for a specific period but EUR 200 is posted for that POB in the same period.

Please refer to the **Recommendations** and **Procedure** sections below.

Execution result: screenshot 1

Exception	Contract	POB	CoCode	Acc.Princ.	Post.Lab	Leadg/Unkd	Leading	Higher-Lvl	Excl.Alloc	BOM Root	Comp.	FulfiType	StartDatTy	FullyFF#	SuspStg	ValidatRes	Conflict	Cont.	Stat	Prof.Segmt	Sales Ord.
	172434	395570	FARR	IAS	Unbilled Receivable/Deferred Revenue							D	E			S		I			13126
		395571	FARR	IAS	Unbilled Receivable/Deferred Revenue							D	E			S		I			13208
		395576	FARR	IAS	Unbilled Receivable/Deferred Revenue	L						D	E			S		I			13209
		395577	FARR	IAS	Unbilled Receivable/Deferred Revenue	A		395576				D	T	3		S		I			13209

Execution result: screenshot 2

Exception	Contract	POB	SumQ	Quant	Currency	Trx.Price	AllocEffct	AltrAlcAm	SumRevSche	SumPlanRev	SumPostRev	SumDefInv	SumPostInv	SumTranInv	SumPosTrn	Final Inv.	SoDel	POB	SumRecAdj	SumRecAdj	SumTrnInvC	SumPosTrn	LocalCur.	SumRecAdj	SumTrnInv
	172434	395570	5	EUR	2.200,00	1.355,47	944,53	944,53	658,19	658,19	0,00	0,00	0,00	0,00	0,00	0,00			0,00	0,00	0,00	0,00	EUR	0,00	0,00
		395571	2	EUR	5.600,00	1.720,76	3.279,22	3.279,22	1.196,72	1.196,72	0,00	0,00	0,00	0,00	0,00	0,00			0,00	0,00	0,00	0,00	EUR	0,00	0,00
		395576	0	EUR	2.130,00	473,12	2.603,12	2.603,12	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00			0,00	0,00	0,00	0,00	EUR	0,00	0,00
		395577	0	EUR	0,00	2.603,13	2.603,13	2.603,13	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00			0,00	0,00	0,00	0,00	EUR	0,00	0,00
	172434			EUR	9.430,00	0,00	9.430,00	9.430,00	1.854,91	1.854,91	0,00	0,00	0,00	0,00	0,00	0,00			0,00	0,00	0,00	0,00	EUR	0,00	0,00

Execution result: screenshot 3

Exception	Contract	POB	LocalCur3	SumPlsLab	SumBookLa	SumPlsAsse	SumBooAsse	Created on	Created at	SDCondPrnc	Currency	SD	ff	UnpocRAI	SD Doc.	Item No	Mapping	remarks	E1	E2	E3	E4	E5	E6	E7	E8	E9	E10	E11	E12	E13	E14	E15	E16	E17	E18
	172434	395570	EUR	0,00	0,00	1.854,91	1.854,91	27.06.2017	17:01:48										✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		395571	EUR	0,00	0,00	1.854,91	1.854,91	27.06.2017	17:01:48										✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		395576	EUR	0,00	0,00	1.854,91	1.854,91	27.06.2017	17:01:48										✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		395577	EUR	0,00	0,00	1.854,91	1.854,91	27.06.2017	17:01:48										✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Recommendations

SAP recommends that you do the following to help detect any inconsistencies in your data:

1. Schedule the Data Validation Checks on a regular basis, for example, weekly, based on your revenue accounting activities using transaction `FARR_CONTR_CHECK`
2. Use transaction `FARR_CONTR_MON` with the option *read from error table* – all contracts with inconsistencies will be displayed.

Note

All POBs in a contract will be displayed, even if one or more do not have an inconsistency. At least one POB should have an inconsistency.

3. You can check a single contract by using the *read data online* option to verify whether there are any inconsistencies, or to verify which processes have been completed for the contract after having run the Data Validation Checks.

Procedure for fixing detected inconsistencies

If any potential issues are spotted, and you cannot identify the root cause for an error, you need to do the following:

1. Ensure that the latest version of Data Validation is installed in your solution. You can find the latest notes for Data Validation by searching for the correction Notes containing the key terms: `FARR_CONTR_CHECK` and `FARR_CONTR_MON`
2. Create an incident with components `FI-RA` and `FI-RA-VAL`, and mention the key term 'Data Validation E [Number of Error category]' in the header text.
3. Open the system, and then provide the access data to the system and steps to reproduce the problem.

SAP Support will then analyze the root cause based on the Data Validation results and provide guidance on how to proceed.

8.6.1 E01: Incorrect balance of allocation effects

The total amount of allocation effects for all performance obligations (POB) of a contract must be zero. Thus, if the balance of allocation effects does not equal zero, an error will occur. The total number of contracts must not be changed after allocation.

i Note

The allocated amount of a POB is calculated based on the standalone selling price (SSP) which is derived from BRF+ or comes from the sender components.

The allocation effect is the difference between the transaction price (TP) and allocated amount.

This check is performed at contract level.

Technical details

Allocation effect of a POB:

FARR_D_DEFITEM-DOC_AMOUNT_CUMULATE for entries with FARR_D_DEFITEM-LATEST_DEFITEM = 'X' and FARR_D_DEFITEM-SPEC_INDICATOR = 'D'

Relevant fields in the RA Consistency Check Monitor

Exception	Contract	POB	Currency	Σ	Trx.Price	Σ AllocEffect	Σ AfrAllocAm	Σ SumRevSche	Σ SumPlanRev	Σ SumPostRev	Σ SumDefInv	Σ SumPostInv	SumTranInv	SumPosTrIn
	63784	123166	EUR		420,00	808,11	1.228,11	1.228,11	102,34	102,34	0,00	0,00	0,00	0,00
		123167	EUR		1.000,00	872,07-	127,93	127,93	127,93	127,93	1.000,00	1.000,00	1.000,00	1.000,00
		123168	EUR		0,00	63,96	63,96	63,96	16,69	16,69	0,00	0,00	0,00	0,00
	63784		EUR		1.420,00	0,00	1.420,00	1.420,00	246,96	246,96	1.000,00	1.000,00		
			EUR		1.420,00	0,00	1.420,00	1.420,00	246,96	246,96	1.000,00	1.000,00		

8.6.2 E02: The allocated amount is not equal to the revenue schedule of a POB

The allocated amount is not equal to the revenue schedule of a performance obligation (POB). If the POB is closed (Status C), the total amount of all posted revenue for all reconciliation keys is compared to the revenue schedule of a POB.

The check is performed at POB level.

i Note

This check will not be performed when the POB fulfillment type is event-based (E), its event type is Goods Issue (GI) and the POB has been overfulfilled – meaning that the effective quantity of the POB is smaller than the fulfilled quantity.

Technical details

Allocated amount of a POB:

```
FARR_D_POB-ALLOC_AMT
```

Revenue schedule amount of a POB

METHOD Calculate revenue schedule entry (query_rev_schedule) in class cl_farr_rev_schedule (provides all period amounts)

```
If FARR_D_POB-STATUS = C
```

```
SUM TOTAL_PLAN_REV for all reconciliation keys
```

Exception: No E02 error when the POB is event based, its event type is Good Issue (GI) and the POB has been overfulfilled.

```
IF FARR_D_POB-FULFILL_TYPE = 'E' AND FARR_D_POB-EVENT_TYPE = 'GI' AND (FARR_D_POB-
EFFECTIVE_QUANTITY >= 0 AND FARR_D_POB- EFFECTIVE_QUANTITY < SUM
(FARR_D_FULFILLMT_REPORTED_QTY) ) OR (FARR_D_POB- EFFECTIVE_QUANTITY < 0 AND
FARR_D_POB- EFFECTIVE_QUANTITY > SUM (FARR_D_FULFILLMT_REPORTED_QTY) )
```

Relevant fields in the RA Consistency Check Monitor

Exception	Contract	POB	Currency	Trx.Price	AllocEffct	Afr/AlocAm	SumRevSche	SumTPlaRev	SumPlanRev	SumPostRev	SumDefInv	SumPostInv	SumTranInv	SumPosTrIn	SumRecAdj
CC	63784	123166	EUR	420,00	808,11	1.228,11	1.228,11	0,00	102,34	102,34	0,00	0,00	0,00	0,00	35,00
CC		123167	EUR	1.000,00	872,07-	127,93	127,93	127,93	127,93	127,93	1.000,00	1.000,00	1.000,00	1.000,00	35,00
CC		123168	EUR	0,00	63,96	63,96	63,96	0,00	16,69	16,69	0,00	0,00	0,00	0,00	35,00
	63784		EUR	1.420,00	0,00	1.420,00	1.420,00		246,96	246,96	1.000,00	1.000,00			
			EUR	1.420,00	0,00	1.420,00	1.420,00		246,96	246,96	1.000,00	1.000,00			

8.6.3 E03: The POB effective quantity is not equal to the fulfilled quantity for a fully fulfilled POB

When a performance obligation (POB) is fully fulfilled, its effective quantity must be equal to the fulfilled quantity. The fulfilled quantity consists of quantities that are both suspended and not suspended from posting. If the POB is soft deleted, the fulfilled quantity must be zero.

For event-based POBs, this check is executed once all fulfillments have been performed.

For time-based POBs, the fulfillment is created when the contract is created. This means that the check can be performed at any time.

This check is performed at POB level.

i Note

This check will not be performed when the POB is event-based (E), its event type is Customer Invoice (CI) and is value relevant.

Technical details

POB Quantity:

FARR_D_POB-EFFECTIVE_QUANTITY

Unsuspected fulfilled quantity:

SUM (FARR_D_FULFILLMT-QTY_NOMINATOR / FARR_D_FULFILLMT-QTY_DENOMINATOR) for
FARR_D_FULFILLMT-FULFILL_STATUS = ' '

Suspended fulfilled quantity:

SUM (FARR_D_FULFILLMT-QTY_NOMINATOR / FARR_D_FULFILLMT-QTY_DENOMINATOR) for
FARR_D_FULFILLMT-FULFILL_STATUS = 'P'

Exception: No E03 error when transactional price, allocation amount, the amount after allocation and fulfillment quantity (pending and non-pending) are zero.

IF FARR_D_POB-TRX_PRICE = 0 AND FARR_D_POB-ALLOC_AMT = 0 AND FARR_D_POB-
AFTER_ALLOC_AMT = 0 AND SUM (FARR_D_FULFILLMT-QTY_NOMINATOR / FARR_D_FULFILLMT-
QTY_DENOMINATOR) = 0 for FARR_D_FULFILLMT-FULFILL_STATUS = ' '

AND SUM (FARR_D_FULFILLMT-QTY_NOMINATOR / FARR_D_FULFILLMT-QTY_DENOMINATOR) = 0 for
FARR_D_FULFILLMT-FULFILL_STATUS = 'P'

Exception: No E03 error when the contract has an error status in the worklist and there is no fulfilled quantity in the FARR_D_FULFILLMT table.

IF FARR_D_CONTRACT-VALIDATE_RESULT = 'E' AND SUM (FARR_D_FULFILLMT-QTY_NOMINATOR /
FARR_D_FULFILLMT-QTY_DENOMINATOR) = 0

Exception: No E03 error when the POB is event-based, its event type is Customer Invoice (CI) and the value-relevant field is marked.

IF FARR_D_POB-FULFILL_TYPE = 'E' AND FARR_D_POB-EVENT_TYPE = 'CI' AND FARR_D_POB-
VALUE_RELEVANT = X.

Relevant fields in the RA Consistency Check Monitor

Exception	Contract	POB	SO Item	Unit	EffectvQty	ΣSumFuFiQua	SumFFQPend	SumFFQPost	SumOPQant	Currency	Trx.Price	ΣAllocEffct	Σ AfrAlkAm
	63784	123166	10	PC	1	1	0	0,083333	0,083333	EUR	420,00	808,11	1.228,11
		123167		PC	1	1	0	1	1	EUR	1.000,00	872,07-	127,93
		123168		PC	1	1	0	0,26087	0,26087	EUR	0,00	63,96	63,96
	63784			PC	3	3				EUR	1.420,00	0,00	1.420,00
				PC	3	3				EUR	1.420,00	0,00	1.420,00

8.6.4 E04: The fulfilled, unsuspended quantity is not equal to the fulfilled deferral item quantity for a time-based POB

For time-based, distinct performance obligations (POB), the fulfilled deferral item quantity must be equal to the unsuspended fulfilled quantity. Fulfilled in this check category refers to all reconciliation keys in the table.

This check only considers the main price condition quantities and not the cost condition quantities in the case of distinct POBs. For linked POBs without a price condition, the allocated amount quantities are used.

This check is performed at POB level.

Note

This check will not be performed for a zero-value condition.

Technical details

$SUM (FARR_D_DEFITEM-REV_QTY_DELTA_NM / FARR_D_DEFITEM-REV_QTY_DELTA_DN)$ for $FARR_D_DEFITEM-SPECIAL_INDICATOR = 'P' AND = 'D'$ for distinct/linked POBs

$SUM (FARR_D_DEFITEM-REV_QTY_DELTA, FARR_D_DEFITEM-REV_QTY_POSTED, FARR_D_DEFITEM-PRO_QTY_CUMULATE)$ for $FARR_D_DEFITEM-SPECIAL_INDICATOR = 'P' AND 'D'$ for distinct/linked POBs

Unsuspended fulfilled quantity:

$SUM (FARR_D_FULFILLMT-QTY_NOMINATOR / FARR_D_FULFILLMT-QTY_DENOMINATOR)$ for $FARR_D_FULFILLMT-FULFILL_STATUS = ' '$

$SUM (FARR_D_FULFILLMT-REPORTED_QTY)$ for $FARR_D_FULFILLMT-FULFILL_STATUS = ' '$

Exception: No E04 error for zero-condition value.

