

Original Article

# SAP Central Finance (cFIN) Real-Time Integration Analysis with Financial Reporting

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**Abstract** - Global enterprises operating across multiple geographies often encounter significant financial challenges when managing accounting transactions and reporting across a variety of ERP systems—such as IBM, VAX, JDE, Microsoft Dynamics, SAP ECC, SAP S/4HANA, and InforM3. These challenges arise from the need to maintain high-quality, consistent data transparency while consolidating financial statements across complex, diverse, and highly integrated system landscapes. There are big challenges for businesses to keep a common master data model. SAP Central Finance (cFIN) provides a global approach to integrating SAP and non-SAP ERP systems, managing landscape complexity for Master data maintenance, handling specific limitations of sub-ledger fixed assets, and providing visibility for high-volume transactions as follows.

- **Data Accuracy:** Poor data quality in source systems is a significant obstacle, requiring clean, consistent data for CFIN to function correctly.
- **System Integration:** Integrating CFIN with the complex landscape of existing SAP and non-SAP systems is challenging, especially with the need for data replication.
- **Master Data and Configuration Alignment:** Keeping master data, functionalities, and configurations synchronized between source systems and the CFIN system is crucial for avoiding inconsistencies.

**Originality / Review** - This article provides the latest CFIN version updates by detailing all key configuration aspects and integration for SAP and non-SAP systems. It presents capabilities for consolidated Financial reconciliation reporting aligned with group US GAAP/IFRS and Local requirements for designing the CFIN framework.

**Keywords** - SAP, SAP S4 CFIN, SAP S/4 HANA CFIN, Central Finance, CFIN, cFIN.

## 1. Introduction

SAP CFIN (Central Finance) is primarily for large, complex enterprises that need to consolidate financial transactions from various financial accounting systems without disrupting their existing operations. It allows organizations to overcome the financial challenges in the area of the common chart of accounts, GL closing, reconciliation, and reporting as described below.

SAP S4 CFIN functionality allows the corporation to have a single source as a central place for financial reporting for Finance and Controlling transactions and reporting structure. CFIN allows organizations to map multiple accounting legal entities to one common set of master data for consolidated reporting.

### 1.1. Desire for Gradual Transformation

These companies want to transition to a modern S/4HANA environment and its advanced capabilities (such as

real-time planning and analysis) in a phased, non-disruptive manner, rather than through a costly "big bang" implementation.

### 1.2. Goal of Centralizing Processes/Shared Services

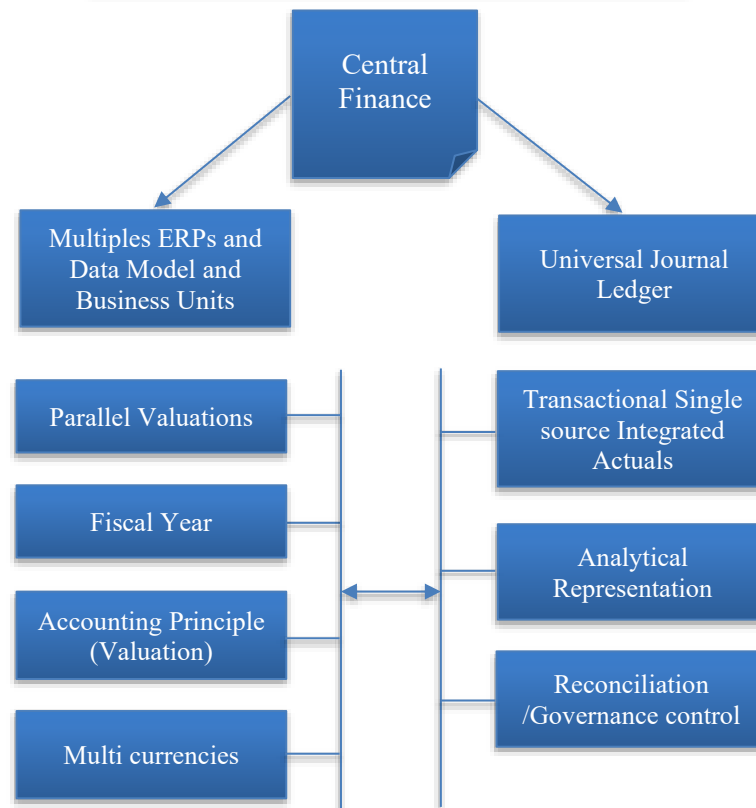
Achieve operational efficiencies by moving processes such as intercompany reconciliation, central payments, lack of COA optimization, slow visibility into reconciliation processes and accounts payable/receivable management to a single shared services center.

