Document Version: 1.0 – yyyy-mm-dd

SAP Revenue Accounting and Reporting Add-On 1.2.4



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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. 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 that you require to operate SAP Revenue Accounting and Reporting securely.
- Operation Information

This chapter provides you with the most relevant information needed for the operation of SAP Revenue Accounting and Reporting.

i Note

You can find the most current version of this document on SAP Service Marketplace at http://service.sap.com/instguides.

We strongly recommend that you use the document available there. 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 SAP Service Marketplace:

Table 1:

Content	Location on SAP Service Marketplace
Latest versions of installation and upgrade guides	http://service.sap.com/instguides

Content	Location on SAP Service Marketplace
General information about SAP Revenue Accounting and Reporting	http://service.sap.com/
Sizing, calculation of hardware requirements-such as CPU, disk and memory resource-with the Quick Sizer tool	http://service.sap.com/quicksizer
Released platforms and technology-related topics such as maintenance strategies and language support	http://service.sap.com/platforms To access the Platform Availability Matrix directly, enter http://service.sap.com/pam/
Network Security	http://service.sap.com/securityguide
High Availability	http://www.sdn.sap.com/irj/sdn/ha
Performance	http://service.sap.com/performance
Information about Support Package Stacks, latest software versions and patch level requirements	http://service.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:

Table 2:

Content	Location on SAP Service Marketplace
Information about creating error messages	http://service.sap.com/messages
SAP Notes search	http://service.sap.com/notes
SAP Software Distribution Center (software download and ordering of software)	http://service.sap.com/swdc
SAP Online Knowledge Products (OKPs)-role-specific learning maps	http://service.sap.com/rkt

1.2.3 Related Guides

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

Table 3:

Title	Location
SAP NetWeaver 7.0	http://service.sap.com/installNW70 Planning Master Guide – SAP NetWeaver 7.0
SAP NetWeaver 7.3	http://service.sap.com/installNW73 Planning Master Guide – SAP NetWeaver 7.3 incl. Enhancement Package 1
SAP NetWeaver 7.4	http://service.sap.com/installNW74 Planning Master Guide – SAP NetWeaver 7.4 incl. SR1
SAP ERP 6.0	http://service.sap.com/erp-inst SAP ERP 6.0 Planning Master Guide for SAP ERP 6.0
SAP Enhancement Package 5 for SAP ERP 6.0	http://service.sap.com/erp-inst 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	http://service.sap.com/erp-inst 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)	http://service.sap.com/erp-inst 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)
SAP Enhancement Package 7 for SAP ERP 6.0 (SAP HANA version)	http://service.sap.com/erp-inst 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

Title	Location
Simple Finance	http://service.sap.com/erp-inst 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://service.sap.com/erp-inst 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 up-to-date version of each SAP Note, which you can find on SAP Service Marketplace at http://service.sap.com/notes.

Table 4:

SAP Note Number	Title	Description
2303283	Release Strategy Note for REVREC 120	This note provides information about planning the installation of the add-on REVREC 120
1992006	CO-PA Activation for Add-On "Revenue Accounting and Reporting"	Implement this note If CO-PA is used.
2295169	Activation of the function "Cost Recognition" in CO-PA for add-on solution "FI Revenue Accounting"	Implement this note if cost-based COPA is used.
1767933 🏕	CD: Extended authorization check	
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 1.2.





SAP Revenue Accounting and Reporting 1.2 is delivered as product version SAP REVENUE ACCOUNTING 1.2 which includes instance Revenue Accounting with software component version REVREC 120 . Instance REVREC 120 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.

Revenue Accounting and Reporting 1.2 is not a standalone product, it needs to be integrated into operational components which send order and billing information to Revenue Accounting and Reporting. With Version 1.2, the following operational components or products support integration to Revenue Accounting and Reporting:

- 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 possible processes of these products are supported yet.

As Revenue Accounting and Reporting also supports remote communication, it is possible to deploy Revenue Accounting and Reporting 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 below that, you first need to upgrade to at least SAP ERP 6.0 Enhancement Package 5.

Required alternative Product Versions, Instances and minimal Support Package Stacks for Revenue Accounting:

Table 5:

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	

The following software components are either mandatory or optional, as indicated below, for the technical implementation of Revenue Accounting and Reporting 1.2.

Table 6:

Component	Mandatory	Optional
REVREC 120	yes	

For the integration with Sales and Distribution, product SAP Sales Integration with SAP Revenue Accounting and Reporting 1.0 (SAP SALES INTEGR SAP RAR 1.0) SP 08 needs to be installed on top of your Sales and Distribution instance. It contains instance Revenue Accounting Integration (software component REVRECSD) which was formerly 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 08 to integrate with Revenue Accounting and Reporting 1.2. If you upgrade from Revenue Accounting and Reporting 1.0, you have to either install product SAP Sales Integration with SAP Revenue Accounting and Reporting 1.0 with support package level 08 or upgrade software component REVRECSD to support package level 08. To simplify future upgrades it is strongly recommended to install SAP Sales Integration with SAP Revenue Accounting and Reporting 1.0.