If $FARR_D_DEFITEM-LATEST_DEFITEM = ' '$

Relevant fields in the RA Consistency Check Monitor

Exception	Contract	POB	SO Item	Unit	Quantity	EffctvQty	SumFuFiQua	SumFFQPend	SumFFQPost	SumOPQant	Rep. Qty	SumDefQty	Currency	Trx.Price
	63784	123166	10	PC	1	1	1	0	1	1	1	1	EUR	420,00
		123167		PC	1	1	1	0	1	1	1	1	EUR	1.000,00
		123168		PC	1	1	1	0	1	1	1	1	EUR	0,00
	63784			PC	3		3						EUR	1.420,00
				PC	3		3						EUR	1.420,00

8.6.5 E05: The latest entry flag for a deferral item is incorrect or missing

To ensure that the deferral items are handled consistently in revenue accounting, the latest deferral item flag must be populated correctly.

In the deferral item table, there are entries at condition level for each performance obligation (POB) and the relevant reconciliation keys. The latest deferral item entry for each condition of a POB (the highest reconciliation key from a time perspective) must be populated.

This check is performed at POB level.

Technical details

Relevant reconciliation keys:

```
FARR_D_RECON_KEY-TM_CONVERT = 'X'
```

```
FARR_D_RECON_KEY-LIAB_ASSET_FLAG = 'X'
```

deferral quantity with relevant recon keys (the *Transfer Revenue* program and *Calculate Contract Liabilities and Assets* program must be executed)

```
Check 5.1 latest FARR_D_DEFITEM-RECON_KEY / FARR_D_DEFITEM-POB_ID / FARR_D_DEFITEM-CONDITION_TYPE / FARR_D_DEFITEM-DEFERRAL_CAT for FARR_D_DEFITEM-LATEST_DEFITEM = 'X'
```

Exception: No E05 error for check 5.1

```
If FARR_D_DEFITEM-REV_AMT_DELTA + FARR_D_DEFITEM-REV_AMT_POSTED = 0 AND
```

```
FARR_D_DEFITEM-DOC_AMT_CUMULATE = 0
```

```
Check 5.2 FARR_D_DEFITEM-POB_ID / FARR_D_DEFITEM-CONDITION_TYPE / FARR_D_DEFITEM-DEFERRAL_CAT only one record with FARR_D_DEFITEM-LATEST_DEFITEM = 'X'
```

Exception: No E05 error for check 5.1 and 5.2

```
If FARR_D_POB-REV_REC_BLOCK = 'X'
```

No relevant fields to compare.

8.6.6 E06: The scheduled revenue amount is not equal to the posted revenue amount

The scheduled revenue amount of a performance obligation (POB) to be posted in specific periods differs from the actual posted revenue amount for the same reconciliation key.

This check is performed for the transaction currency at POB level.

Technical details

Relevant reconciliation keys:

FARR_D_RECON_KEY-TM_CONVERT = 'X'

FARR_D_RECON_KEY-LIAB_ASSET_FLAG = 'X'

Sum FARR_D_DEFITEM-REV_AMT_DELTA

Sum FARR_D_POSTING-BETRW for posting category *RV* (Revenue)

Relevant fields in the RA Consistency Check Monitor

Exception	Contract	POB	Currency	Trx.Price	AllocEffct	AfrAlcAm	SumRevSche	SumPlanRev	SumPostRev	SumDefInv	SumPostInv	SumTranInv	SumPosTrIn
	63784	123166	EUR	420,00	808,11	1.228,11	1.228,11	102,34	102,34	0,00	0,00	0,00	0,00
		123167	EUR	1.000,00	872,07-	127,93	127,93	127,93	127,93	1.000,00	1.000,00	1.000,00	1.000,00
		123168	EUR	0,00	63,96	63,96	63,96	16,69	16,69	0,00	0,00	0,00	0,00
	63784		EUR	1.420,00	0,00	1.420,00	1.420,00	246,96	246,96	1.000,00	1.000,00		
			EUR	1.420,00	0,00	1.420,00	1.420,00	246,96	246,96	1.000,00	1.000,00		

8.6.7 E07: The scheduled invoice amount is not equal to the posted invoice amount

The scheduled invoice amount of a performance obligation (POB) to be posted in specific periods differs from the actual posted invoice amount.

This check is performed for the transaction currency at POB level.

Note

This check will not be performed for bill of material (BOM) cases in which the amount of the header POB is distributed to sub-item POBs.

Technical details

Relevant reconciliation keys:

FARR_D_RECON_KEY-TM_CONVERT = 'X'

FARR_D_RECON_KEY-LIAB_ASSET_FLAG = 'X'

FARR_D_DEFITEM-INV_AMT_DELTA

Sum FARR_D_POSTING-BETRW for posting category *IC* (Invoice Correction)

Relevant fields in the RA Consistency Check Monitor

Exception	Contract	POB	Currency	Σ Trx.Price	Σ AllocEffct	Σ AfrtrAllocAm	Σ SumRevSche	Σ SumPlanRev	Σ SumPostRev	Σ SumDefInv	Σ SumPostInv	Σ SumTranInv	Σ SumPosTrIn
OO	63784	123166	EUR	420,00	808,11	1.228,11	1.228,11	102,34	102,34	0,00	0,00	0,00	0,00
OO		123167	EUR	1.000,00	872,07-	127,93	127,93	127,93	127,93	1.000,00	1.000,00	1.000,00	1.000,00
OO		123168	EUR	0,00	63,96	63,96	63,96	16,69	16,69	0,00	0,00	0,00	0,00
	63784		EUR	1.420,00	0,00	1.420,00	1.420,00	246,96	246,96	1.000,00	1.000,00		
			EUR	1.420,00	0,00	1.420,00	1.420,00	246,96	246,96	1.000,00	1.000,00		

8.6.8 E08: The special indicator flag is incorrect or missing

To ensure that deferral items are handled consistently in revenue accounting, the special indicator flag must be populated correctly. The special indicator is a technical field which specifies the main price condition and allocation difference condition. For each leading or distinct performance obligation (POB), there must be exactly one condition indicated as the main price condition. In this case, the special indicator flag must be set to *P* (price condition). For each leading or distinct POB, there must not be more than one allocation difference condition with the special indicator *D* (difference allocation).

This check is performed at POB level.

Note

This check will not be performed for the following cases:

- When a POB is deleted or soft deleted
- Linked POBs, POBs that are added manually with no main price condition, with no transactional price from SD or that have a transactional price with an excluded allocation price.

Technical details

FARR_D_POB- LEADING_POB_ID = 'L' OR FARR_D_POB- LEADING_POB_ID = ' '

FARR_D_DEFITEM-CATEGORY = 'P'

FARR_D_DEFITEM-LATEST_DEFITEM = 'X'

FARR_D_DEFITEM-SPEC_INDICATOR = 'P' (exactly one main price condition)

FARR_D_DEFITEM-SPEC_INDICATOR = 'D' OR FARR_D_DEFITEM-SPEC_INDICATOR = ' ' (none or one allocation difference condition)

Exception: No E08 error for the manually added POB with no main price condition, no transaction price from SD or transaction price with excluded allocation price.

If FARR_D_POB-TRX_PRICE = 0 OR

FARR_D_POB-TRX_PRICE <> 0 AND FARR_D_POB-AFTER_ALLOC_AMT = 0

Exception: No E08 error for soft deleted POB.

If FARR_D_POB- SOFT_DELETED= 'X' AND FARR_D_DEFITEM-SPEC_INDICATOR = ' '.

No relevant fields to compare.

8.6.9 E09: The transaction price, allocated amount and allocation effect of a POB are inconsistent

The allocation effect of a performance obligation (POB) must be equal to the allocated price of a POB, minus the transaction price. In this comparison, the transaction price and allocated amount are derived from the POB master data and the allocation effect is calculated based on the corresponding allocation effect condition in the deferral item. This means that the amount from the original document, as well as the amount from the prospective change, are added together for the deferral item with the latest entry flag to form the allocation effect.

This check is performed at POB level.

Note

This check will not be performed for the following cases:

- Bill of material (BOM) cases in which the amount of header POB is distributed to sub-item POBs
- At least one of the POBs in the contract is set to error status in contract management

Technical details

FARR_D_POB-ALLOC_AMT

FARR_D_POB-TRX_PRICE

Sum (FARR_D_DEFITEM-DOC_AMT_CUMULATE + FARR_D_DEFITEM-PRO_AMT_CUMULATE) for
 FARR_D_DEFITEM-SPEC_INDICATOR = 'D' and FARR_D_DEFITEM-LATEST_DEFITEM = 'X'
 IF FARR_D_DEFITAM-ALLOC_AMT NE (FARR_D_POB-ALLOC_AMT- FARR_D_POB-TRX_PRICE)

Exception: No E09 error for BOM header in which its amount is distributed to sub-item POBs and for at least one of the POBs that is set to error status in contract management.

Relevant fields in the RA Consistency Check Monitor

Exception	Contract	POB	Currency	Trx.Price	AllocEffect	AfrAlicAm	SumRevSche	SumPlanRev	SumPostRev	SumDefInv	SumPostInv	SumTranInv	SumPosTrIn
	63784	123166	EUR	420,00	808,11	1.228,11	1.228,11	102,34	102,34	0,00	0,00	0,00	0,00
		123167	EUR	1.000,00	872,07-	127,93	127,93	127,93	127,93	1.000,00	1.000,00	1.000,00	1.000,00
		123168	EUR	0,00	63,96	63,96	63,96	16,69	16,69	0,00	0,00	0,00	0,00
	63784		EUR	1.420,00	0,00	1.420,00	1.420,00	246,96	246,96	1.000,00	1.000,00		
			EUR	1.420,00	0,00	1.420,00	1.420,00	246,96	246,96	1.000,00	1.000,00		

8.6.10 E10: Incorrect balance on receivable adjustment account in transaction currency

If there is a deferred or an unbilled method, the balance on the receivable adjustment account must be zero because the difference between the invoiced amount and recognized amount will be posted to the deferred/unbilled account. This means that the offsetting postings to the receivable adjustment account must total zero. The check is calculated based on the transactional currency.

E10 checks whether all periods of a contract for each liability/asset calculation have been executed. If no incorrect balance is detected, the migration period will be checked separately. If there is an incorrect receivable adjustment balance for the migration period, the E10 error is raised.

The total receivable adjustment for the migration period must equal zero.

This check is performed at contract level.

Technical details

Relevant reconciliation keys:

```
FARR_D_RECON_KEY-LIAB_ASSET_FLAG = 'X'
```

Sum of receivable adjustment:

```
Sum FARR_D_POSTING-BETRW for FARR_D_POSTING-POST_CAT = 'RA' (Receivable Adjustment)
```

Relevant fields in the RA Consistency Check Monitor

Exception	Contract	POB	Currency	Trx.Price	AllocEffect	AfrAlcAm	SumRevSche	SumPlanRev	SumPostRev	SumDefInv	SumPostInv	SumTranInv	SumPostTrIn	Final Inv.	SofDel	POB	SumRecAdj
	63784	123166	EUR	420,00	808,11	1.228,11	1.228,11	102,34	102,34	0,00	0,00	0,00	0,00				35,00
		123167	EUR	1.000,00	872,07-	127,93	127,93	127,93	127,93	1.000,00	1.000,00	1.000,00	1.000,00	X			35,00
		123168	EUR	0,00	63,96	63,96	63,96	16,69	16,69	0,00	0,00	0,00	0,00				35,00
	63784		EUR	1.420,00	0,00	1.420,00	1.420,00	246,96	246,96	1.000,00	1.000,00						
			EUR	1.420,00	0,00	1.420,00	1.420,00	246,96	246,96	1.000,00	1.000,00						

8.6.11 E11: Deferred revenue/contract liability amount calculated based on the deferral items is not equal to the corresponding posted amounts

Deferred revenue calculation

Depending on how you configured the contract balance presentation, revenue accounting calculates the deferred revenue/unbilled receivable or contract liability/contract asset as an initial step of the revenue accounting posting run. The calculation can be performed at contract or POB level according to the Customizing setting.

If you choose the unbilled receivable/deferred revenue calculation, revenue accounting calculates the difference between all revenues postings (posting category *RV*) and all invoice correction postings (posting category *IC*) which have already been performed for a contract in the relevant posting period. When the invoice correction amount exceeds the revenue amount, the difference will be posted to the deferred revenue. This means that, from a consistency perspective, the difference between all revenue postings and invoice corrections that have been performed for a contract or a POB must be synced with the corresponding deferred revenue postings (posting category *DR*).

Revenue accounting calculates the deferred revenue amounts based on the deferral items for the latest reconciliation key for which the *Transfer Revenue* program and the *Calculate Contract Liabilities and Assets* program have been run, including all previous reconciliation keys. The values calculated will be compared with all existing posting entries (posting category *DR*).

This check is performed at contract level or POB level.

Technical details

Amounts calculated based on deferral items:

Relevant reconciliation keys:

```
FARR_D_RECON_KEY-TM_CONVERT = 'X'
```

```
FARR_D_RECON_KEY-LIAB_ASSET_FLAG = 'X' for current period and all previous reconciliation keys
```

Sum of scheduled revenue posting amounts at POB level:

```
Sum FARR_D_DEFITEM-REV_AMT_DELTA
```

Sum of scheduled invoice correction amounts at POB level:

```
Sum FARR_D_DEFITEM-INV_AMT_DELTA
```

```
If Sum of planned revenue at POB level < Sum of planned invoice at POB level
```

Deferred revenue amount difference at POB level:

```
Sum FARR_D_DEFITEM-INV_AMT_DELTA - FARR_D_DEFITEM-REV_AMT_DELTA
```

Posted amounts:

```
Sum of posted deferred revenue: Sum FARR_D_POSTING-BETRW for all existing items with POST_CAT = 'DR'
```

Contract liability calculation

The contract liability is the difference between the invoiced due amount and the scheduled revenue amount for the specific period. In the same way as the contract asset, this amount can never be negative. The amount calculated for contract liability is compared with the posted values in the specific periods.