### 1.3. Complex Reporting and Compliance Needs

Multinational corporations or those in heavily regulated industries benefit from the ability to streamline group consolidation, harmonize master data, and ensure consistent compliance with accounting standards (e.g., IFRS, U.S. GAAP, and Local GAAP).



## CFIN support Finance Use cases in across all Industries



**Fig. 1 Industries Use Cases**

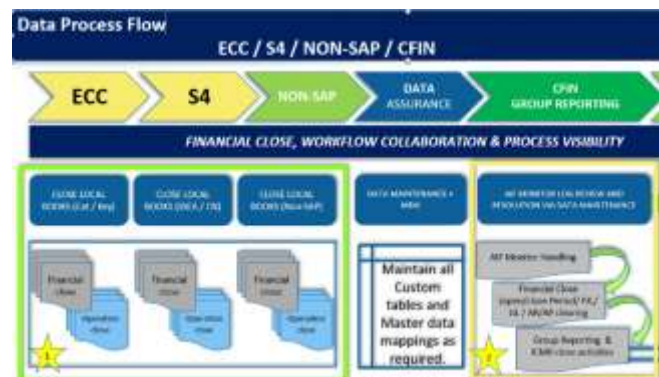
## 2. SAP CFIN Architecture Flow in S4 HANA

SAP Central Finance is a future option of S/4HANA that creates a single source for information by replicating accounting data in real-time from multiple source ERP systems (both SAP and non-SAP). This acts as a central hub, harmonizing financial data without disrupting existing systems and providing a "single source of truth" for real-time reporting, analytics, and a unified view of global finances. It is often used as a foundational step in a phased transition to SAP S/4HANA.

### 2.1. How it Works

- **Data Replication:** Central Finance pulls financial transactions from various source systems (like SAP ECC or non-SAP ERPs) and replicates them into a central SAP S/4HANA system in real time or on hourly/daily batch processing way by consider legacy system limitations.
- **Data Harmonization:** It harmonizes the data, which may have different structures or charts of accounts in the source systems, into a standard/common operating chart of accounts format and common cost objects for consolidated Financial statement reporting.
- **Real-Time Integration:** It uses real-time replication, enabling immediate access to consolidated data without manual reconciliation.

- **Non-Disruptive:** It connects to existing systems without changing how they operate on a daily basis for day-to-day operations.



**Fig. 2 Data Replication model**

### 3. System Integration and Data Mapping

The CFIN system landscape includes four system types:

- Source system
- SLT
- MDG (Optional)
- CFIN.

The legacy source systems are those from which transaction data flows to the CFIN system. It can be an SAP ECC system running on an S/4HANA database, or even a non-

SAP ERP system. Sometimes organizations use the BODS (Business Object Data Services) system to transfer accounting data from non-SAP systems to CFIN.