Required alternative Product Versions, Instances and minimal Support Package Stacks for SAP Sales Integration with SAP Revenue Accounting and Reporting 1.0:

Table 7:

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
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

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

Table 8:

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
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

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:

Table 9:

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

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

Table 10:

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 and Reporting is not installed on the same system as the operational component, it is required that all systems have harmonized master data and configuration. This is because Revenue Accounting and Reporting 1.2 supports neither key-mapping nor value-mapping functions. Especially, the following data and settings must be 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 software component Revenue Accounting, make sure that the following notes are installed:

Table 11:

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 in the following notes:

Table 12:

Note	Title
2305407	SAP Revenue Accounting 1.2: Release Information Note

i Note

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

Related Guides

Table 13:

Upgrade and Update Guide for SAP ERP 6.0	http://service.sap.com/erp-inst/>
Upgrade and Update Guide for SAP ERP 6.0 Enhancement Package 5	http://service.sap.com/erp-ehp5-inst
Upgrade and Update Guide for SAP ERP 6.0 Enhancement Package 6	http://service.sap.com/erp-ehp6-inst
Upgrade and Update Guide for SAP ERP 6.0 Enhancement Package 7	http://service.sap.com/erp-ehp7-inst
Installation & Upgrade Guide SAP Netweaver 7.0	http://service.sap.com/installNW70
Installation & Upgrade Guide SAP Netweaver 7.0 Enhancement Package 2	http://service.sap.com/installNW70
Installation & Upgrade Guide SAP Netweaver 7.3	http://service.sap.com/installNW73
Installation & Upgrade Guide SAP Netweaver 7.4	http://service.sap.com/installNW74

Post-Installation

In transaction SICF, activate all Web Dynpro applications that start with FARR_, e.g. 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 RFC function calls. If these two instances are installed in different systems, you need to define an RFC destination with connection type 3 (Connection to ABAP System) in the system where Rev. Accounting Integration is installed, pointing 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 an RFC destination that supports the bgRFC protocol. To do this, run transactionsM59, choose the Special *Options* tab, and then select *Classic with bgRFC* as the Transfer Protocol.

3 Upgrade Information

3.1 Introduction

SAP Revenue Accounting and Reporting 1.2 is enhanced in the following ways:

- Exchange rate difference is calculated and posted on performance obligation level, instead of contract level. You can run report FARR_UPG_EXRATE_DIFF_TO_RA12 to migrate the existing data.
- Posting run now supports parallelized creation of GL/CO documents. If this feature is used it is beneficial to configure buffering in number range object RF BELEG.

3.2 Preparation

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

3.3 Quick Guide

If you upgrade from release 1.0 to 1.2, take the following steps:

Implement pre-check Notes

Table 14:

Activity
Implement Note 2163395 (Migrate SDBP billing plan items to SDPI and aggregated SDOI items).
Implement Note 2119123.
Execute report FARR_NOTE_2119123.
Implement Note 2114560 .

Run pre-check program

Table 15:

Activity

Run program FARR_DATA_MIGRATION_PRECHECK.

Upgrade from release 1.0 to 1.2

Table 16:

Activity

Upgrade from release 1.0 to 1.2.

Implement Notes

Table 17:

Activity

Implement Note 2245461

Upgrade Reconciliation Key Table

Table 18:

Activity

Run program $FARR_RK_MIG_TO_RA11$ to upgrade the reconciliation key table.

Run program FARR_RK_MIG_TO_RA11_SET_STATUS.

Regenerate RAI Classes.

Set Completion Status for Performance Obligations.

If you upgrade from release 1.1 to 1.2, you need to take the following steps:

Upgrade from release 1.1 to 1.2

Table 19:

Activity

Upgrade from release 1.1 to 1.2.

3.4 Upgrade Process

After the technical upgrade from 1.0 to 1.2 (the installation of software component REVREC 120) was successfully performed, you need to take the following steps to accomplish the data upgrade:

- 1. Maintain the parallelization settings for the migration program FARR_RK_MIG_TO_RA11 under Revenue Accounting Revenue Accounting 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 enriches contract ID for all non-closed reconciliation keys

i Note

This program will first backup the reconciliation key table into a backup table FARR L RECKEY BK.

3. After upgrading the reconciliation key table, perform some manual check. If you find anything wrong, you can run the program FARR_RK_MIG_TO_RA11_ROLLBACK to roll back the changes to the reconciliation key table (copy the backup data from FARR_L_RECKEY_BK_to_FARR_D_RECON_KEY) and perform the migration again.

i Note

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

- 4. If everything is OK, then you should run the program <code>FARR_RK_MIG_TO_RA11_SET_STATUS</code> to mark the migration as "completed". In the controlling table <code>FARR_C_MIG_RA11</code>, the entry <code>MIGRATION_STATUS</code> will be set to "C".
- 5. Upgrade functionality of BRFplus.

There is a new parameter <code>FLAG_INVOICE</code> in function <code>FARR_FC_POB_STATUS</code> of BRF+ template <code>FARR_POB_STATUS</code> TEMPLATE.