Revenue accounting calculates the contract liability amounts based on the deferral items for the latest reconciliation key for which the *Transfer Revenue* program and the *Calculate Contract Liabilities and Assets* program have been run, including all previous reconciliation keys. The values calculated are compared with all existing posting entries (posting category *CL*).

If you choose the contract liability/contract asset calculation, the *Calculate Contract Liabilities and Assets* program considers the current reconciliation key, as well as all previous reconciliation keys for which the contract liability/contract asset calculation has been already executed.

This check is performed at contract level or POB level.

For the contract liability calculation, the relevant invoices are those with the due date lower than, or equal to, the last day of the period in which the *Calculate Contract Liabilities and Assets* program is run.

Note

E11 will not be performed for the following cases:

- When the currency difference method FX2 is used
- When the *Calculate net CL/CA directly on Contract* method is used
- When you use a BAdI to implement your own logic.

Technical details

`LV_LIAB_POB = SUM FARR_D_INVOICE-BETRW - SUM FARR_D_DEFITEM-REV_AMT_DELTA`

Posted amounts:

`Sum FARR_D_POSTING-BETRW for FARR_D_POSTING-POST_CAT = 'CL'` (Contract Liability) for all existing items with `POST_CAT = 'CL'`

Exception: No E11 error for currency difference FX2, new CL/CA calculation method and BAdI implementation.

`If LC_CALC_METHOD = 'A' OR CLCA_CALC_METHOD = '1' OR GV_CUST_LOGIC_LA = 'X'`

Relevant fields in the RA Consistency Check Monitor

Exception	Contract	POB	SumPosTrIn	LocalCurr.	SumRecAdj2	SumTrInvlC	SumPosTrIn	LocalCurr2	SumRecAdj3	SumTrInvlC	SumPosTrIn	LocalCurr3	SumPlaLab	SumBookLa	SumPlaAsse	SumBooAsse
000	63784	123166	0,00	EUR	45,50	0,00	0,00	USD	244,96	0,00	0,00	HKD	788,04	788,04	0,00	0,00
000		123167	1.000,00	EUR	45,50	1.300,00	1.300,00	USD	244,96	6.999,00	6.999,00	HKD	788,04	788,04	0,00	0,00
000		123168	0,00	EUR	45,50	0,00	0,00	USD	244,96	0,00	0,00	HKD	788,04	788,04	0,00	0,00
63784																

8.6.12 E12: Unbilled receivable/contract asset amount calculated based on the deferral items is not equal to the corresponding posted amounts

Unbilled receivable calculation

Depending on how you configured the contract balance presentation, revenue accounting calculates the deferred revenue/unbilled receivable or contract liability/contract asset as an initial step of the revenue accounting posting run.

The calculation can be performed at contract or POB level according to the Customizing setting.

If you choose the unbilled receivable/deferred revenue calculation, revenue accounting calculates the difference between all revenues postings (posting category *RV*) and all invoice correction postings (posting category *IC*) which have already been performed for a contract in the relevant posting period. When the invoice correction amount exceeds the revenue amount, the difference will be posted to the unbilled receivables. This means that, from a consistency perspective, the difference between all revenue postings and invoice corrections that have been performed for a contract or a POB must be synced with the corresponding unbilled receivables postings (posting category *UR*).

Revenue accounting calculates the unbilled receivable amounts based on the deferral items for the latest reconciliation key for which the *Transfer Revenue* program and the *Calculate Contract Liabilities and Assets* program have been run, including all previous reconciliation keys. The values calculated will be compared with all existing posting entries (posting category *UR*).

This check is performed at contract level or POB level.

Technical details

Amounts calculated based on the deferral items:

Relevant reconciliation keys:

```
FARR_D_RECON_KEY-TM_CONVERT = 'X'
```

```
FARR_D_RECON_KEY-LIAB_ASSET_FLAG = 'X' for current period and all previous reconciliation keys
```

Sum of scheduled revenue posting amounts at POB level:

```
Sum FARR_D_DEFITEM-REV_AMT_DELTA
```

Sum of scheduled invoice correction amounts at POB level:

```
Sum FARR_D_DEFITEM-INV_AMT_DELTA
```

```
If Sum of planned revenue at POB level > Sum of planned invoice at POB level
```

Unbilled receivable amount difference at POB level:

```
Sum FARR_D_DEFITEM-REV_AMT_DELTA - Sum FARR_D_DEFITEM-INV_AMT_DELTA
```

Posted amounts:

Sum of the posted unbilled receivables: `Sum FARR_D_POSTING-BETRW` for all existing items with `POST_CAT = 'UR'`

Contract asset calculation

If you choose the contract liability/contract asset method, revenue accounting checks whether the billable amount exceeds the invoiced due amount, or the invoiced due amount exceeds the billable amount. The billable amount is the amount of recognized revenue minus the recognized allocation effect. The invoiced due amount is the amount of invoice correction for which the due date is reached when the calculation occurs.

When the billable amount exceeds the invoiced due amount, the contract asset amount is the difference between the recognized revenue and the billable amount for a period. When the invoiced due amount exceeds the billable amount, the asset amount is the difference between the recognized revenue and the invoiced due amount. The contract asset amount is cleared when it's negative.

Revenue accounting calculates the contract asset amounts based on the deferral items for the latest reconciliation key for which the *Transfer Revenue* program and the *Calculate Contract Liabilities and Assets* program have been run, including all previous reconciliation keys. The values calculated will be compared with all existing posting entries (posting category *CA*).

If you choose the contract liability/contract asset calculation, the *Calculate Contract Liabilities and Assets* program considers the current reconciliation key, as well as all previous reconciliation keys for which the contract liability/contract asset calculation has been already executed.

This check can be performed at contract level or POB level.

For the contract asset calculation, the relevant invoices are those with the due date lower than, or equal to, the last day of the period in which the *Calculate Contract Liabilities and Assets* program is run.

i Note

E12 is not performed for the following cases:

- When the currency difference method FX2 is used
- When the *Calculate net CL/CA directly on Contract* method is used
- When you use a BAdI to implement your own logic.

Technical details

Billable amount:

Relevant reconciliation keys:

`FARR_D_RECON_KEY-TM_CONVERT = 'X'`

`FARR_D_RECON_KEY-LIAB_ASSET_FLAG = 'X'` for current period and all previous reconciliation keys

`Sum FARR_D_DEFITEM-REV_AMT_DELTA` for `CONDITION_TYPE NE PAR_COND_TYPE-CORR_COND_TYPE`

```

Invoices amount: SUM FARR_D_INVOICE-BETRW with DUE_DATE LE SY-DATUM
IF ABS (Sum FARR_D_INVOICE_BERTW > Sum FARR_D_DEFITEM-REV_AMT_DELTA)
ASSET = FARR_D_DEFITEM-REV_AMT_DELTA - Sum FARR_D_INVOICE_BERTW
ELSE.
ASSET = Sum FARR_D_INVOICE-BETRW - Sum FARR_D_DEFITEM-REV_AMT_DELTA
ENDIF.

```

Posted amounts:

Sum FARR_D_POSTING-BETRW for FARR_D_POSTING-POST_CAT = 'CA' (Contract Asset) for all existing items with POST_CAT = 'CA'

Exception: No E12 error for currency difference FX2, new CL/CA calculation method and BAdI implementation.

If LC_CALC_METHOD = 'A' OR CLCA_CALC_METHOD = '1' OR GV_CUST_LOGIC_LA = 'X'

Relevant fields in the RA Consistency Check Monitor

Exception	Contract	POB	SumPosTrIn	LocalCurr.	SumRecAdj2	SumTrInVL	SumPosTrIn	LocalCurr2	SumRecAdj3	SumTrInVL	SumPosTrIn	LocalCurr3	SumPlaLab	SumBookLa	SumPlaAsse	SumBooAsse
CC	63784	123166	0,00	EUR	45,50	0,00	0,00	USD	244,96	0,00	0,00	HKD	788,04	788,04	0,00	0,00
CC		123167	1.000,00	EUR	45,50	1.300,00	1.300,00	USD	244,96	6.999,00	6.999,00	HKD	788,04	788,04	0,00	0,00
CC		123168	0,00	EUR	45,50	0,00	0,00	USD	244,96	0,00	0,00	HKD	788,04	788,04	0,00	0,00

8.6.13 E13: The transferred invoice amount is not equal to the posted invoice amount in the transaction currency

The total value of all invoices sent to contract management for a POB must be equal to the total amount of posted invoice corrections for this POB.

This check is performed at POB level for the transaction currency.

Technical details

Sum of transferred invoice: Sum FARR_D_INVOICE-BETRW

Sum of posted invoice: Sum FARR_D_POSTING-BETRW for all items with POST_CAT= 'IC' without reconciliation key limitation.

Relevant fields in the RA Consistency Check Monitor

Exception	Contract	POB	Currency	Trx.Price	AllocEffct	AfrAlcAm	SumRevSche	SumPlanRev	SumPostRev	SumDefInv	SumPostInv	SumTranInv	SumPosTrIn
	63784	123166	EUR	420,00	808,11	1.228,11	1.228,11	102,34	102,34	0,00	0,00	0,00	0,00
		123167	EUR	1.000,00	872,07	127,93	127,93	127,93	127,93	1.000,00	1.000,00	1.000,00	1.000,00
		123168	EUR	0,00	63,96	63,96	63,96	16,69	16,69	0,00	0,00	0,00	0,00
	63784		EUR	1.420,00	0,00	1.420,00	1.420,00	246,96	246,96	1.000,00	1.000,00		
			EUR	1.420,00	0,00	1.420,00	1.420,00	246,96	246,96	1.000,00	1.000,00		

8.6.14 E14: Incorrect balance on receivable adjustment account in local currencies

If there is a deferred or an unbilled method, the balance on the receivable adjustment account must be zero because the difference between the invoiced amount and recognized amount will be posted to the deferred/unbilled account. This means that the offsetting postings to the receivable adjustment account must total zero. This check is calculated based on the local currencies.

E14 checks whether all periods of a contract for each deferred/unbilled calculation have been executed. If no incorrect balance is detected, the migration period will be checked separately. If there is an incorrect receivable adjustment balance for the migration period, the E14 check is raised.

The E14 check is the same as E10 except for that it compares the local currencies. It's not performed for the liability/asset method.

This check is performed at POB level.

Technical details

Relevant reconciliation keys:

```
FARR_D_RECON_KEY-LIAB_ASSET_FLAG = 'X'
```

Sum of receivable adjustment:

```
SUM FARR_D_POSTING-BETRH for FARR_D_POSTING-POST_CAT = 'RA'
```

```
SUM FARR_D_POSTING-BETRH2 for FARR_D_POSTING-POST_CAT = 'RA'
```

```
SUM FARR_D_POSTING-BETRH3 for FARR_D_POSTING-POST_CAT = 'RA'
```

Relevant fields in the RA Consistency Check Monitor

Exception	Contract	POB	SumRecAdj	SumRecAdj2	SumTrInvlC	SumPosTrIn	LocalCurr.	SumRecAdj2	SumTrInvlC	SumPosTrIn	LocalCurr2	SumRecAdj3	SumTrInvlC	SumPosTrIn	LocalCurr3	SumPlaLab
	63784	123166	35,00	35,00	0,00	0,00	EUR	45,50	0,00	0,00	USD	244,96	0,00	0,00	HKD	788,04
		123167	35,00	35,00	1.000,00	1.000,00	EUR	45,50	1.300,00	1.300,00	USD	244,96	6.999,00	6.999,00	HKD	788,04
		123168	35,00	35,00	0,00	0,00	EUR	45,50	0,00	0,00	USD	244,96	0,00	0,00	HKD	788,04
	63784															

8.6.15 E15: A POB does not have a deferral item

Each performance obligation (POB) in contract management must have deferral items which include all necessary information for the revenue schedule of a POB. This means that without any deferral items, it would not be possible to post revenues for the POB.

This check is performed at POB level.

i Note

E15 is not performed for the following cases:

- A distinct type is a compound
- A POB refers to a BOM header
- A POB is a linked POB and is excluded from allocation
- A POB is deleted or soft deleted
- A POB has a transaction price of zero
- At least one of the POBs in the contract is in error status in contract management

Technical details

Deferral item table: FARR_D_DEFITEM

No relevant fields to compare.

8.6.16 E16: The transferred invoice amount is not equal to the posted invoice amount in the local currencies

The total value of all invoices sent to contract management for a POB must be equal to the total amount of posted invoice corrections for this POB.

This check is performed at POB level for local currencies.

Technical details

Sum of transferred invoice in local currencies:

Sum FARR_D_INVOICE-BETRH

Sum FARR_D_INVOICE-BETR2

Sum FARR_D_INVOICE-BETR3

Sum of posted invoice in local currencies:

Sum FARR_D_POSTING-BETRH for all items with POST_CAT= 'IC' without reconciliation key limitation.

Sum FARR_D_POSTING-BETR2 for all items with POST_CAT= 'IC' without reconciliation key limitation.

Sum FARR_D_POSTING-BETR3 for all items with POST_CAT= 'IC' without reconciliation key limitation.

Relevant fields in the RA Consistency Check Monitor

Exception	Contract	POB	SumRecAdj	SumRecAdj	SumTrInVLC	SumPosTrIn	LocalCurr.	SumRecAdj2	SumTrInVLC	SumPosTrIn	LocalCurr2	SumRecAdj3	SumTrInVLC	SumPosTrIn	LocalCurr3	SumPlaLab
000	63784	123166	35,00	35,00	0,00	0,00	EUR	45,50	0,00	0,00	USD	244,96	0,00	0,00	HKD	788,04
000		123167	35,00	35,00	1.000,00	1.000,00	EUR	45,50	1.300,00	1.300,00	USD	244,96	6.999,00	6.999,00	HKD	788,04
000		123168	35,00	35,00	0,00	0,00	EUR	45,50	0,00	0,00	USD	244,96	0,00	0,00	HKD	788,04
63784																

8.6.17 E17: Incorrect cumulated quantity posted in the deferral items

The quantity posted in the deferral item table must be equal to the total of the revenue delta quantities from all previous reconciliation keys.