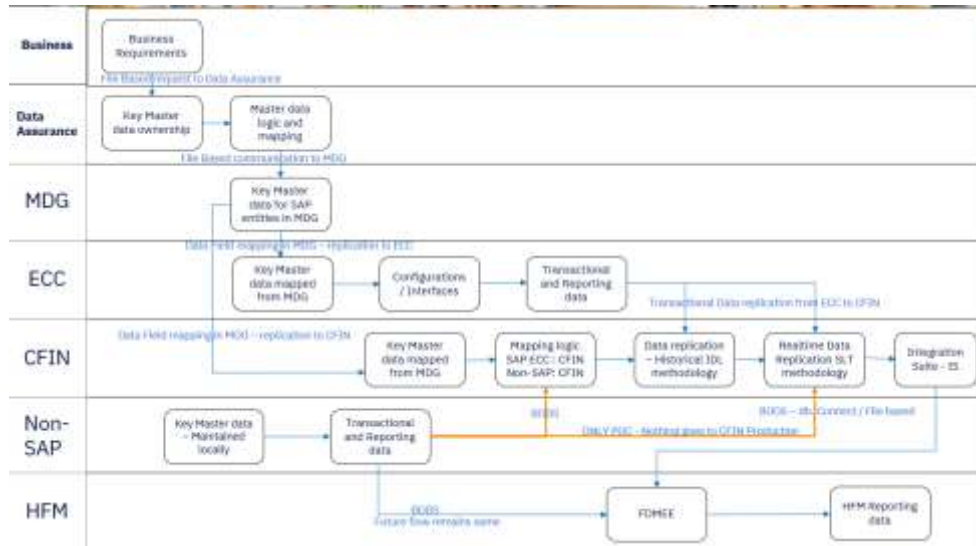


Fig. 3 System Integration and Data Mapping

### 3.1. Source System SAP and Non-SAP

The first step is to design the strategy for the database trigger that communicates with the SAP CFIN-S/4 Finance database tables.

SAP provides two key technical configuration mechanisms for sending source data:

#### 3.1.1. Initial Data Load (IDL)

Transfer historical existing documents and general ledger account balances from the source to CFIN using the Application Interface Framework (AIF), which uses a staging table approach to update data in the ACDOCA table.

SAP standard program FINS\_CFIN\_INT\_ANALYZR to test Central Finance FI Initial Load activities during troubleshooting. It begins with background concepts about the Initial Load, followed by details on how to use the program.

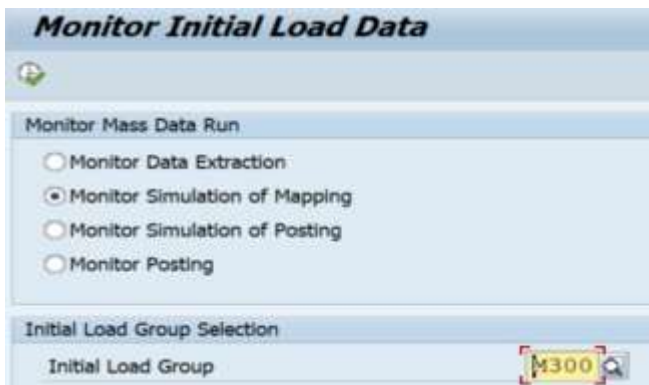


Fig. 4 Initial Load Steps

#### 3.1.2. Online / Real-time replication

This approach replicates new and changed data when events trigger in the source system. It also uses the Application Interface Framework (AIF), but the data is retrieved by the SAP SLT (SAP Landscape Transformation Server) and the Data Replication Framework (DRFIMG) transaction.

If source system in SAP ECC or S4 then data replicates in Central Finance System before when system call posting BAPI/BADI so it a real time replication based on simulation/ event trigger in the source system.

AIF Transaction code – /N/AIF/IFMON process to check the errors in the online replication process in the SAP system (cFIN). This process covers key points.

- Check Error
- Export the Error
- Restart the Error
- Cancel the Error

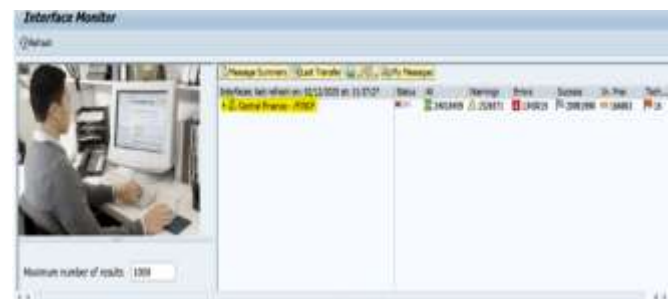


Fig. 5 Execute online Interface ( /FINCF)



Fig. 6 Execute and Expand online replication error

### 3.2. SLT Landscape

SAP Landscape Transformation (SLT) replication tool collects data from relevant source system tables and stores it in the CFIN standard database logging tables for further processing. It uses a trigger-based replication process to send data in real time. The tables used for storing the data are:

#### Key Advantages

- SLT allows real-time data update as well as scheduled time data update.
- SLT transforms data in S4 HANA ACDCOA table format in real time.
- SLT has mapping tables and data rule definitions for transformation.
- SLT provides visibility of data flow and error log for tracking



Fig. 7 SLT setup for Source and Target mappings



Fig. 8 SLT setup for Transfer Jobs and Replication Frequency

### 3.3. Master Data Governance (MDG)

The Master Data Governance (MDG) system provides a solution for companies to have a common master data, ensuring system consistency and accuracy for consolidated reporting. SAP recommends it because manual handling of master data mappings is tedious and time-consuming. This system will facilitate the replication of master data elements,

including GL Accounts, Cost Centers, Profit Centers, Material Codes, and Business Partners.

### 3.4. SAP Central Finance

SAP Central Finance (CFIN) system key Technical Aspects to Configure CFIN.

#### 3.4.1. Setup AIF Runtime Groups to Run Objects

Process transaction code CFNIMG

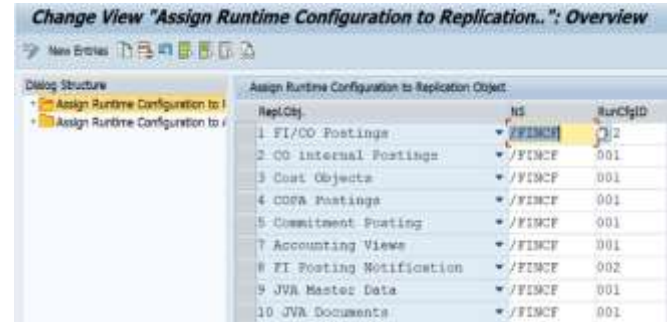


Fig. 9 Assign runtime configuration

#### 3.4.2. Setup Destination for Source Systems

Process transaction code CFNIMG

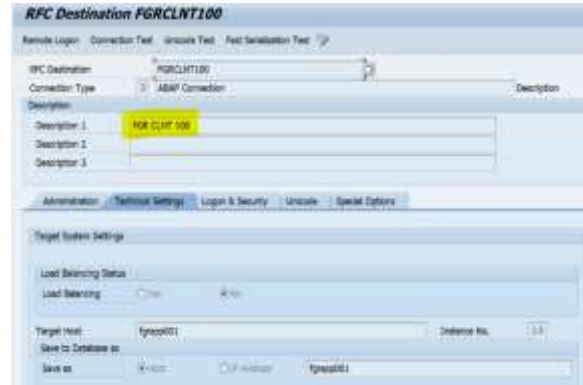


Fig. 10 Setup RFC Destination – for Logical System

#### 3.4.3. Integrate the Logical System with the Source System

Process Transaction Code CFNIMG

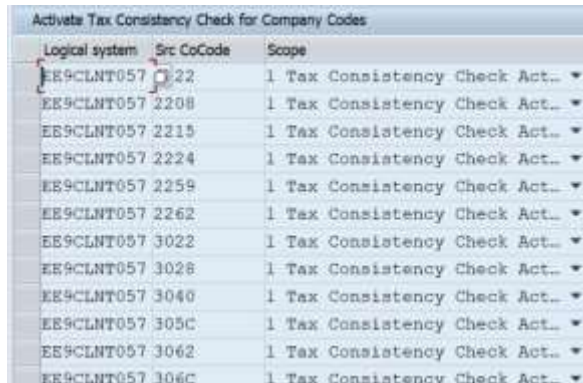


Fig. 11 Source System Mappings



### 3.4.4. Define Scenarios for Cost Objects Process Transaction Code CFINIMG

Scen Scenario	Scenario Name	Table Name	Source Object	Central Object	Cardinality
ZSAP001	Maintenance Order	ZPM ORD	PM order	Internal Order	N:1
ZSAP002	Process Order	ZPO ORD	Process order	Internal Order	N:1
ZSAP003	QM Order	ZQM ORD	QM Order	Internal Order	N:1
ZSAP001	Production Order	ZPD ORD	Production	Internal Order	N:1

Fig. 12 Define Cost Objects Mapping

### 3.5. Key and Value Mappings

CFIN Key mapping and Value mapping are required configurations for defining mappings between source and target systems to replicate documents from the source company code. Before you start mapping your data, you must define the business systems for each logical system in your scenario as described in section 3.4.3. By default, central finance uses the System Landscape Directory (SLD) to determine the local business system. Therefore, it is necessary to maintain the relationship between the logical system and the business system in SLD, and to configure access correctly.