If you copied template FARR POB STATUS TEMPLATE, you need to:

- $\circ \quad \text{Adjust your BRFplus rule}.$
- Or copy the template and implement the function FARR FC POB STATUS according to your rule.

If you did not copy template <code>FARR_POB_STATUS_TEMPLATE</code>, you need to adjust <code>FARR_FC_POB_STATUS</code> in your own template. Make sure that you have the same parameter as the standard function in the standard function <code>FARR_POB_STATUS</code> <code>TEMPLATE</code>.

Then you also need to Implement Note 2316921.

But if you perform the technical upgrade from 1.1 to 1.2 (the installation of software component REVREC 120), you only need to take the following step to accomplish the data upgrade:

1. Upgrade functionality of BRFplus.

There is a new parameter <code>FLAG_INVOICE</code> in function <code>FARR_FC_POB_STATUS</code> of BRF+ template <code>FARR_POB_STATUS_TEMPLATE</code>.

If you copied template FARR POB STATUS TEMPLATE, you need to:

- o Adjust your BRFplus rule.
- Or copy the template and implement the function FARR FC POB STATUS according to your rule.

If you did not copy template <code>FARR_POB_STATUS_TEMPLATE</code>, you need to adjust <code>FARR_FC_POB_STATUS</code> in your own template. Make sure that you have the same parameter as the standard function in the standard function <code>FARR_POB_STATUS</code> <code>TEMPLATE</code>.

Then you also need to Implement Note 2316921.

3.5 Follow-up Activities

3.5.1 Regenerating RAI Classes

SAP Revenue Accounting and Reporting adds new fields to those 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 button of Selected entries.

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 was enhanced, no update of the configuration is necessary and the configuration keeps the status active .In such case you may 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 set the status as modified . Then you 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 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 RAI class and press Generate.
- 5. Press Yes when you are asked whether you want to run the generation right away.
- 6. Press *No* when you are asked whether you want to delete revenue accounting items which are available in development and test systems.

i Note

In production systems the deletion is not allowed. Therefore you are not asked whether you want to delete already available revenue accounting items in production systems. After finishing this step, you will receive a popup with the generation results. All status icons should be green.

7. Repeat these steps for all Revenue Accounting Item Classes.

3.5.2 Exchange Rate Difference Migration

Since the SAP Revenue Accounting and Reporting 1.2, the exchange rate difference is calculated from contract level to performance obligation level, so it is necessary to migrate the existing data.

i Note

As for how to maintain exchange rate difference account, refer to Note 2336665.

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 background. You can select specific company codes, accounting principles, and contract IDs. Contracts that need to be updated including the following:

- Contracts with status of not completed
- Contracts whose balance of exchange rate difference. on contract level 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 in time, before the next period close. The program will write entries to the application log, object "FARR", and subject "DATA_MIGRATION". Please check the log and re-run the program in case of errors.

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

📫 Example

Before upgrade, exchange rate difference entries are displays in posting table as follows:

Table 20:

RECON_KEY	CONTRACT_ID	POB_ID	POST_CAT	SHKZG	BETRH	HWAER
2014007026	0000000016 852	0000000000	ED	Н	300,00	EUR
2014007026	0000000016 852	00000000000	RA	S	300,00-	EUR

After upgrade, the amounts on contract level are reversed as follows:

Table 21:

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

In the meanwhile, the amounts are posted on performance obligation level with updated condition types.

Table 22:

RECON_KEY	CON- TRACT_ID	POB_ID	COND	POST_CAT	SHKZG	BETRH	HWAER
2014007026	0000000001 6852	00000000 0063724	EXDF	ED	Н	200,00-	EUR
2014007026	0000000001 6852	00000000 0063724	EXDF	RA	S	200,00	EUR
2014007026	0000000001 6852	00000000 0063725	EXDF	ED	Н	100,00-	EUR
2014007026	0000000001 6852	00000000 0063725	EXDF	RA	S	100,00	EUR

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

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

i Note

The migration report will generate correction entries into posting table with the reconciliation key which could be posted by program REVENUE POSTING RUN. It differentiates the following 3 kinds of periods:

- Migration period
 - Exchange rate difference on contract level in migration period should be reversed into the same key on contract level. Then exchange rate difference on contract level in migration period should be distributed into the same key on performance obligation level.
- RA Closed productive period
 Exchange rate difference on contract level in productive period should be reversed into the first open RA period on contract level. Then exchange rate difference on contract level in productive period should be distributed into the first open RA period on performance obligation level.
- RA Open productive period

Exchange rate difference on contract level in productive period should be reversed into its own period on contract level. Then exchange rate difference on contract level in productive period should be distributed into its own period on performance obligation level.

3.5.3 Fiscal Year and Period Migration in Posting Table Entries

In the revenue accounting 1.2, the datasource <code>OFARR_RA_10</code> which load data from <code>FARR_D_POSTING</code> can support aggregation that is directly based on requested fields. But there are no fiscal year and period information in the posting table. From performance point of view, it is really 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 <code>FARR_RECONKEY_TO_GJAHR_POPER</code> to set this two values for existing data in the posting table .For the new created posting entries in the table, they have already carried these two values.