This check is performed at POB level and for each condition type.

Technical details

Revenue quantity posted: FARR_D_DEFITEM-REV_QTY_POSTED + FARR_D_DEFITEM-PRO_QTY_CUMULATE

Revenue quantity delta: FARR_D_DEFITEM-REV_QTY_DELTA

No relevant fields to compare.

8.6.18 E18: Inconsistent and invalid accounting objects

Performance obligations (POBs) may have accounting objects such as a profitability segment. The object numbers must be consistent in the leading and linked POBs, and must also be equal in the POB master data and posting entries.

Also, these object numbers must be valid in CO-PA. When incorrect numbers are sent to CO-PA, posting problems occur. This check acts as a safe guarding measure to avoid posting errors and must be performed when posting entries have been created.

Technical details

Relevant reconciliation keys

FARR_D_RECON_KEY-STATUS = 'O'

FARR_D_POSTING for open reconciliation keys

Profitability segment number in the POB: FARR_D_POB-PAOBJNR

Profitability segment number in the posting: FARR_D_POSTING-PAOBJNR

Profitability segment number in the CO-PA: CE4XXX -PAOBJNR or CE4XXX_ACCT-PAOBJNR for company code = XXX.

Relevant fields in the RA Consistency Check Monitor

Exception	Contract	POB	FullyFill	SusPstg	ValidatRes	Conflict	Cont. Stat	Prof.Segmt	Sales Ord.	SO Item	Unit	Quantity	SumFuFiQua	SumFFQPend	SumFFQPost	SumOPQant
	63784	123166			S		I		18608	10	PC	1	1	0	0,083333	0,083333
		123167	X		S		I	106848			PC	1	1	0	1	1
		123168			S		I	106848			PC	1	1	0	0,26087	0,26087
	63784										PC	3	3			
											PC	3	3			

8.6.19 E19: Missing reconciliation keys in the reconciliation keys table

Each existing reconciliation key in the posting/deferral items tables must have an equivalent entry in the reconciliation keys table.

This check is performed at POB level.

Note

If a POB is suspended, this check will be skipped.

Technical details

Deferral item table: FARR_D_DEFITEM

Posting table: FARR_D_POSTING

Fulfillment table: FARR_D_FULFILLMT

Reconciliation table: FARR_D_RECON_KEY

Exception: No E19 error for suspended POBs.

If LW_OUT-REV_REC_BLOCK IS INITIAL

If LW_OUT-PENDING_CONFLICT IS INITIAL

No relevant fields to compare.

8.6.20 E22: Inconsistent data in conflict management between the contract/POB and manual change data

The POB has a conflict when a change that is related to the price is processed from the sender component for a POB that has manual spreading or price allocation.

E22 checks that:

1. When there is no manual spreading on the POB UI, the POB should not have a spreading conflict.
2. When the allocated amount of a POB is equal to the manual spread amount, it should not have a spreading conflict.
3. When a POB is fully fulfilled, it should not have a spreading conflict.
4. When there is spreading in the manual change data, there should be a POB with manual spreading.
5. When a POB has manual spreading, it should have the manual spreading amount in the manual change data.
6. When a POB has no spreading conflict, there should be no conflict in the manual change data.
7. When a POB has a spreading conflict, there should be a conflict in the manual change data.
8. When there is a manual change allocation in the manual change data, there should be a condition type.
9. When a POB has a conflict in the manual change data, the POB should have a pending conflict.
10. When a POB has no conflict in the manual change data, the POB should not have a pending conflict.
11. When a POB has a pending conflict, the contract should have a pending conflict, or vice versa.
12. When a POB has a spreading conflict, there should be a spreading entry in the manual change data.

Note

This check is skipped for soft deleted POBs.

The manual change data is derived from data base table FARR_D_MANL_CHNG.

Technical details

POB table: FARR_D_POB

Manual change table: FARR_D_MANL_CHNG

Contract table: FARR_D_CONTRACT

Exception: No E22 error for soft-deleted POBs.

Relevant fields in the RA Consistency Check Monitor

Exception		Contract	POB	SumPosTrh	SumRecA03	LocalCurr3	SumPlaLab	SumBookLa	SumPlaAsse	SumBookAsse	ManSpread	Spread Ct	Manual Amt	Manual Con	Manual Spr	Manu Alloc	Manual Any	Created on	Created at	E01	E02	E03	E04	E05	E06	E07	E08	E09	E10	E11	E12	E13	E14	E15	E16	E17	E18	E19	E22	E25		
COB	64596	140733					0,00	0,00	0,00	0,00								19.08.2018	14:04:37	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	64596																																									
COO	7777777	7777777					0,00	0,00	0,00	0,00								08.08.2018	14:04:37	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
COO	7777777	7777772					0,00	0,00	0,00	0,00								19.08.2018	14:04:37	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗
COO	8888888	132274					0,00	0,00	0,00	0,00								19.08.2018	14:04:37	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗	✗

8.6.21 E25: Source of price flag is incorrect or missing

Each performance obligation (POB) that has a main price condition from the sender component must have a *source of price flag*.

When a main condition has been assigned to POBs, all distinct POBs which are not part of the hierarchy structures must have the source of price flag.

When a POB is part of the hierarchy structure, the source of price flag checks whether the price is at header level or sub item level. It could be that the price is distributed from header level to sub item level. In this scenario, the header level must have the source of price flag.

A linked or a manually created POB never has the source of price flag because the price comes from allocation.

This check is performed at POB level.

E25 is not performed for the following cases:

- A POB is soft deleted
- A POB is manually deleted
- At least one of the POBs in the contract is in error status in contract management

Technical details

```
FARR_D_POB- LEADING_POB_ID = 'L' OR FARR_D_POB- BOM_POB_ID IS NOT INITIAL OR  
FARR_D_POB- HI_LEVEL_POB_ID IS NOT INITIAL
```

METHOD `read_cust_cond_type` in class `cl_farr_contr_cust_db_access` ---> check if the condition buffer for a POB has an entry for price condition, this POB should have the SOP flag

```
FARR_D_POB- LEADING_POB_ID = ' '
```

```
FARR_D_DEFITEM-CATEGORY = 'P'
```

```
FARR_D_DEFITEM-LATEST_DEFITEM = 'X'
```

```
FARR_D_DEFITEM-SPEC_INDICATOR = 'P' or ' '
```

```
FARR_D_POB- LEADING_POB_ID = 'A' OR FARR_D_POB- BOM_POB_ID IS INITIAL no source of price  
flag
```

Exception: No E25 check for POBs that are soft deleted, manually deleted and for at least one of the POBs that is set to error status in contract management.

No relevant fields to compare.

8.6.22 Data Validation BAdI implementation - Comparison between the POB transaction price and the sales order item value

Purpose

In Revenue Accounting, a sender component sends data to the revenue accounting module. It's important to verify that the transaction price of the performance obligation (POB) is consistent with the relevant value of the respective sales order item. One option is to compare the values using the data validation BAdI

`FARR_BADI_CONS_REPORT`.

This SAP Note provides a check logic which can be implemented in the BAdI methods to compare the POB transaction price and the sales order item value, and to identify additional errors using the data validation checks.

This check logic provides two additional error categories: ERR90 and ERR91.

ERR90 compares the POB transaction price with the relevant sales order item price.

ERR91 compares the billing status of an order item and the respective performance obligation. When there is a mismatch, the data validation check will raise an error. If either error category does not produce a comparison, the reason is populated in a remark column.

Prerequisites

Please implement SAP Note [2707858](#) to ensure that any additional error flags are populated in the `FARR_D_CONS` table during mass transaction `FARR_CONTR_CHECK`.

To derive the condition values for sales order items with the Revenue Accounting indicator `G`, please implement SAP Note [2703852](#).

This SAP Note applies in the following scenarios:

1. Only for the SD sender component.
2. The SD module must be in the same system.
3. When the order and invoice are created in SD.
4. Only for order/invoice conditions which consist of the price and discount conditions, but no costs conditions are considered.
5. When there are no customer-specific revenue accounting item classes.
6. When the total values are compared at performance obligation level, not at condition level.

Limitations

- There may be performance issues due to a large volume of data.
- Legacy data is not compared during the check
- Archived SD documents are not considered.
- Orders in editing mode are not considered.
- Orders with unprocessed revenue accounting items are not considered.
- Orders with missing mapping are not considered.
- The checks cannot be executed when the integration with Revenue Accounting is deactivated.

8.6.23 Notes

In the Data Validation program, the code is adjusted based on new functionality or new logic., For this reason, SAP delivers Correction Notes continuously to address the new functionality or logic.

To view all the notes that are currently available, please visit support.sap.com and use the Access Expert Search functionality. You can also use the search terms to find new correction notes.






Enter the following parameters:

Component : FI-RA or FI-RA-VAL

Search Term : FARR_CONTR_CHECK or FARR_CONTR_MON

A list with all current notes for the Data Validation checks will be displayed. SAP may release enhancements and bug fixes in the form of Correction Notes. SAP recommends that you implement Notes which address problems that you encounter individually.

For your information, in the following table, you'll find all current SAP Notes relating to adjustments in the Data Validation program thus far.

SP/FP RAR 130	Note Number	Description
-	2318787 	RA Data Validation: Sum of revenue schedule value not correct on the checklist
-	2339986 	RA - Data Validation / additional checks part I
-	2346857 	RA - Data Validation / additional checks part I. Request for UDO
-	2353858 	RA - Data Validation / additional checks part II
-	2374845 	RA - Data Validation / Profitability segment data check

SP/FP RAR 130	Note Number	Description
-	2376446	RA - Data Validation - rec. adjustment E10, E14 / no deferral items E15
-	2379211	RA - Data Validation Improvements E5 latest DEFITEM flag/ E9 help text / E15 no deferral item / E16, E18 profitability segment number
-	2384108	RA - Data Validation - Error 15 correctur
-	2385426	RA Data Validation - Error 16 correctur / Text correctur
-	2390749	RA - Data Validation E5, E11, E12, E15, E16 correction
-	2394310	RA - Data Validation E14 - add limit of tolerance
-	2396274	RA - Data Validation / Handling with reassigned POBs, E03, E06, E07 / E10, E14 for migration period
-	2397577	RA - Data Validation / DDIC correction of FARR_S_CONS
-	2405361	RA - Data Validation 1.2 - User exit
-	2412715	RA - Data Validation v1.3 update
-	2413170	RA - Data Validation / E4, E5 & Statistic flag in the POSTING table
-	2422221	RA - Data Validation E11 error
-	2425239	RA - Data Validation - E04 correction
-	2426420	RA - Data Validation - STATISTIC flag in the DEFITEM table
-	2428938	RA- Data Validation Error 03 calculation of quantities
SP01	2429998	RA - Data Validation E04 Table synchronization
SP01	2434889	RA - Data Validation / special indicator check E08

SP/FP RAR 130	Note Number	Description
SP02	2436118 	RA - Data Validation / E16 invoice and posted value in local currency
SP02	2439093 	RA - Data Validation / E01, E03, E04, E08 corrections
SP02	2448625 	RA - Data Validation / E04 correction
SP02	2449307 	RA - Data Validation / E16 old check switch off
SP02	2459695 	RA - Data Validation - liability/asset calculation E10, E11, E12, E14
SP02	2464334 	RA - Data Validation - E10, E11, E12, E14, help text correction
SP02	2466287 	RA - Data Validation liability/asset calculation E11, E12
SP03	2475579 	RA - Data Validation / E14 check / new E17 - incorrect posted quantity
SP03	2481936 	RA - Data Validation / E08
SP03	2489381 	RA - Data Validation / Switch off Errors in BAdI
SP03	2493241 	RA - Data Validation / Error 15 add new exception
SP03	2495295 	RA - Data Validation / code example for method SET_STANDARD_FLAGS
SP03	2503911 	RA - Data Validation / Error 08 manual or zero value for POB
FP04	2508686 	RA - Data Validation E07, E09, E13 and E16 excluding BOM POB cases
FP04	2517217 	RA - Data Validation / Incorrect E4/E9 for contracts in the error worklist
FP04	2519237 	RA - Data Validation / Last POB of any RA contract does not get validation errors anymore

SP/FP RAR 130	Note Number	Description
FP04	2519605 	RA - Data Validation / Incorrect E3/E4/E17 because of overflow issue and incorrect sorting of deferral items
FP04	2522523 	RA - Data Validation / Incorrect E9/E15 errors when multiple contracts are checked
FP04	2527586 	RA - Data Validation / E03 no after allocation value for linked POB / E17 sort by condition type
FP04	2522474 	RA - Data Validation / E10, E14 - considering recon keys without TM flag/ E03 new exception
FP04	2538607 	RA - Data Validation / Additional fields from error structure displayed in FARR_CONTR_MON
FP04	2539591 	RA - Data Validation / Incorrect E6, E11 and E12 errors when contracts are checked
FP04	2548528 	RA - Data Validation / Incorrect E6, E11 and E12 errors when contracts are checked
FP04	2551351 	RA - Data Validation / E03 Effective quantity
FP04	2551526 	RA - Data Validation / Incorrect E11, E12 when liability/asset calculated on POB level
FP04	2552072 	RA - Data Validation / E17 Contract Modification
FP04	2554746 	RA - Data Validation / Incorrect E11 and E12 errors when contracts are checked
FP04	2559533 	RA - Data Validation liability/asset calculation E11, E12
FP04	2559607 	RA - Data Validation / Enhancing E17 Contract Modification
FP04	2561813 	RA - Data Validation / Incorrect E03 for contracts in the error worklist