#### 3.5.1. Define Technical Setup for All Sourced Systems

- Set up access to SLD from the Central Finance system using transaction SLDAPICUST.
- Maintain business systems in SLD using transaction SLDHTMLGUI.



Fig. 13 Define Business System Mapping

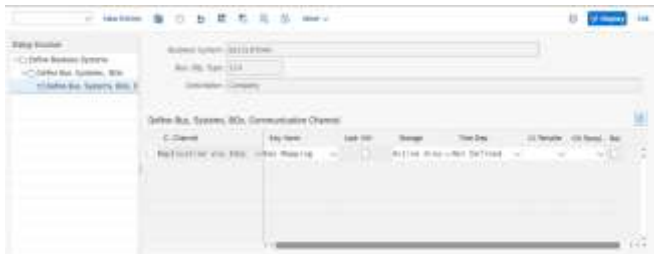


Fig. 14 Define Business System Communication Channel

#### 3.5.2. Define Mapping Action for Mapping Entities

CFIN provides the following mapping actions (Keep Data, Mapping Obligatory, Map if Possible, and Clear Data)

See table export of FINS\_CFIN\_MIDGEB from FSP for Mapping Actions Configuration Below:

Business System	Mapping Entity	Mapping Action
EAPCLNT100	ACCOUNTING PRINCIPLE	Map if Possible
EAPCLNT100	BLART	Map if Possible
EAPCLNT100	BSCHL	Map if Possible
EAPCLNT100	BURSR	Map if Possible
EAPCLNT100	COMPANY ID	Map if Possible
EAPCLNT100	COST CENTRE ID	Keep Data
EAPCLNT100	COST ELEMENT ID	Map if Possible
EAPCLNT100	CUSTOMER ID	Map if Possible
EAPCLNT100	DZARLS	Map if Possible
EAPCLNT100	DZLSCH	Map if Possible
EAPCLNT100	FAGL_LDRSP	Map if Possible
EAPCLNT100	FRSR	Map if Possible
EAPCLNT100	GENERAL LEDGER ACC MASTER ID	Map if Possible
EAPCLNT100	GSBER	Clear Data
EAPCLNT100	HKRER	Map if Possible

Fig. 15 Define Business System mapping action

### 3.6. AIF Error Resolution

The following section serves as a “one-stop shop” to reference the resolution procedures for various AIF errors. When generated, these errors must be resolved to ensure accurate updates to Central Finance.

Type	Description
1	FINS_CFIN_BC_V-039 ** code/code for tax code ** does not match in source and target.
2	FINS_CFIN_BC_Report-112 No deferred tax rule assigned to company code
3	FINS_CFIN_BC_V-010 Entry in table T007A for key / ** does not exist
4	FINS_CFIN_BC_V-031 Procedure for country/region does not match in source and target.
5	FINS_CFIN_BC_V-035 Check ID for tax code ** does not match in source and target
6	FINS_CFIN_BC_V-032 Reporting country/region does not match in source and target
7	FINS_CFIN_BC_V-040 Indicator "Extended W.Tax Active" for company code does not match.
8	FINS_CFIN_BC_V-119 Withholding tax type ** / ** is not defined in target system.FF-724 Tax entry not possible in this item 23
9	FINS_CFIN_BC_V-20 Indicator "Not deductible" does not match in source and target.
10	FS-210 TAXPS cannot be determined in non-tax items. 39

## 4. Future Capabilities and Core Benefits

### 4.1. Future Capabilities

SAP CFIN is focused on strategic innovation that delivers benefits to organizational leaders.

- More Central Processing: SAP is adding more features to handle payments and receivables from one central place.
- AI and Machine Learning: Future versions will use AI and machine learning to automatically clean data, find issues, and predict financial trends, helping finance teams focus on decision-making.
- Universal Parallel Accounting (UPA): Recent updates already include capabilities for UPA, providing full integration of different values per ledger and currency type, enabling greater flexibility in multi-currency and

multi-entity environments.