You don not need to run this program during the upgrade process. Instead you can also start if afterwards. Nevertheless, it should be run in time, before the next period close.

The change will not have any influence on reporting figures. It just lets the datasource run faster in future releases.

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

Revenue Accounting and Reporting 1.2 supports parallel posting to GL and CO. 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 IMG: Revenue Accounting Switch on Posting Optimization New Entries and set the post optimization on .

3.5.5 Optional: Refresh Bindings in BRFplus Structures

With SAP Revenue Accounting and Reporting 1.2, there are new fields can be used as source fields in BRFplus rules. In detail, the new fields are listed as follows:

• Application FARR_AP_PROCESS_TEMPLATE and FARR_AP_CA_PROCESS_TEMPLATE (and all Applications copied from that templates)

Table 23:

Structure IS_SD01_BRF, IS_RAI_BRF, and LOCAL_S_SD01_BRF			
KOSTL	Cost center		
AUFNR	Internal order number		
PS_POSID	Work breakdown structure element		
FINAL_DATE	Finalization date (UTC)		
COOBJNR	Technical CO object number in case of Results Analysis integration		
CORA_INTEG_TYPE	Integration type in case of Results Analysis integration		

Table 24:

Structures ES_RAI_ACC_ASS_BRF		
KOSTL	Cost center	
AUFNR	Internal order number	
PS_POSID	Work breakdown structure element	

• Application FARR_AP_SD_PROCESS_TEMPLATE (and all Applications copied from that template)

Table 25:

Structure IS_SD01_BRF and LOCAL_S_SD01_BRF				
KOSTL	Cost center			
AUFNR	Internal order number			
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

Table 26:

Structure IS_COMP_GRP_POB and IS_COMP_GRP_POB_SSP	
NO_COST_RECOGNITION	No cost recognition

Output structures

Table 27:

Structure ES_POB_BRF and FARR_S_POB_BRF	
NO_COST_RECOGNITION	No cost recognition

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.

4 Configuration Information

4.1 Revenue Accounting and Reporting IMG Paths

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

For SAP Revenue Accounting and Reporting: MG Financial Accounting (New) Revenue Accounting

4.2 Revenue Accounting Roles

SAP Revenue Accounting and Reporting 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 and Reporting 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 and Reporting, see the Security Information [page 36] chapter in this document.

4.3 CO-PA Integration

SAP Revenue Accounting and Reporting integrates with CO-PA using the SD entry into CO-PA, which means 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 and Reporting does not provide quantities to CO-PA.



A Caution

As SAP Revenue Accounting and Reporting by nature delivers positive and negative values to CO-PA, it is required that the "Transfer +/-" flag is set for the assignment of the condition type to the value field, at least for the reserved condition types configured for Revenue Accounting and Reporting. Please carefully read the documentation for this flag and consider possible implications to existing data.

4.4 **Parallel Processing**

Most of the processing in Revenue Accounting and Reporting 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 Configure Parallel Processing for Revenue Posting

Then, maintain the following entries for individual processing tasks:

Table 28:

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 POB completion status
FARR_POST	Post Revenue to General Ledger
FARR_RADI	Calculate Time-based Revenue
FARR_RAGL	Reconciliation of Revenue Postings with GL
FARR_RAIO	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
FARR_CPRP	Transition: Comparative Report Data Selection

Application Type	Processing Task
FARR_RAI4T	Transition: Copy of Accounting Principle
FARR_TRANS	Transition: Cumulative Catchup

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.

4.5 Browser Requirements

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

Table 29:

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

Operation Information 5

5.1 Introduction

This document provides you with the most important information regarding the operations of the SAP Revenue Accounting and Reporting.

Technical requirements for Revenue Accounting:

Revenue Accounting is available with

- enhancement package 5 SAP ERP 6.0 (SAP_APPL SPS 10) http://help.sap.com/erp605?current=erp606/
- enhancement package 6 SAP ERP 6.0 (SAP_APPL SPS 6) http://help.sap.com/erp606?current=erphana616
- enhancement package 7 SAP ERP 6.0 (SAP_APPL SPS 1) http://help.sap.com/erp_607/
- SAP SFINANCIALS 1.0 http://help.sap.com/sfin100?current=erp607/
- SAP SFINANCIALS 1503 http://help.sap.com/sfin200?current=erp607/
- SAP S/4HANA ON_PREMISE 1511
- SAP S/4HANA ON PREMISE 1605

Monitoring 5.2

5.2.1 Background RFC Communication

You can use the Background RFC (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.

Troubleshooting and Monitoring for background communication:

http://help.sap.com/saphelp_snc_uiaddon_10/helpdata/en/48/982bcf0e0e0e27e100000000a421937/ content.htm?frameset=/en/48/927c5caa6b17cee10000000a421937/frameset.htm=/en/ 33/12e0f98f494692b9777dd0ce9fba1e/plain.htm=119=false



Caution

Background communication requires that you have note 2013706 (Destination unlocking does not trigger bgRFC scheduler) applied.