SP/FP RAR 130	Note Number	Description
FP04	2563471 	RA - Data Validation /New Error Category (E19) - Check the existing recon key
FP04	2569065 	RA - Data Validation / Incorrect E19 errors when contracts are checked
FP04	2571063 	RA - Data Validation / Incorrect E11 and E12 errors when contracts are checked
FP04	2567096 	RA - Data Validation/ Incorrect E03, E11 and E12 errors when contracts are checked
FP05	2581025 	RA - Data Validation/ UDO report for Error Category (E19)
FP05	2577732 	RA - Data Validation /E04 adjustment for price condition, no defitem flag and reported quantity
FP05	2595770 	RA- Data Validation / Incorrect E6, E7 or E19 or Runtime Error SAPSQL_IN_ITAB_ILLEGAL_OPTION
FP05	2597285 	RA - Data Validation / New error category E25 Missing Source of Price
FP05	2601197 	RA - Data Validation/ Enhancing E04 Data Validation check
FP05	2602042 	RA - Data Validation/ Incorrect E17 errors when contracts are checked
FP05	2607851 	RA - Data Validation/ Incorrect E19 errors when contracts are checked
FP05	2610270 	RA - Data Validation/ Incorrect E17 errors when contracts are checked
FP05	2610746 	RA - Data Validation/ Enhancing E02 Data Validation check
FP05	2613583 	RA - Data Validation/ Update F1 help description
FP06	2623614 	Inflight Check C03 & Data Validation E03/ Error for Event Based POB With EventType='CI' Which Is Value Relevant

SP/FP RAR 130	Note Number	Description
FP06	2623644 	RA - Data Validation / Incorrect E19 error due to wrong internal table sorting
FP06	2629450 	RA - Data Validation/ E08 Error for Soft Deleted POBs
FP06	2630758 	RA - Data Validation / E02 Enhancement: Allow over fulfillment for event-based POB with Goods Issue (GI)
FP06	2632855 	RA - Data Validation / E05 Enhancement: Exclude POBs with deleted condition and pending fulfillment
FP06	2634300 	RA - Data Validation/ E03 After Fulfillment Type Change in the POB
FP06	2638136 	RA - Data Validation/ E03 When Quantity Denominator is 0 For the Fulfillment Entry for Time Based POB
FP06	2639151 	RA - Data Validation/ E04 After Change in Main Price Condition
FP06	2635686 	RA - Data Validation / Improvements to Data Validation Check
FP06	2643449 	DDIC objects for Package FARR_CONS_CHECK (pre-implementation steps for Note 2635686)
FP06	2638736 	Data Validation - Report RFARR_CONS_MONITOR produces a dump after implementing Note 2634199
FP07	2653855 	RA - Data Validation / Contract combination results in E06 and E07 errors
FP07	2657046 	E02/C02 after Adjustment of Time Based POB fulfillments
FP07	2666762 	RA - Data Validation/Adjust CC & AP to method check_authority_acct_princip

SP/FP RAR 130	Note Number	Description
		in Mass Transaction FARR_CONTR_CHECK
FP07	2671122	RA - Data Validation / Test Class Include
FP07	2674415	Data Validation / E11 and E12 short dump GETWA_NOT_ASSIGNED due to Recon Keys with empty Contract ID
FP07	2667046	RA - Data Validation/E02-Exclude contract in Error status
FP07	2714781	Data Validation BAdI implementation - Comparison between the POB transaction price and the sales order item value
FP07	2701727	RA - Data Validation/E02 Enhancement : Aligning E02 with Inflight check C02
FP07	2707858	Data Validation Check E22 Error is not Saved to Error Table
FP07	2694208	UDO report for Data Validation E22
FP07	2697781	RA - Data Validation/E02 Enhancement - Compare the total revenue for latest deferral items for a condition type with the curren
FP07	2671716	RA - Data Validation/ E03 When Sum Of Fulfilled Quantity Numerator/ Denominator Has Minimal Difference Compared to Effective Quantity
FP07	2678004	RA - Data Validation to fix dump when POB is empty to fetch posting entries

8.7 Monitoring

8.7.1 Background RFC Communication

You can use the background remote function call (bgRFC) monitor to monitor background communication. You can start the bgRFC monitor by using transaction **SBGRFCMON**. Authorization object `S_BGRFC` is required for monitoring or Customizing activities.

Refer to Troubleshooting and Monitoring for background communication:

http://help.sap.com/saphelp_snc_uiaddon_10/helpdata/en/48/982bcf0e0e0e27e10000000a421937/content.htm?frameset=/en/48/927c5caa6b17cee10000000a421937/frameset.htm=/en/33/12e0f98f494692b9777dd0ce9fba1e/plain.htm=119=false

⚠ Caution

You have to apply Note [2013706](#) for background communication (destination unlocking does not trigger bgRFC scheduler).

In some error situations, a transactional remote function call (tRFC) is used instead of a bgRFC. To monitor the tRFC queue, use transaction SM58.

http://help.sap.com/saphelp_snc_uiaddon_10/helpdata/en/48/821b412ddd3cb8e10000000a42189d/content.htm?frameset=/en/48/982bcf0e0e0e27e10000000a421937/frameset.htm=/en/33/12e0f98f494692b9777dd0ce9fba1e/plain.htm=35

8.7.2 Application Log

Revenue Accounting uses the application log to report issues during processing. You can use transaction `SLG1` to open the application log and use transaction `SLG2` to remove expired application log items. Revenue Accounting uses application log object `FARR` with the following subobjects:

- `ACCRUAL`: for messages issued during an accrual run (revenue posting)
- `CHECK_IC_DATA`: for messages issued during the Revenue Accounting Integration Consistency Check
- `CLEANUP`: for messages issued during the cleanup
- `CONTR_MGMT`: for messages issued during contract processing, Inflight Checks or when you execute the Data Validation tools
- `RAI_CHANGE`: for messages issued during a revenue accounting item change (via bgRFC)
- `RAI_CHECK`: for messages issued during reconciliation between operational documents and revenue accounting items
- `RAI_CREATE`: for messages issued during revenue accounting item creation (via bgRFC)
- `RAI_GEN`: for messages issued during revenue accounting item class generation.
- `RAI_LOAD`: for messages issued during the initial load of revenue accounting items
- `RAI_PROCESS`: for messages issued during revenue accounting item processing (RAI2->RAI4)
- `RAI_RECON`: for messages issued during reconciliation between revenue accounting items and revenue accounting contracts

- RAI_TRANSFER: for messages issued during revenue accounting item transfer (RAI0 to RAI2)
- RECON_RAI_ENGINE: for messages issued during reconciliation of revenue accounting items with revenue accounting contracts.
- SDBP_MIGRATION
- REV_TRANSFER: for messages issued during the transfer of revenue.
- CONTR_CHECK: for messages issued during the contract consistency check
- REVERSAL: for messages issued during the reversal of a revenue posting to the general ledger
- FARR_NEWACP: for messages issued during transition (copy of accounting principle, transition)
- TRANS_REVERSE_URDR: for messages issued during the reversal of unbilled receivables/deferred revenue (transition)
- TRANS_COMPARATIVE: for messages issued during the calculation of differences between accounting principles (transition)
- TRANS_CATCHUP: for messages issued during the cumulative catchup calculations

For more information about the maintenance of the Application Log, see the following documentation resources:

- Displaying log
http://help.sap.com/saphelp_snc_uiaddon_10/helpdata/en/4e/21041a35d44180e10000000a15822b/content.htm?frameset=/en/4e/4a2209872c3b0fe10000000a42189e/frameset.htm=/en/Ob/f24dccfb8f4be5a8e3d51989f97397/plain.htm=4
- Analyze log
http://help.sap.com/saphelp_snc_uiaddon_10/helpdata/en/4e/21048535d44180e10000000a15822b/content.htm?frameset=/en/4e/21041a35d44180e10000000a15822b/frameset.htm=/en/Ob/f24dccfb8f4be5a8e3d51989f97397/plain.htm=5
- Deleting log
http://help.sap.com/saphelp_snc_uiaddon_10/helpdata/en/4e/21053535d44180e10000000a15822b/content.htm?frameset=/en/4e/21048535d44180e10000000a15822b/frameset.htm=/en/Ob/f24dccfb8f4be5a8e3d51989f97397/plain.htm=6ArchivingObjectBC_SBAL

8.7.3 Revenue Accounting Monitor (RAI Monitor)

Information sent from operational components will be saved as revenue accounting items (RAI) in Revenue Accounting. Depending on the type of information, revenue accounting items of different classes, such as order item, invoice items, and revenue accounting items, will be created.

You can use the revenue accounting monitor (transaction FARR_RAI_MON) to track the processing of revenue accounting items. The revenue accounting item monitor allows you to monitor the following types of items:

- Erroneous items (main purpose of the monitoring)
- Items that have already been sent (either successfully or incorrectly)
- Items that have to be sent to Revenue Accounting

The monitor allows you to perform these tasks:

- Change revenue accounting items with the required authorizations
- Manually process or transfer revenue accounting items
- Monitor errors issued during the transfer of revenue accounting items

- Monitor errors issued during the processing of revenue accounting items

Manual changes can be displayed in the change history. The application log for the transfer or processing run can be displayed when you click on the error field.

The application log for the transfer or processing run can be displayed when you click on the error field.

For more details, see the program documentation.

8.7.4 Parallel Processing Monitor

The parallel processing monitor (transaction `FARR_RAI_PP_MON`) displays certain information about parallel jobs processed in Revenue Accounting. The jobs listed here are mainly administrative jobs involved in revenue accounting item (RAI) processing. Other jobs are monitored in a different application (with a different user interface) as described in the next chapter.

You can see the selection criteria with which an individual job was run. You can also see the job status and navigate to the application log written by the job. The following parallel processing runs are currently supported:

- RAI Transfer (transaction `FARR_RAI_TRANS`)
- RAI Processing (transaction `FARR_RAI_PROC`)
- RAI Initial Load (transaction `FARR_RAI_PROC_LOAD`)
- RAI to Contract Reconciliation (transaction `FARR_RAI_RECON`)
- Sender Component to RAI Reconciliation (transaction `FARR_CHECK_CONS`)
- Revenue Contract consistency check (transaction `FARR_CONTR_CHECK`)

For more information, see the program documentation.

8.7.5 Revenue Posting Job Monitor

The Revenue Posting Job Monitor (Web Dynpro Application `FARR_JOB_MONITOR`, contained in role `SAP_SR_FARR_REV_ACCOUNTANT`) provides status and result information about all jobs started as Web Dynpro applications. The following jobs are supported:

- Transfer Revenue
- Calculate Contract Liabilities and Contract Assets
- Revenue Posting Run
- Revenue Posting Reversal

In this monitor, you can navigate to the application log to view the selection criteria and the resulting general ledger documents.

8.7.6 Standard Job Monitor

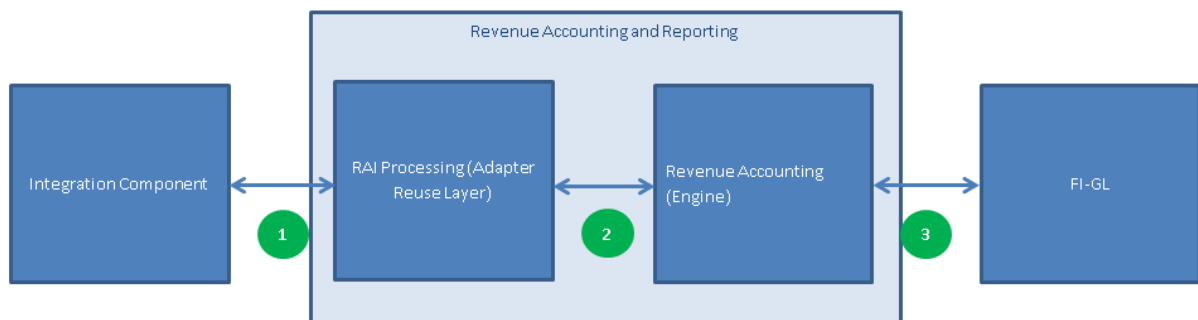
The following reports can be monitored with the standard job monitor (transaction `SM37`).

- Reconciliation Contracts - GL
- Reconciliation Contracts - GL Accounts

8.8 Reconciliation

8.8.1 Introduction

Revenue Accounting integrates with other components but is only loosely coupled. Revenue Accounting also includes two major components that work independently of each other. In this loosely coupled architecture, different components manage their own data. This requires reconciliation between the components. The following figure provides an overview of the integration scenario and the components between which data has to be reconciled:



Revenue Accounting supports the following types of reconciliation:

- Reconciliation between operational documents, such as sales orders and invoices, and the resulting revenue accounting items in the Adapter Reuse Layer. This type of reconciliation is also called Revenue Accounting Integration Consistency Check.
- Reconciliation between revenue accounting items and revenue accounting contracts.

- Reconciliation between revenue accounting contracts (including revenue accounting postings) and FI-GL.

8.8.2 Reconciliation Reports

8.8.2.1 Introduction

The reconciliation reports allow you to check whether information that is relevant to revenue recognition is transferred and processed successfully in Revenue Accounting.

8.8.2.2 Reconciliation Type 1

The reconciliation occurs between revenue accounting items in the Adapter Reuse Layer (transaction `FARR_CHECK_CONS`) and the data originating from the operational source component. The reconciliation can be carried out either from the last successful check or by the operational document (the latter is for simulation only). Refer to the transaction documentation.

The reconciliation report checks the following:

- Whether items are transferred from the sender system
- Whether revenue accounting item errors are reported
- Whether different item values occur
- Whether different condition type values occur

This report uses the application log to report the results of the reconciliation. You can check the results using transaction `SLG1` and selecting the application log object `FARR` and subobject `RAI_CHECK`.