- Platform for Continuous Transformation: CFIN serves as a stepping stone to a full SAP S/4HANA landscape, allowing for the gradual phasing out of legacy systems and adoption of future SAP innovations.
- Central Payment: Allows organizations to consolidate open invoices and manage all payment activities from the central system, optimizing cash management and working capital.
- Central Receivable Management: Centrally manages customer credit, collections, and dispute processes across all business units.
- Central Asset Accounting: Manages fixed asset processes, financial reporting, and closing activities centrally, while logistics processes remain in the source systems.
- Central Tax Reporting: Supports statutory and legal reporting requirements by centralizing tax-related data and leveraging tools like SAP Document and Reporting Compliance.
- Central Budgeting and Planning: Integrates with planning tools like SAP Analytics Cloud (SAC) to facilitate unified business planning, budgeting, and forecasting using real-time data.
- Shared Services Optimization: Serves as a foundation for a shared services delivery model, driving economies of scale and standardized, efficient processes across the enterprise.

#### 4.2. Core Benefits

- Real-Time Transparency: Provides an immediate, unified view of financial data across the enterprise, improving the accuracy and timeliness of reporting and decision-making.
- Process Standardization and Harmonization: Aligns financial processes and master data (like the chart of accounts) across different systems, leading to greater efficiency and consistency.
- Non-Disruptive Implementation: Allows companies to replicate data from existing systems into a central S/4HANA instance without having to decommission or replace their current ERPs immediately.
- Faster Time to Value: Enables the implementation of advanced financial functionalities, such as a faster financial close, by creating a central platform for reporting and analysis.
- Reduced System Complexity: Simplifies a complex

landscape by replacing multiple legacy systems with a single, centralized financial instance for core reporting and processes.

- Cost Savings: Achieves cost savings by consolidating systems and gradually decommissioning old ones, along with reducing manual reconciliation efforts

#### 4.3. Check Point Reports

SAP S/4HANA – CFIN provides standard reports for the reconciliation checkpoint and takes the best view of consolidated reports and open line item analysis with full detail view and multi-dimensional Fiori reporting.

Report Name	Purpose	Transaction
Central Finance: Comparison of FI Document Headers	Checks whether all journal entries (accounting documents) from the source system have been posted in the Central Finance system as expected.	FINS_CFIN_DV_FI_NUM
Central Finance: Comparison of FI Balances	Check whether the debit or credit amount per G/L account is the same in a source and Central Finance system.	FINS_CFIN_DV_FI_BAL
Central Finance: Comparison of FI Line Items	Check whether all FI line items for selected G/L accounts and document number in a source system and Central Finance system total the same amount.	FIN_CFIN_DV_FI_DOC
Central Finance: Comparison of CO Document Headers	Checks whether all internal controlling documents (secondary postings) that have been transferred with the CO Interface have been posted in the Central Finance system as expected.	FINS_CFIN_DV_CO_NUM
Central Finance: Comparison of CO Balances	Checks whether debit or credit totals for cost elements used in secondary postings are identical in source system and Central Finance system.	FINS_CFIN_DV_CO_BAL
Central Finance: Comparison of CO Line Items	Checks whether all CO line items for selected cost elements and document number in a source system and Central Finance system total the same amount.	FINS_CFIN_DV_CO_DOC

Fig. 16 Standard Check Point Reports

## 5. Conclusion

In this document, we have explained the key technical aspects for SAP Central Finance that provide a base for implementing the standardized finance processes and advance future capabilities without disrupting existing local operations. The main point of the stakeholders' point of view of reporting and analytics is how, using the SAP S4 Universal Journal Design, Central Finance delivers a single source of truth that supports unified, real-time financial and management reporting, eliminating data silos and manual reconciliations. It further enhances period-end activities through Central Financial Close, providing greater automation, end-to-end visibility via the Financial Closing Cockpit, and real-time Intercompany Reconciliation (ICMR), thereby strengthening the Business's overall closing process in the future.

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