In some error situations, Transactional RFC (tRFC) is used instead of bgRGC. To monitor the tRFC queue please use transaction SM58.

5.2.2 Application Log

Revenue Accounting and Reporting 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. SAP Revenue Accounting and Reporting uses Application Log object FARR with the following sub-objects:

- ACCRUAL: for messages issued during an accrual run (revenue posting)
- CHECK IC DATA: for messages issued during Revenue Accounting Integration Consistency check
- CLEANUP: for messages issued during the cleanup
- CONTR MGMT: for messages issued during contract processing
- RAI CHANGE: for messages issued during 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 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 (RAIO to RAI2)
- RECON_RAI_ENGINE: for messages issued during reconciliation of revenue accounting items with revenue accounting contracts.
- SDBP MIGRATION
- TM_TRANSFER: for messages issued during calculation of time-based revenue.
- CONTR CHECK: for message issued during contract consistency check
- REVERSAL: for message 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 message issued during the reversal of Unbilled Receivables/Deferred Revenue (Transition)
- TRANS_COMPARATIVE: for messages issued during the calculation of differences between accounting principles (Transition)
- \bullet $\tt TRANS_CATCHUP:$ 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/0b/f24dccfb8f4be5a8e3d51989f97397/plain.htm=4

- Analyze log
- Deleting log

 $\label{lem:http://help.sap.com/saphelp_snc_uiaddon_10/helpdata/en/4e/21053535d44180e10000000a15822b/content.htm? frameset=/en/4e/21048535d44180e100000000a15822b/frameset.htm=/en/0b/f24dccfb8f4be5a8e3d51989f97397/plain.htm=6ArchivingObjectBC_SBAL$

5.2.3 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, revenue accounting Items, invoice item, 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 RAI 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 of transfer or processing run can be displayed by click on the error field.

The application log of transfer or processing run can be displayed by click on the error field.

For more details, see the program documentation.

5.2.4 Parallel Processing Monitor

The Parallel Processing Monitor (transaction FARR_RAI_PP_MON) displays certain information about parallel jobs processed in Revenue Accounting and Reporting. The jobs listed here are mainly administrative jobs involved in RAI processing. Other jobs are monitored in a different application (with a different UI) as described in the next chapter.

The user can see the selection criteria with which an individual job was run and the job status, and can also 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.

5.2.5 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:

- Calculate Time-Based Revenue
- Calculate Contract Liabilities and Assets
- Revenue Posting Run
- Revenue Posting Reversal

In this monitor, the user can navigate to the application log and view the selection criteria and the resulting GL documents.

5.2.6 Standard Job Monitor

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

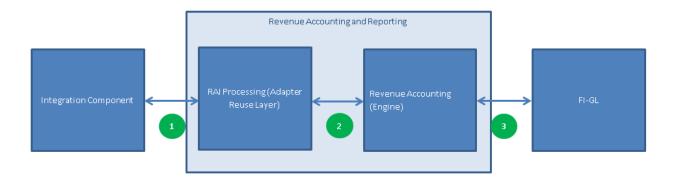
- Reconciliation Contracts-GL
- Reconciliation Contracts-GL Accounts

5.3 Reconciliation

5.3.1 Introduction

SAP Revenue Accounting and Reporting integrates with other components, but is only loosely coupled. Additionally, *SAP Revenue Accounting and Reporting* itself includes two major components that work independently from each other. In this loosely coupled architecture, different components have to 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:



SAP Revenue Accounting and Reporting 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.

5.3.2 Reconciliation Reports

5.3.2.1 Introduction

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

5.3.2.2 Reconciliation Type 1

The Reconciliation occurs between Revenue Accounting Items in Adapter Reuse Layer (transaction FARR_CHECK_CONS) and the originating data in the operational source component. The reconciliation can be carried out either from last successful check or by operational document (the latter is for simulation only). Also see the documentation of the report.

The reconciliation report checks the following things:

- 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.

5.3.2.3 Reconciliation Type 2

To ensure data consistency, 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, transaction price per condition
- Fulfill quantity
- Invoice amount per condition type

The reconciliation results are displayed on performance obligation level.

If one or more differences are found, the performance obligation is marked as not successfully reconciled and 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 whose fulfillment is not triggered by events;
 - o 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 RAI monitor to check unprocessed revenue accounting items, if the corresponding performance obligations have been generated

Transaction: FARR RAI MON.

Kinds of Selection: All Items Related to Order Items.