8.8.2.3 Reconciliation Type 2

To ensure that the data is consistent, you need to periodically reconcile the processed revenue accounting items with the performance obligations that were determined. The program (transaction `FARR_RAI_RECON`) checks the following data:

- Order quantity
- Order transaction price per condition
- Fulfilled quantity
- Invoice amount per condition type

This report uses the application log to report the results of the reconciliation. The errors that arise are also stored in the `FARR_D_RECON_ERR` table. You can check the execution results using transaction `SLG1` and selecting the application log object `FARR` and subobject `RAI_RECON`.

It's possible to run this report in simulation mode. If you do this, no entries are created in the `FARR_D_RECON_ERR` table.

The reconciliation results are displayed at performance obligation level.

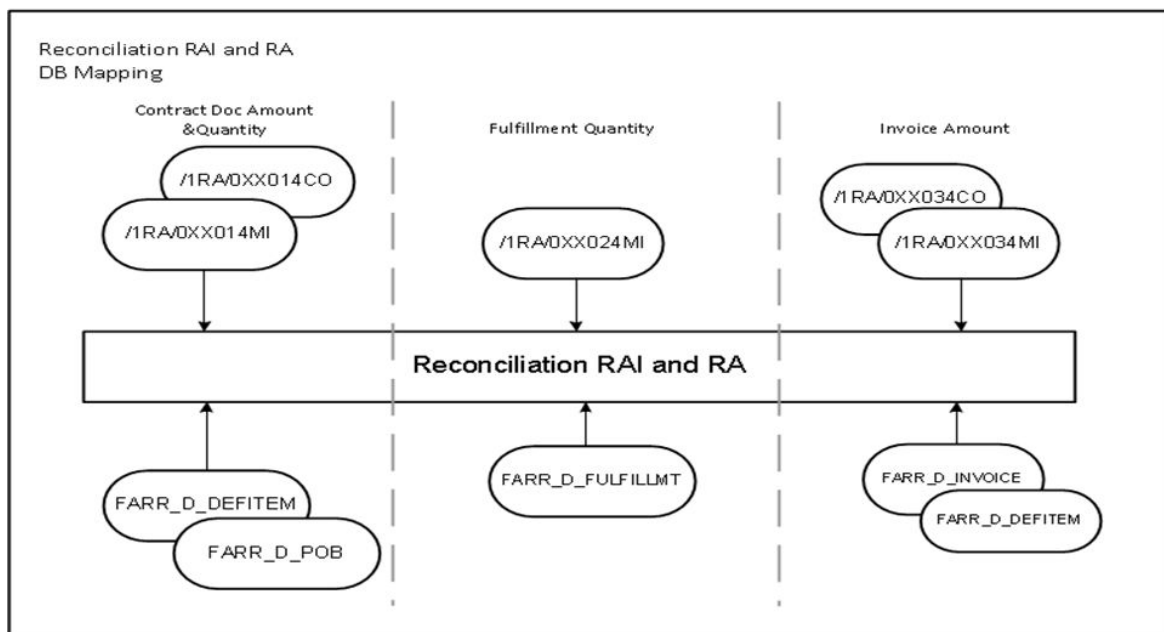
If one or more differences are found, the performance obligation will be considered again in the next reconciliation run.

However, the following data is not checked:

- Invoice quantity
- Fulfillment of specific types of performance obligations:
 - Time-based performance obligations with a fulfillment that is not triggered by events;
 - Value-based performance obligations
 - Manual fulfillment performance obligations

If differences are found, you have the following options to resolve the differences:

1. You can run the revenue accounting item monitor to check for unprocessed revenue accounting items, if the corresponding performance obligations have been generated
 Transaction: FARR_RAI_MON.
 Types of Selection: All Items Related to Order Items.
 Item Status: Processable Items
 Company Code: Specified in the Reconciliation Report
 Performance Obligation: Specified in the Reconciliation Report
2. You can check the related database tables to identify the root cause. The following figure illustrates the tables that are involved in the processing:



Type-2 Reconciliation

To see the report document, go to the F1 help of the report in the system, or go to <http://help.sap.com> and choose: ► *Financial Management* ► *SAP Revenue Accounting and Reporting* ► *SAP Revenue*

8.8.2.4 Reconciliation Type 3

The following reconciliation reports allow you to perform reconciliation between FI-GL and Revenue Accounting:

- Reconciliation between Revenue Postings and the General Ledger
- Reconciliation of Accounts Between Revenue Accounting and the General Ledger

Reconciliation Type 3.1: Reconciliation between Revenue Postings and the General Ledger

Required role: SAP_SR_FARR_REV_ADMIN

In the NetWeaver Business Client (NWBC), choose [Reconciliation](#) > [Revenue Postings and General Ledger](#)

This report detects differences between the posting table and the general ledger. The processing is mainly based on Run IDs. This report does not check differences related to accrual runs and posting errors. Instead, this report focuses on differences between the posting table and posting results.

You can have several selection criteria but the company code, fiscal year, period, and accounting principle are mandatory and single-value fields. For better performance, you can now only perform reconciliation for one period at a time.

The reconciliation report detects the following differences:

- Different document amounts between the posting table and general ledger records
- Different local amounts between the posting table and general ledger records
- Different general ledger accounts between the posting table and general ledger records

If differences are found, you can run a reverse posting and run a revenue posting again.

To run a reverse posting, in the NetWeaver Business Client (NWBC), choose [Revenue Posting Run](#) > [Revenue Posting Reversal](#).

To see the report document, go to <http://help.sap.com> and choose [Financial Management](#) > [SAP Revenue Accounting and Reporting](#) > [Application Help](#) > [Reconciliation](#) > [Reconciliation: Revenue Posting and General Ledger](#).

Reconciliation Type 3.2: Reconciliation of Accounts Between Revenue Accounting and the General Ledger

Required role: SAP_SR_FARR_REV_ADMIN

In the NetWeaver Business Client (NWBC), choose [Reconciliation](#) > [Accounts Between Revenue Accounting and G/L](#) >

This report detects differences between account balances in Revenue Accounting and the general ledger. This only works if Revenue Accounting is the only application that posts to these accounts. The report has to be started for a company code, accounting principle, and a fiscal year period. You can also specify a set of accounts to be compared.

8.9 Archiving

8.9.1 Archiving

Two archiving objects are available for archiving revenue accounting data:

1. FARR_CONTR (Revenue Accounting Contracts)
2. FARR_RAI (Processed Revenue Accounting Items)

You can move data into archiving files with the help of the standard Archive Development Kit (ADK) using transactions SARA and an appropriate archiving object.

8.9.2 Archiving Revenue Accounting Contracts (FARR_CONTR)

A revenue accounting contract can be archived when the status is set to *Completed* and the residence time has finished. The start of the residence time is the date on which the contract was completed.

i Note

In the Archive Writer program (RFARR_CONTR_AR01), the Archiving Key Date field determines the set of revenue accounting items to be checked. Revenue accounting items which were created after the date entered are not processed. Thus, if you do not archive revenue accounting items that were created over the last two years, for example, you should set the date to two years ago to improve the performance of the Archive Writer program.

This residence time can be maintained in Customizing for Revenue Accounting: [Revenue Accounting](#) > [Revenue Accounting Contracts](#) > [Archiving](#) > [Define Residence Time for Revenue Accounting Contracts](#) >

If no residence time is maintained, a default residence time of 30 days is applied.

A contract can be set to *Completed* when all its performance obligations are completed and the contract is balanced. Program FARR_SET_CONTRACT_COMPLETE (transaction FARR_CONTR_COMPLETE) checks whether the conditions are satisfied for each open contract and sets the completion indicator accordingly. Schedule this program regularly or run it before archiving starts.

The archiving program also verifies that there are no outstanding postings for the contract. If some postings remain outstanding, the contract cannot be archived.

The following tables relate to the revenue accounting contract (FARR_D_CONTRACT) and are archived:

- FARR_D_CONT_ERR: Log Messages of Contract Errors
- FARR_D_DEFERRAL: Deferrals
- FARR_D_DEFITEM: Deferral Items
- FARR_D_EV_CONTR: Events that Occur for Contracts
- FARR_D_FULFILLMT: Fulfillment Entries
- FARR_D_INVOICE: Invoice Entries
- FARR_D_INV_FX_ED: Distributed Invoice and Exchange Rate Difference
- FARR_D_MANL_CHNG: Manual Changes
- FARR_D_POB: Performance Obligations
- FARR_D_POB_HIS: History of Performance Obligations/Contract Structure Changes
- FARR_D_POSTING: Postings
- FARR_D_RECON_KEY: Reconciliation Keys
- FARR_D_CHG_TYPE: Change Type in Period (Prospective/Retrospective)

After the data has been moved to an archive file, the data can be reloaded back to the database.

The archiving object FARR_CONTR is also integrated into SAP NetWeaver Information Lifecycle Management (ILM) which you can configure to meet legal business requirements.

You can also display archived data by using transaction SARI together with the standard Archive Information Structure SAP_FARR_CONTR delivered by SAP.

8.9.3 Archiving Processed Revenue Accounting Items (FARR_RAI)

Processed revenue accounting items (RAIs) are stored in several tables, depending on the used revenue accounting item classes and also on the record types (main or condition items).

i Note

In the *Archive Writer* program (RFARR_RAI_AR01), the field *Archiving Key Date* determines the set of revenue accounting items to be checked. Revenue accounting items which were created after the date entered, are not processed. Thus, if you do not archive revenue accounting items that were created over the last two years, for example, you should set the date to two years ago to improve the performance of the *Archive Writer* program.

There is no defined residence time for a processed revenue accounting item. You can archive a processed revenue accounting item immediately when all of its relevant contracts are archived.

The following tables relate to revenue accounting items and are archived:

- /1RA/0SD014MI: Processed Main Items for Class SD01 (example for class SD01)
- /1RA/0SD014CO: Processed Condition Items for Class SD01 (example for class SD01)
- /1RA/0XXXX4MI: Processed Main Items for Class XXXX (example for class XXXX)
- FARR_D_COMP: Compound Groups of Contract items
- FARR_D_RAI_CH: Change Sequence of Changed Items

- `FARR_D_RAI_HIST`: History Table for Revenue Accounting Item Exemptions
- `FARR_D_LEGACY`: Legacy data for initial load of revenue accounting items
- `FARR_D_LEGACYC`: Legacy data for initial load of conditions for rev.acc.it.
- `FARR_D_LEGACYSF`: Legacy data for scheduled fulfillments (time-based)

After the data has been moved to an archive file, the data can be reloaded back to the database.

The archiving object `FARR_RAI` is also integrated into SAP NetWeaver Information Lifecycle Management (ILM) which you can configure to meet legal business requirements.

You can also display archived data via transaction `SARI` using the standard Archive Information Structure `SAP_FARR_RAI`, provided by SAP.

9 Best Practices and Recommendations

SAP recommends the following best practices to run the SAP Revenue Accounting and Reporting Add-On:

- Keep the Inflight Checks set to active in your productive solution.
- Run the Data Validation reports regularly (for example, weekly) to monitor the quality of the data in your solution.
- Run the type 1 and 2 reconciliation reports before transferring revenue, and run the type 3 reconciliation report after transferring revenue.
- Plan regular intermediate postings during the financial period to reduce the amount of posted data at period closing.

10 Security Information

10.1 Introduction

With the increasing use of distributed systems and the Internet for managing business data, the demands on security are also on the rise. When using a distributed system, you need to be sure that your data and processes support your business needs without allowing unauthorized access to critical information. User errors, negligence, or attempted manipulation of your system should not result in loss of information or processing time. These demands on security apply likewise to *SAP Revenue Accounting and Reporting*. We have provided this Security chapter to assist you in securing *SAP Revenue Accounting and Reporting*.

About this Document

The Security chapter provides an overview of the security-relevant information that applies to *Revenue Accounting and Reporting*. This chapter comprises the following main sections:

- **Before You Start**
This section contains information about why security is necessary, how to use this document, and references to other Security Guides that build the foundation for this Security chapter.
- **Technical System Landscape**
This section provides an overview of the technical components and communication paths that are used by *Revenue Accounting and Reporting*.
- **User Administration and Authentication**
This section provides an overview of the following user administration and authentication aspects:
 - Recommended tools for user management
 - User types that are required by *Revenue Accounting and Reporting*
 - Standard users that are delivered with *Revenue Accounting and Reporting*
 - Overview of the user synchronization strategy if several components or products are involved
 - Overview of how integration into Single Sign-On environments is possible
- **Authorizations**
This section provides an overview of the authorization concept that applies to *Revenue Accounting and Reporting*.
- **Session Security Protection**
This section provides information about activating secure session management, which prevents JavaScript or plug-ins from accessing the SAP logon ticket or security session cookie(s).
- **Network and Communication Security**
This section provides an overview of the communication paths used by *Revenue Accounting and Reporting* and the security mechanisms that apply. It also includes our recommendations for the network topology to restrict access at network level.
- **Internet Communication Framework Security**
This section provides an overview of the Internet Communication Framework (ICF) services that are used by *Revenue Accounting and Reporting*.

- Services for Security Lifecycle Management
This section provides an overview of services provided by Active Global Support that are available to assist you in maintaining security in your SAP systems on an ongoing basis.
- Appendix
This section provides references to further information.

10.2 Before You Start

Fundamental Security Guides

Revenue Accounting and Reporting is based on SAP ERP 6.0. Therefore, the corresponding Security Guides also apply to *Revenue Accounting and Reporting 1.3*. Pay particular attention to the most relevant sections or specific restrictions as indicated in the table below.

Fundamental Security Guides

Scenario, Application or Component Security Guide	Most Relevant Sections or Specific Restrictions
SAP NetWeaver Application Server ABAP Security Guide	SAP Authorization Concept
WebDynpro ABAP Security Guide	
SAP Security Guides for SAP ERP	

For a complete list of the available SAP Security Guides, see SAP Service Marketplace at <https://support.sap.com/securitynotes>.

Important SAP Notes

For a list of additional security-relevant SAP Hot News and SAP Notes, see also SAP Support Portal at <https://support.sap.com/securitynotes>.

Configuration

You can find a summary of the configuration steps for implementing security for *Revenue Accounting and Reporting 1.3* in the *Configuration Guide, Solution Manager*.

Additional Information

For more information about specific topics, see the Quick Links as shown in the table below.

Content	Quick Link on SAP Support Portal, SAP Help Portal, or SDN
Security	http://scn.sap.com/community/security
Security Guides	http://help.sap.com/
Related SAP Notes	https://support.sap.com/notes
	https://support.sap.com/kb-incidents/notes.html
Released platforms	https://support.sap.com/release-upgrade-maintenance/pam.html
Network security	http://help.sap.com/
SAP Solution Manager	https://support.sap.com/solutionmanager
SAP NetWeaver	http://scn.sap.com/community/netweaver

10.3 Technical System Landscape

The figure below shows an overview of the technical system landscape for Revenue Accounting and Reporting 1.3.

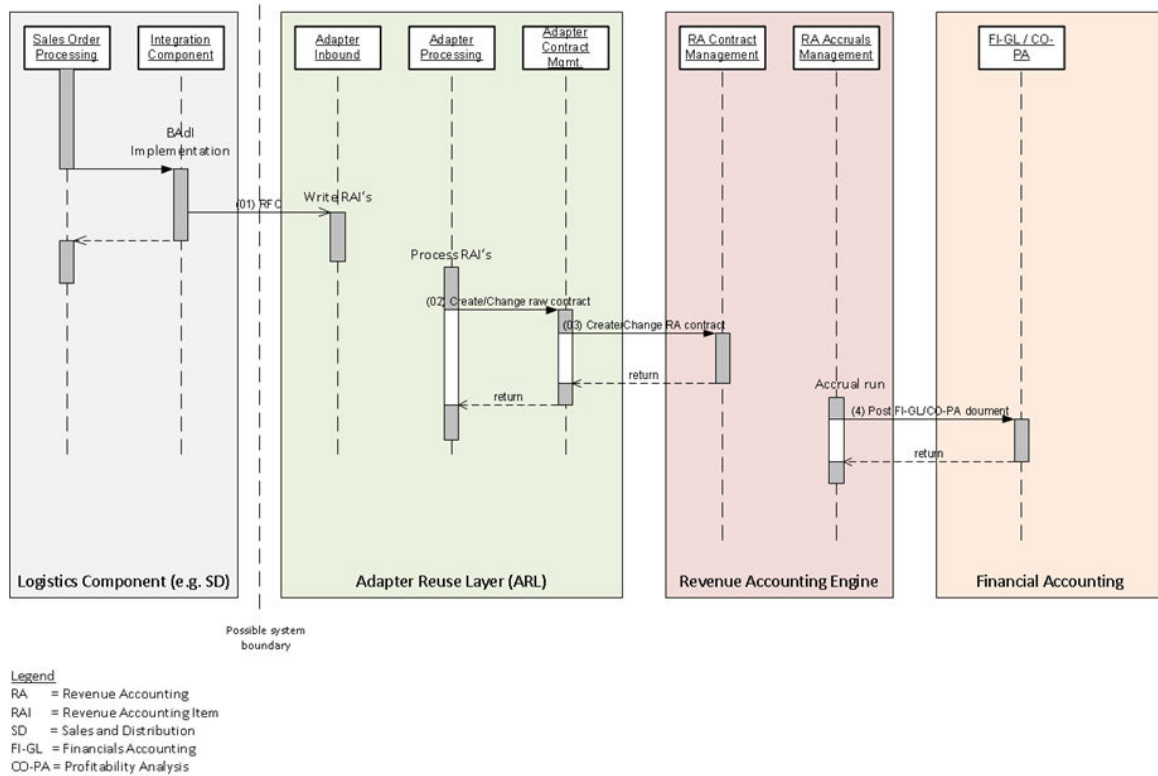
Information about the [Technical System Landscape \[page 111\]](#) is provided in the SAP Online Help.

For more information about the technical system landscape, see the resources listed in the table below.

Topic	Guide/Tool	Quick Link
Technical description for Revenue Accounting and Reporting 1.3 and the underlying components such as SAP NetWeaver	<i>Master Guide</i>	http://help.sap.com/revacc
High availability	<i>High Availability for SAP Solutions</i>	https://help.sap.com/erp_fao_addon10/helpdata/en/08/5748f74ae611d1894f0000e829fbbd/frameset.html
Technical landscape design	See applicable documents	http://scn.sap.com/docs/DOC-8140
Security	See applicable documents	http://scn.sap.com/community/security

10.4 Security Aspects of Data, Data Flow and Processes

The figure below shows an overview of the data flow and processes for *Revenue Accounting and Reporting 1.3*.



Technical System Landscape of SAP Revenue Accounting and Reporting

The table below shows the security aspect to be considered for the process steps and the mechanism that applies.

Step	Description	Security Measure
1	RFC to the Adapter Reuse Layer (ARL)	Background RFC
2	Create and change the raw contract	Not applicable
3	Create and change the Revenue Accounting contract	Not applicable
4	Post the FI documents via RW Interface	Not applicable

10.5 User Administration and Authentication

10.5.1 Introduction

Revenue Accounting and Reporting 1.3 uses the user management and authentication mechanisms provided with the SAP NetWeaver platform, in particular the SAP NetWeaver Application Server ABAP. Therefore, the security recommendations and guidelines for user administration and authentication, as described in the [SAP NetWeaver Application Server ABAP Security Guide](#), also apply to Revenue Accounting and Reporting 1.3.

In addition to these guidelines, information about user administration and authentication that specifically applies to Revenue Accounting and Reporting 1.3 is included in the following topics:

- [User Management](#)
This topic lists the tools for user management, the types of users required, and the standard users that are delivered with Revenue Accounting and Reporting 1.3.
- [Integration into Single Sign-On Environments](#)
This topic describes how Revenue Accounting and Reporting 1.3 supports Single Sign-On mechanisms.

10.5.2 User Management

Revenue Accounting and Reporting uses the mechanisms provided with the SAP NetWeaver Application Server, for example, tools, user types, and password policy. For an overview of how these mechanisms apply for Revenue Accounting, see the sections below.

User Administration Tools

The table below shows the tools to use for user management and user administration with [Revenue Accounting and Reporting](#).

User Management Tools

Tool	Detailed Description	Comment
User maintenance for ABAP-based systems (transaction SU01)	You use the user maintenance transaction to generate users in the ABAP-based systems. For more information, see User and Role Administration of Application Server ABAP .	Used for all deployment options of Revenue Accounting and Reporting

Tool	Detailed Description	Comment
Role maintenance (transaction PFCG)	You use the role maintenance transaction to generate user profiles. For more information, see User and Role Administration of Application Server ABAP .	Used for all deployment options of Revenue Accounting and Reporting
User Management Engine with SAP NetWeaver AS Java	You use this User Management Engine for creating Portal users. For more information, see User Management Engine .	Used for deployment option on the SAP NetWeaver Portal

User Types

It is often necessary to specify different security policies for different types of users. For example, your policy may specify that individual users who perform tasks interactively have to change their passwords on a regular basis, but not those users under which background processing jobs run.

The user types that are required for Revenue Accounting and Reporting 1.3 include:

- Individual users:
 - Dialog users are used for SAP GUI for Windows and WebDynpro ABAP.
- Technical users:
 - Background users are used for remote call function (RFC) destinations and background jobs such as revenue accounting item processing and Accrual Run.

For more information about these user types, see [User Types](#) in the SAP NetWeaver AS ABAP Security Guide.

Standard Users

No standard users are delivered for [Revenue Accounting and Reporting 1.3](#).

10.5.3 Integration into Single Sign-On Environments

Revenue Accounting and Reporting 1.3 supports the Single Sign-On (SSO) mechanisms provided by SAP NetWeaver. Therefore, the security recommendations and guidelines for user administration and authentication, as described in the [SAP NetWeaver Security Guide](#), also apply to Revenue Accounting and Reporting 1.3.

For more information about the authentication mechanisms available, see [User Authentication and Single Sign-On](#) in the [SAP NetWeaver Library](#).

10.6 Authorizations

Revenue Accounting and Reporting 1.3 uses the authorization concept provided by SAP NetWeaver AS ABAP. Therefore, the recommendations and guidelines for authorizations, as described in the SAP NetWeaver AS Security Guide ABAP, also apply to Revenue Accounting and Reporting.

The SAP NetWeaver authorization concept is based on assigning authorizations to users based on roles. For role maintenance, use the profile generator (transaction `PF03`) on the AS ABAP and the User Management Engine's user administration console on AS Java.

i Note

For more information about how to create roles, see Role Administration [SAP Library]

Standard Roles

The table below shows the standard roles that are used by Revenue Accounting and Reporting.

Standard Roles

Role	Description
SAP_SR_FARR_REV_ACCOUNTANT	Revenue Accountant
SAP_SR_FARR_REV_ACCOUNTANT_A	Revenue Accountant (Authorization)
SAP_SR_FARR_REV_ADMIN	Revenue Accounting Administrator
SAP_SR_FARR_REV_ADMIN_A	Revenue Accounting Administrator (Authorization)
SAP_SR_FARR_REV_AUDITOR	Revenue Accounting Auditor
SAP_SR_FARR_REV_AUDITOR_A	Revenue Accounting Auditor (Authorization)
SAP_SR_FARR_REV_RFCUSER_A	Revenue Accounting RFC User (Authorization)

For more information about roles delivered for *Revenue Accounting and Reporting*, see the documentation at <http://help.sap.com> > *Financial Management* > *SAP Revenue Accounting and Reporting* > *Application Help* > *Administration and Maintenance* > *Roles* >

Standard Authorization Objects

The table below shows the security-relevant authorization objects that are used SAP Revenue Accounting and Reporting.

Standard Authorization Objects

Authorization Object	Field	Value	Description
F_RRRAI	ACTVT	01 Create or generate	01 Create and process revenue accounting items
Revenue Accounting Items		03 Display	03 Display revenue accounting items in the RAI monitor
	BUKRS		Company code
F_RRRAIADM	ACTVT	02 Change	02 Change revenue accounting items in the RAI monitor
Change Revenue Accounting Items			
F_RRRAIICON	ACTVT	02 Change	01 Create and change RAI configurations
Configuration and Generation of RAI Classes		07 Activate, generate	07 Activate RAI configurations
F_RRRAITST	ACTVT	01 Create or generate	01 Create test data with report FARR_RAI_SAMPLE
Test Data Creation			
F_RR_ACCR	BUKRS		Company code
Accrual Run and Reconciliation Reporting			
	ACTVT	03 Display	Activity
		10 Post	
		48 Simulate	
		93 Calculate	
	ACCRULE		Accounting Principle (AP)
F_RR_ACCTD	ACTVT	02 Change	02 Maintain account determination for Revenue Accounting specific accounts
Decision Table of Account Determination		03 Display	03 Display account determination for Revenue Accounting specific accounts

Authorization Object	Field	Value	Description
F_RR_CONTR Revenue Accounting Contract	ACTVT	01 Create or generate	01: Create Revenue Accounting contract
		02 Change	02: Change Revenue Accounting contract
		03 Display	03: Display Revenue Accounting contract
		A3 Change status	A3: Change status of performance obligation
	BUKRS		Company code
	FARR_VKORG		Sales organization (compatible with SD, CRM, ...)
F_RR_INITD Initial Load Data	ACTVT	01 Create	01: Create and process initial load data (legacy data, revenue accounting items, contracts)
		06 Delete	06: Delete initial load data during initial load cleanup (transaction FARR_IL_CLEANUP)
	BUKRS		Company code
	ACCRULE		Accounting Principle (AP)
F_RR_MFUFI Manual Fulfill	ACTVT	16 Execute	Activity
F_RR_CLOSE RA Period Close and Contract Shift to next Period	ACTVT	03 Display	
		50 Move	
		PB Close Period	
	BUKRS		Company code
	ACCRULE		Accounting Principle
F_RR_STATUS Performance Obligation Status	ACTVT	02 Change	Change the performance obligation status
		POB STATUS	Performance obligation status
		REVIEWREAS	Review reason

Authorization Object	Field	Value	Description
F_RRCONSIS Contract Consistency Check	ACTVT	03 Display	16: Execute the Contract Consistency Check program 03: Display the result of the Contract Consistency Check.
		16 Execute	
	BUKRS		Company code
	ACCRULE		Accounting Principle
F_RRNEWACP Transition	ACTVT	01 Create or generate	01: Copy Accounting Principle 03: Display differences between Accounting Principles 06: Cleanup transition data 16: Execute cumulative catchup 93: Calculate cumulative catchup or differences between Accounting Principles
		03 Display	
		06 Delete	
		16 Execute	
		93 Calculate	
F_RRRAIEXC	ACTVT	01 Create or generate	01: Exempt RAI from processing 85: Remove exemption from RAI
		85 Reverse	

Additional Relevant Authorization Objects

The following table displays authorization checks that BRFplus uses for Revenue Accounting.

Authorization Object	Field	Value	Description
FDT_OBJECT Authority-Check on Object Level	FDT_APPL		Check during BRFplus maintenance
FDT_PROC Processing (Web Service/RFC)	FDT_APPL		Check during BRFplus function call
FDT_TRACE Authority-Check on Trace	FDT_APPL		Checked during BRFplus tracing

The following table displays authorization checks that Information Lifecycle Management (ILM) uses for archiving.

Authorization Object	Field	Value	Description
S_ARCHIVE	ARCH_OBJ		Enables the customer to control the archiving and read archived data at Archiving Object level

10.7 Session Security Protection

To increase security and prevent access to the SAP logon ticket and security session cookie(s), we recommend activating secure session management.