Item Status: Processable Items

Company Code: Specified in Reconciliation Report

POB: Specified in Reconciliation Report

2. You can check the related database tables to identity the root cause. The following figure illustrates the tables that are involved in the processing:

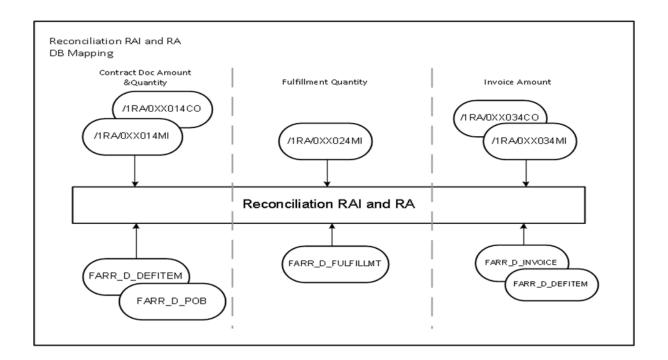


Figure 1: Type-2 Reconciliation

To see report document, click into http://help.sap.com/ and choose Financial Management SAP Revenue Accounting and Reporting SAP Revenue Accounting and Reporting Application Help Reconciliation: Revenue Accounting Items and Revenue Accounting

5.3.2.4 Reconciliation Type 3

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

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.

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

The reconciliation report detects the following differences:

- Different document amounts between posting table and general ledger records
- Different local amounts between posting table and general ledger records
- Different G/L accounts between 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 Run Revenue Posting Reversal Revenue Posting Reversal Revenue Posting Reversal Revenue Posting Revenue Posting Run R

To see report document, click into http://help.sap.com and choose Financial Management SAP Revenue Accounting and Reporting Application Help Reconciliation Revenue Posting and General Ledger.

Reconciliation of Accounts Between Revenue Accounting and the G/L

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 G/L. This works only 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. In addition, you can specify a set of accounts to be compared.

5.4 Archiving

5.4.1 Archiving

Two archiving objects are available for archiving Revenue Accounting data:

- 1. FARR CONTR (Revenue Accounting Contracts)
- 2. FARR RAI(Processed Revenue Accounting Items)

By using transaction SARA and an appropriate archiving object, you can write data into archiving files and remove data from the database to archive files with help of the standard Archive Development Kit (ADK).

5.4.2 Archiving Revenue Accounting Contracts (FARR_CONTR)

A Revenue Accounting Contract can be archived when the status is set to completed and a certain time span has passed since the contract was completed. This time span 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 for each open contract if the conditions are satisfied and sets the completion indicator accordingly. Schedule this program regularly or run it before archiving starts.

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

Depended tables from the Revenue Accounting Contract (FARR D CONTRACT) 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 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 written to an archive file, the data can be deleted from the database tables and also be reloaded.

The archiving object FARR_CONTR is also integrated to the SAP NetWeaver Information Lifecycle Management (ILM) and can be configured to meet legal business requirements.

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

5.4.3 Archiving Processed Revenue Accounting Items (FARR_RAI)

Processed Revenue Accounting Items are stored in several tables, depending on the used Revenue Accounting Item Classes and also on the kind of 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 RAIs to be checked. RAIs are created after the date entered are not processed. Therefore, if you almost do not archive RAIs that were created over the last 2 years, for example, you should set the date 2 years back to the past to improve the performance of the archive write program.

Depended tables from the Revenue Accounting items 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 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 written to an archive file the data can be deleted from the database tables and also be reloaded.

The archiving object FARR_RAI is also integrated to the SAP NetWeaver Information Lifecycle Management (ILM) and can be configured to meet legal business requirements.

You can also display archived and deleted data via transaction SARI using the standard Archive Information Structure SAP FARR RAI, delivered from SAP.

6 Security Information

6.1 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 the *SAP Revenue Accounting and Reporting*. To assist you in securing the *SAP Revenue Accounting and Reporting*, we provide this Security chapter.

About this Document

The Security chapter provides an overview of the security-relevant information that applies to the *SAP 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 the SAP Revenue Accounting and Reporting.
- User Administration and Authentication
 - This section provides an overview of the following user administration and authentication aspects:
 - o Recommended tools to use for user management
 - User types that are required by the SAP Revenue Accounting and Reporting
 - o Standard users that are delivered with SAP Revenue Accounting and Reporting
 - $\circ \quad \text{Overview of the user synchronization strategy if several components or products are involved} \\$
 - o Overview of how integration into Single Sign-On environments is possible
- Authorizations
 - This section provides an overview of the authorization concept that applies to the SAP 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 the SAP Revenue Accounting and Reporting and the security mechanisms that apply. It also includes our recommendations for the network topology to restrict access at the network level.
- Internet Communication Framework Security
 This section provides an overview of the Internet Communication Framework (ICF) services that are used by
 SAP 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.

6.2 Before You Start

Fundamental Security Guides

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

Table 30: 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 http://service.sap.com/securityguide.

Important SAP Notes

For a list of additional security-relevant SAP Hot News and SAP Notes, see also SAP Service Marketplace at http://service.sap.com/securitynotes/*>.

Configuration

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

Additional Information

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

Table 31:

Content	Quick Link on SAP Service Marketplace or SDN
Security	http://scn.sap.com/community/security
Security Guides	http://service.sap.com/securityguide
Related SAP Notes	http://service.sap.com/notes
	http://service.sap.com/securitynotes
Released platforms	http://service.sap.com/pam
Network security	http://service.sap.com/securityguide
SAP Solution Manager	http://service.sap.com/solutionmanager
SAP NetWeaver	http://scn.sap.com/community/netweaver

6.3 Technical System Landscape

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

The information about technical system landscape is provided in the Technical System Landscape [page 8] section

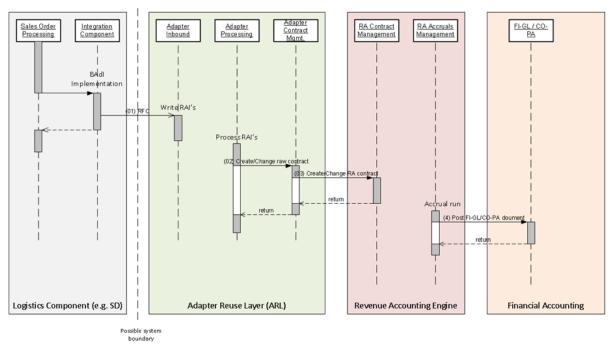
For more information about the technical system landscape, see the resources listed in the table below.

Table 32:

Торіс	Guide/Tool	Quick Link on SAP Service Market- place or SCN
Technical description for SAP Revenue Accounting and Reporting and the un- derlying components such as SAP Net- Weaver	Master Guide	http://service.sap.com/instguides
High availability	High Availability for SAP Solutions	http://scn.sap.com/docs/DOC-7848
Technical landscape design	See applicable documents	http://scn.sap.com/docs/DOC-8140
Security	See applicable documents	http://scn.sap.com/community/security

6.4 **Security Aspects of Data, Data Flow and Processes**

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



= Revenue Accounting

RAI = Revenue Accounting Item SD = Sales and Distribution

FI-GL = Financials Accounting CO-PA = Profitability Analysis

Figure 2: Technical System Landscape of SAP Revenue Accounting and Reporting

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

Table 33:

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

6.5 User Administration and Authentication

6.5.1 Introduction

The SAP Revenue Accounting and Reporting 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 the SAP Revenue Accounting and Reporting.

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

User Management

This topic lists the tools to use for user management, the types of users required, and the standard users that are delivered with the SAP Revenue Accounting and Reporting.

Integration into Single Sign-On Environments

This topic describes how the SAP Revenue Accounting and Reporting supports Single Sign-On mechanisms.

6.5.2 User Management

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

User Administration Tools

The table below shows the tools to use for user management and user administration with the SAP Revenue Accounting and Reporting.

Table 34: 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 <i>User and Role Administration of Application Server ABAP</i> .	Used for all deployment options of the SAP Revenue Accounting and Reporting

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

- Individual users:
 - o Dialog users are used for SAP GUI for Windows and WebDynpro ABAP.
- Technical users:
 - Background users are used for RFC destinations and background jobs like RAI 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 SAP Revenue Accounting and Reporting.

6.5.3 Integration into Single Sign-On Environments

The SAP Revenue Accounting and Reporting 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 the SAP Revenue Accounting and Reporting.

For more information about the available authentication mechanisms, see *User Authentication and Single Sign-On* in the *SAP NetWeaver Library*.

6.6 Authorizations

The SAP Revenue Accounting and Reporting uses the authorization concept provided by the SAP NetWeaver AS ABAP. Therefore, the recommendations and guidelines for authorizations as described in the SAP NetWeaver AS Security Guide ABAP also apply to the SAP 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 PFCG) on the AS ABAP and the User Management Engine's user administration console on the 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 the SAP Revenue Accounting and Reporting.

Table 35: 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 *SAP 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 by the SAP Revenue Accounting and Reporting.

Table 36: Standard Authorization Objects

Authorization Object	Field	Value	Description
F_RRRAI Revenue Accounting Items	ACTVT	01 Create or generate 03 Display	O1 Create and process Revenue Accounting Items O3 Display Revenue Accounting Items in RAI Monitor
	BUKRS		Company Code
F_RRRAIADM Change Revenue Accounting Items	ACTVT	02 Change	02 Change Revenue Accounting Items in RAI Monitor
F_RRRAICON Configuration and Generation of RAI Classes	ACTVT	02 Change 07 Activate, generate	O1 Create and Change RAI configurations O7 Activate RAI configurations
F_RRRAITST Test Data Creation	ACTVT	01 Create or Generate	01 Create test data with report FARR_RAI_SAMPLE
F_RR_ACCR Accrual Run and Reconciliation Reporting	BUKRS		Company Code
	ACTVT	03 Display 10 Post 48 Simulate 93 Calculate	Activity
	ACCRULE		Accounting Principle (AP)
F_RR_ACCTD Decision Table of Account Determination	ACTVT	02 Change 03 Display	02 Maintain Account Determination for Revenue Accounting specific accounts 03 Display Account Determination for Revenue Accounting specific accounts