We also highly recommend using SSL to protect the network communications where these security-relevant cookies are transferred

Session Security Protection on the AS ABAP

To activate session security on the AS ABAP, set the corresponding profile parameters and activate the session security for the client(s) using the transaction `SICF_SESSIONS`.

For more information, a list of the relevant profile parameters, and detailed instructions, see [Activating HTTP Security Session Management on AS ABAP](#) in the AS ABAP security documentation.

10.8 Network and Communication Security

10.8.1 Introduction

The network topology for Revenue Accounting and Reporting is based on the topology used by the SAP NetWeaver platform. Therefore, the security guidelines and recommendations described in the SAP NetWeaver Security Guide also apply to Revenue Accounting and Reporting. Details that specifically apply to Revenue Accounting and Reporting are described in the following topics:

- **Communication Channel Security**
This topic describes the communication paths and protocols used by Revenue Accounting and Reporting.
- **Network Security**
This topic describes the recommended network topology for Revenue Accounting and Reporting. It shows the appropriate network segments for the various client and server components and where to use firewalls for access protection. It also includes a list of the ports needed to operate Revenue Accounting and Reporting.
- **Communication Destinations**

This topic describes the information needed for the various communication paths, for example, which users are used for which communications.

For more information, see the following sections in the SAP NetWeaver Security Guide:

- Network and Communication Security
- Security Guides for Connectivity and Interoperability Technologies

10.8.2 Communication Channel Security

Operational applications send information to Revenue Accounting and Reporting in the form of revenue accounting items. Tables that store the items are generated using the namespace /1RA/. Additionally, an RFC-enabled function module is generated, which creates revenue accounting items that are named with /1RA/xxxx_RAI_CREATE_API, where xxxx represents the four-character name of the revenue accounting item class.

To integrate Revenue Accounting and Reporting with SAP Sales and Distribution, you must use the following revenue accounting item classes:

Name of Class	Description
SD01	Order Items
SD02	Fulfillment Items
SD03	Invoice Items

To integrate Revenue Accounting and Reporting with Billing and Revenue Innovation Management (BRIM), you must use the following revenue accounting item classes (depending on your additional process requirements in addition or instead the revenue accounting item classes for Sales and Distribution):

Name of Class	Description
CA01	Order Items
CA02	Fulfillment Items
CA03	Invoice Items

To integrate Revenue Accounting and Reporting with SAP Customer Relationship Management (CRM), you must use the following revenue accounting item classes:

Name of Class	Description
CS01	Order Items
CS03	Invoice Items

You can also integrate Revenue Accounting and Reporting with external order entry and billing systems. When you do this, you must create your new revenue accounting item classes by using the Y- and Z- name spaces.

The communication between order entry and billing systems and SAP Revenue Accounting and Reporting uses background RFC (bgRFC). After receiving revenue accounting items, SAP Revenue Accounting and Reporting processes them and creates revenue accounting contracts.

To integrate SAP Revenue Accounting and Reporting with SAP Customer Relationship Management (CRM) Service, you must use the following revenue accounting item classes (depending on your process requirements in addition to the revenue accounting item classes for SAP Sales and Distribution):

Name of Class	Description
CS01	Order Item
CS03	Invoice Items

The table below shows the communication channels used by the SAP Revenue Accounting and Reporting, the protocol used for the connection, and the type of data transferred.

Communication Path	Protocol Used	Type of Data Transferred
Integration Component to SAP Revenue Accounting and Reporting	RFC	Revenue Accounting Items (RAI)
SAP Revenue Accounting and Reporting SAPGUI Applications	DIAG	UI control data
SAP Revenue Accounting and Reporting WebDynpro Applications	HTTP(S)	UI control data
3rd party to SAP Revenue Accounting and Reporting	RFC	Legacy Data

DIAG and RFC connections can be protected using Secure Network Communications (SNC). HTTP connections are protected using the Secure Sockets Layer (SSL) protocol. SOAP connections are protected with Web services security.

→ Recommendation

We strongly recommend using secure protocols (SSL, SNC) whenever possible.

For more information, see [Transport Layer Security](#) and [Web Services Security](#) in the SAP NetWeaver Security Guide.

10.8.3 Network Security

Ports

Revenue Accounting and Reporting 1.3 runs on SAP NetWeaver and uses the ports from AS ABAP or AS Java. For more information, see the topics for [AS ABAP Ports](#) [SAP Library] and [AS Java Ports](#) [SAP Library] in the

corresponding SAP NetWeaver Security Guides. For other components, for example, SAPinst, SAProuter, or the SAP Web Dispatcher, see also the document *TCP/IP Ports Used by SAP Applications*, which is located on the SAP Developer Network at <http://scn.sap.com/community/security> under **Infrastructure Security** **Network and Communications Security**.

10.8.4 Communication Destinations

The table below shows an overview of the communication destinations used by Revenue Accounting and Reporting.

Destination	Delivered	Type	User, Authorizations	Description
Integration Component to SAP Revenue Accounting and Reporting	No	RFC	User-based authorizations	Revenue accounting item creation
3rd Party to SAP Revenue Accounting and Reporting	No	RFC	User-based authorizations	Transfer of legacy data from 3rd party systems to SAP Revenue Accounting and Reporting

10.9 Internet Communication Framework Security

You should only activate services that are required for the applications running in your system. For Revenue Accounting and Reporting, the following services are needed which, unless stated otherwise, you can find in the path `default_host/sap/bc/webdynpro/sap/`:

- `FARR_ACCR_RUN`: Accrual run for testing online or run in background
- `FARR_ACCT_DETERMINATION_OVP`: Account determination
- `FARR_ADD_CONT_TO_REVIEW_LIST`: Add contracts to review list
- `FARR_ALLOC_PRICE_OVP`: Price allocation
- `FARR_BRF_UI_DT_OVP_APPLN`: BRF+ UI decision table Web Dynpro application for OVP
- `FARR_BRF_UI_LAUNCHER`: BRF+ UI decision table launcher
- `FARR_CONFLICT_OVP`: Resolve change conflicts
- `FARR_CONTRACT_ALL_OVP`: Contract comprehensive view
- `FARR_CONTRACT_CHG_HISTORY`: Change history
- `FARR_CONTRACT_DOC_SEARCH_OVP`: Search contract with document
- `FARR_CONTRACT_MANAGEMENT_OVP`: Contract management OVP
- `FARR_CONTRACT_MAN_FULFILL_OVP`: Contract manual fulfillment application
- `FARR_CONTRACT_MAN_FUL_OVP`: Manual fulfillment contract management OVP

- FARR_CONTRACT_MAN_HIS_OVP: Manual fulfillment contract POB history
- FARR_CONTRACT_MGMT_OVP: Revenue accounting contract
- FARR_CONTRACT_SEARCH_OVP: Search contract OVP
- FARR_CONTRACT_SHIFT: Contract shift
- FARR_DISAGGR_REVENUE_CUSTOMER: Dissaggregation of revenue by customer
- FARR_DISAGGR_REVENUE_CUST_GRP: Dissaggregation of revenue by customer group
- FARR_DISAGGR_REVENUE_POB_TYPE: Disaggregation of revenue by POB type
- FARR_JOB_MONITOR: List: Job monitor for posting
- FARR_LIAB_RUN: Run contract liability calculation
- FARR_MANUAL_COMBINE_OVP: Manual contract combination
- FARR_PERIODIC_RUN: Accrual periodic run
- FARR_POB_ADD_OVP: POB add OVP
- FARR_POB_DETAIL_OVP: Performance obligation
- FARR_POB_FULILL_OVP: POB fulfill page
- FARR_POB_MGMT_OVP: Performance obligation structure
- FARR_POB_REASSIGN_OVP: POB reassign OVP
- FARR_POB_REV_RECOG_OVP: Revenue schedule
- FARR_POSTED_AMOUNT_CONTRACT: Posted amount by contract report
- FARR_POSTED_AMOUNT_POB_TYPE: Posted amount by POB type report
- FARR_RAI_MON_NAV: Navigation for RAI monitor
- FARR_RECON_ACCOUNT_RA_GL: Reconciliation for G/L accounts between RA and GL
- FARR_RECON_FI_USER: Reconciliation for FI user
- FARR_RECON_KEY_STATUS: Reconciliation Key status report
- FARR_RECON_POSTING_GL: Reconciliation: Posting table and G/L accounting
- FARR_SHIFT_HISTORY_AUDIT: Audit of contract shift history
- FARR_SPREADING_CHANGE_OVP: Change POB revenue spreading
- FARR_TM_REV_RUN: Transfer revenue
- FARR_TRANSITION_COMP_REPORT: Transition comparative report

Use the transaction `SICF` to activate these services.

If your firewall(s) uses URL filtering, also note the URLs used for the services and adjust your firewall settings accordingly.

For more information, see [Activating and Deactivating ICF Services](#) in the SAP NetWeaver Library documentation.

For more information about ICF security, see the [RFC/ICF Security Guide](#).

10.10 Virus Scan Interface

Revenue Accounting and Reporting supports uploading attachments to contracts and performance obligations from the user interface. If you have business scenarios that require uploading attachments to contracts and performance obligations, SAP recommends that you activate the virus scan interface in your system to prevent files with viruses from being uploaded to the application server.

The virus scan interface in Revenue Accounting and Reporting is based on SAP NetWeaver technology and described in the SAP NetWeaver Security Guide.

10.11 Services for Security Lifecycle Management

Use

The following services are available from Active Global Support to assist you in maintaining security in your SAP systems on an ongoing basis.

Security Chapter in the EarlyWatch Alert (EWA) Report

This service regularly monitors the Security chapter in the EarlyWatch Alert report of your system. It tells you:

- Whether SAP Security Notes have been identified as missing on your system.
In this case, analyze and implement the identified SAP Notes, if possible. If you cannot implement the SAP Notes, the report should be able to help you decide on how to handle the individual cases.
- Whether an accumulation of critical basis authorizations has been identified.
In this case, verify whether the accumulation of critical basis authorizations is acceptable for your system. If not, correct the situation. If you consider the situation to be acceptable, you should still check for any significant changes compared to former EWA reports.
- Whether standard users with default passwords have been identified on your system.
In this case, change the corresponding passwords to non-default values.

Security Optimization Service (SOS)

The Security Optimization Service can be used for a more thorough security analysis of your system, including:

- Critical authorizations in detail
- Security-relevant configuration parameters
- Critical users
- Missing security patches

This service is available as a self-service within SAP Solution Manager, as a remote service, or as an on-site service. We recommend you use it regularly (for example, once a year) and in particular after significant system changes or in preparation for a system audit.

Security Configuration Validation

The Security Configuration Validation can be used to continuously monitor a system landscape for compliance with predefined settings, for example, from your company-specific SAP Security Policy. This primarily covers configuration parameters, but it also covers critical security properties like the existence of a non-trivial Gateway configuration or making sure standard users do not have default passwords.

Security in the RunSAP Methodology / Secure Operations Standard

With the E2E Solution Operations Standard Security service, a best practice recommendation is available on how to operate SAP systems and landscapes in a secure manner. It guides you through the most important security operation areas and links to detailed security information from SAP's knowledge base wherever appropriate.

More Information

For more information about these services, see:

- EarlyWatch Alert: <https://support.sap.com/support-programs-services/services/earlywatch-alert.html>
- Security Optimization Service / Security Notes Report: <https://support.sap.com/securitynotes>
- Comprehensive list of Security Notes: <https://support.sap.com/securitynotes>
- Configuration Validation: <https://help.sap.com/viewer/8b923a2175be4939816f0981b73856c7/7.2.04/en-US/2b614e1cb8204f35b477eac703073589.html?q=change%20control%20management>
- RunSAP Roadmap, including the Security and the Secure Operations Standard: <https://support.sap.com/securitynotes> (See the RunSAP chapters 2.6.3, 3.6.3 and 5.6.3)

10.12 Data Protection

Customers can transform revenue recognition related events such as order inceptions or changes, fulfilments and invoices from various sender components (for example, SD, CRM Service) into revenue accounting items (RAI). When revenue accounting items (RAI) are processed, Revenue Accounting contracts and performance obligations are created or updated. The system also updates other database tables in Revenue Accounting such as for deferral items, fulfilments and invoices etc.

Revenue Accounting does not replace operational contract management systems. A contract in the context of Revenue Accounting is a contract for the purpose of accounting. As a result, a Revenue Accounting contract could comprise one or more operational contracts.

Revenue Accounting and Reporting can contain a reference to the customer (customer ID (KUNNR) or business partner ID (BU_PARTNER)). Both references are optional and use case specific. For example, a customer ID is provided if the integration to Sales Distribution (SD) is used. For external integration use cases, no customer ID needs to be provided. Revenue Accounting and Reporting can still work effectively as an accounting engine without any reference to a customer ID or business partner.

Consequently, Revenue Accounting and Reporting does not process data (personal data such as customer ID or business partner ID) itself that is subject to data protection laws applicable in specific countries (as described in SAP Note [1825544](#)). Revenue Accounting and Reporting only references the customer ID or business partner ID within a contract for the sake of accounting.

10.12.1 Deleting Data

You can archive revenue accounting contracts and revenue accounting items (RAIs) that are no longer needed. The current archiving objects are integrated with SAP NetWeaver Information Lifecycle Management (ILM).

The following two archiving objects are available for archiving revenue accounting data, including all personal data such as customer ID and partner ID:

- FARR_CONTR (Revenue Accounting Contracts)

- FARR_RAI (Processed Revenue Accounting Items)

Revenue Accounting supports data destruction with ILM-Enabled Archiving Objects. Please refer to the following:

SAP Information Lifecycle Management -> Using ILM Retention Management in the Application System -> Destroying Data in a Live Application System -> Destroying Data from the Database of the Application System

If data has been archived, you can delete it using the ILM capabilities. Please refer to the following:



SAP Information Lifecycle Management -> Using ILM Retention Management in the Application System -> Destroying Data in a Live Application System -> Destroying Data from an ILM Store

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