Authorization Object	Field	Value	Description
F_RR_CONTR Revenue Accounting Contract	ACTVT BUKRS	01 Create or generate 02 Change 03 Display A3 Change status	01: Create Revenue Accounting Contract 02: Change Revenue Accounting Contract 03: Display Revenue Accounting Contract A3: Change Status of Performance Obligation Company Code
	FARR_VKORG		Sales Organization (Compatible with SD, CRM,)
F_RR_INITD Initial Load Data	ACTVT	O1 Create O6 Delete	O1: Create and process Initial Load data (Legacy data, Revenue Accounting Items, Contracts) O6: 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	16: Execute the Contract Consistency Check program 03: Display the result of the Contract Consistency Check.
	BUKRS		Company Code
	ACCRULE		Accounting Principle
F_RRNEWACP Transition	ACTVT	O1 Create or generate	01: Copy Accounting Principle
		03 Display 06 Delete	03: Display differences between Accounting Principles
		16 Execute	06: Cleanup transition data
		93 Calculate	16: Execute cumulative catchup
			93: Calculate cumulative catchup or differences between Accounting Principles

6.7 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 <code>SICF_SESSIONS</code>.

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.

6.8 Network and Communication Security

6.8.1 Introduction

Your network infrastructure is extremely important in protecting your system. Your network needs to support the communication necessary for your business needs without allowing unauthorized access. A well-defined network topology can eliminate many security threats based on software flaws (at both the operating system level and application level) or network attacks such as eavesdropping. If users cannot log on to your application or database servers at the operating system or database layer, then there is no way for intruders to compromise the machines and gain access to the back-end system's database or files. Additionally, if users are not able to connect to the server LAN (local area network), they cannot exploit well-known bugs and security holes in network services on the server machines.

The network topology for the SAP 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 the SAP Revenue Accounting and Reporting. Details that specifically apply to the SAP Revenue Accounting and Reporting are described in the following topics:

- Communication Channel Security [page 46]
 This topic describes the communication paths and protocols used by the SAP Revenue Accounting and Reportingc1.2.
- Network Security [page 48]

This topic describes the recommended network topology for the SAP 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 the SAP Revenue Accounting and Reporting.

Communication Destinations [page 49]
 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

6.8.2 Communication Channel Security

Operational applications send information to SAP 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 like/1RA/ xxxx RAI CREATE API, where xxxx represents the four-character name of the revenue accounting item class.

To integrate SAP Revenue Accounting and Reporting with SAP Sales and Distribution, you must use the following revenue accounting item classes:

Table 37:

Name of Class	Description
SD01	Order Items
SD02	Fulfillment Items
SD03	Invoice Items

To integrate SAP Revenue Accounting and Reporting with SAP 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 SAP Sales and Distribution):

Table 38:

Name of Class	Description
CA01	Order Items
CA02	Fulfillment Items
CA03	Invoice Items

To integrate SAP Revenue Accounting and Reporting with SAP CRM, you must use the following revenue accounting item classes:

Table 39:

Name of Class	Description
CS01	Order Items
CS03	Invoice Items

You can also integrate *SAP 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):

Table 40:

Name of Class	Description
CS01	Order Item

ı	Name of Class	Description
(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.

Table 41:

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.

6.8.3 Network Security

Ports

The SAP Revenue Accounting and Reporting runs on SAP NetWeaver and uses the ports from the 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 SAP Developer Network at http://scn.sap.com/community/security under *Infrastructure Security Network and Communications Security*.

6.8.4 Communication Destinations

The table below shows an overview of the communication destinations used by the SAP Revenue Accounting and Reporting.

Table 42:

Destination	Delivered	Туре	User, Authorizations	Description
Integration Component to SAP Revenue Ac- counting 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

6.9 Internet Communication Framework Security

You should only activate services that are required for the applications running in your system. For SAP Revenue Accounting and Reporting, the following services are required:

- 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 fulillment 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: Dissagregation of revenue by customer
- FARR DISAGGR REVENUE CUST GRP: Dissagregation 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: Time-based revenue transfer
- FARR TRANSITION COMP REPORTTransition comparative report

Use the transaction SICF to activate these services.

If your firewall(s) use 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.

6.10 Virus Scan Interface

SAP Revenue Accounting and Reporting supports uploading attachments to contracts and performance obligations from UI. If you have business scenarios that require uploading attachments to contracts and performance obligations, SAP recommends you to 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 SAP Revenue Accounting and Reporting is based on SAP NetWeaver technology and described in the SAP NetWeaver Security Guide.

For more information, see SAP Help Portal at http://help.sap.com/nw75 > Application Help > Function-Oriented View > Security System Security > Virus Scan Interface \(\bigsec\) .

You can find additional information in the SAP Notes 786179 and 1494278.

6.11 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 okay for your system. If not, correct the situation. If you consider the situation okay, 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: http://service.sap.com/ewa/
- Security Optimization Service / Security Notes Report: http://service.sap.com/sos/
- Comprehensive list of Security Notes: http://service.sap.com/securitynotes
- Configuration Validation: http://service.sap.com/changecontrol/
- RunSAP Roadmap, including the Security and the Secure Operations Standard: http://service.sap.com/runsap
 (See the RunSAP chapters 2.6.3, 3.6.3 and 5.6.3)

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