

ERP-352 Integration with Blackline for Account Reconciliation

Approved

Status	Approved
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Jira Request ID	 ERP-119 - Jira project doesn't exist or you don't have permission to view it.
Jira Development ID	 ERP-352 - Jira project doesn't exist or you don't have permission to view it.

High- Level Specification

Implementing System	S/4 HANA RoW, S/4 HANA CHINA
Invoked by/Invokes	
Business Process Reference	09.07.01.05. Manage General Ledger Period Close

Functional Overview

BlackLine has been chosen as the application that will be used for account reconciliation post period-end in Syensqo. Account reconciliation is a process whereby G/L account balances will be substantiated and certified by accountants to ensure control of a company's accounts. In Syensqo this only refers to balance sheet accounts. Each G/L Account will be assessed as to how often it needs to be reconciled based on the account's perceived risk and the entity's complexity*. This is performed as a monthly exercise for Syensqo company codes in SAP S/4 HANA (*Note: As per the reconciliation schedule for Key/Non-Key entities and their risk level this will be performed on staggered Quarterly basis with exception Bank account groups will be performed on monthly basis).

In order to enable account reconciliation in BlackLine, G/L account balances will be extracted from SAP S/4 HANA once the accounting period has been closed as part of the period-end process.

There are three methods of integration between SAP S/4 HANA and BlackLine:

- File-Based Integration.** This method is by exporting financial data in structured file formats (CSV, XML, or TXT) and transfers it to BlackLine via Secure File Transfer Protocol (SFTP). BlackLine then processes this data for reconciliation and reporting. Although this is simpler to set up, however it is prone to error and requires robust error-handling mechanisms
- SAP Connector for BlackLine.** BlackLine offers a pre-built SAP-certified connector that enables seamless integration with SAP S/4 HANA. This connector automates data extraction and transmission without manual file handling.
- API-Based Integration.** BlackLine also offer organizations that seek a more dynamic and real-time integration to use API. SAP S/4 HANA's RESTful APIs (SAP BTP, SAP API Business Hub) facilitates direct communication with BlackLine's API endpoints. In Syensqo's case, the extraction is only once after period-end close hence it does not necessitate to have this method for real-time data processing

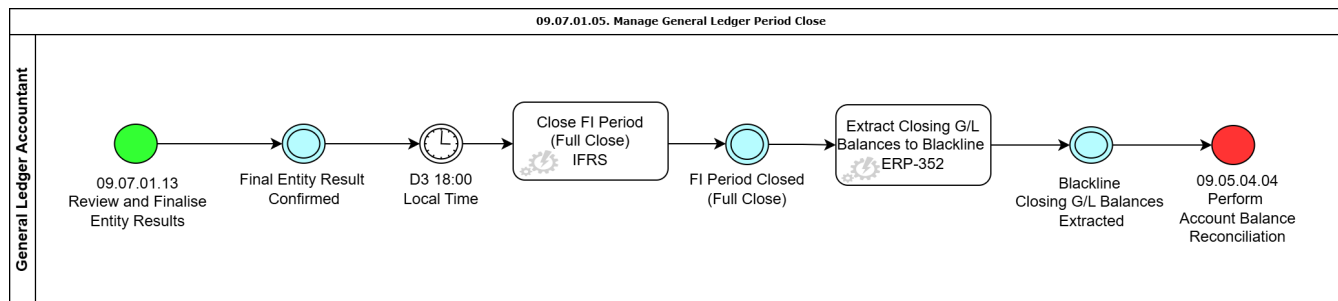
In Syensqo **SAP Connector for BlackLine** is the method that will be used and described in this document.

Scope and Objectives

Scope of the SAP connector for Syensqo is to facilitate Account Reconciliation which is one directional flow from S/4 HANA to BlackLine system. There are other BlackLine products (Journal Entry, Transaction Matching, etc) however they are not in scope of the SyWay implementation

The objective of the implementing SAP Connector is to provide an interface that enables configuration to automatically extract data from S/4 HANA systems and formats the data to be compatible with BlackLine. The SAP Connector retrieves data related to account balances (including subledgers) and transactions from the SAP S/4 HANA instances. Once the G/L account balances are retrieved, the SAP Connector formats the data into BlackLine's specifications in order for the data to be imported for use in BlackLine's Account Reconciliation.

Process Flow Diagram



Step	Description	Comment
1	Work Day 3 (D3) 18:00 Local Time Period Close	The extraction will be triggered from AFC to run once G/L Accounting period for IFRS ledger is fully closed in S/4
2.1	Extract Account Balances (including subledgers) to BlackLine	SAP Connector extracts and format the account balances from S/4 for the entities/region on the day accounting period has been closed in S/4
2.2	Receive data in BlackLine from S/4	SAP Connector send the data from S/4 in pre-formatted result to BlackLine

Assumptions

It is assumed that business will not start with the preparation of account reconciliation before the periods have been closed in S/4. This has been endorsed based on Signavio L4 process review with SME

Dependencies

Month end closing needs to be completed before the extracts can be run. BlackLine extraction Batch jobs will be triggered automatically following successful completion of Full Closure task (planned on D3 18:00 local time) in Advance Financial Close (AFC) at month-end to ensure the data is complete and final.

Security, Integrity and Controls

S/4 HANA

Transaction codes and programs for configuring data from S/4 HANA to BlackLine should only be granted to BlackLine System Administrator.

Configuration transaction codes:

- /BLACKLIN/MENU Blackline main configuration page
- /n/BLACKLIN/SRV_DIR configuration to whitelist (register) the server path where the extracted file is placed
- /n/BLACKLIN/BL00 configuration to enable segment combination
- /n/BLACKLIN/BLUC configuration to setup user-defined parameter categories
- /n/BLACKLIN/BLUV configuration to setup user-defined parameter values

Transaction codes for extracting data from S/4 HANA to BlackLine are part of General Ledger Accountant role. The Blackline extractor transaction codes will be exposed as tiles in the Work Zone launchpad. It is mandatory for the General Ledger accountant to have access to these transactions in order to trigger automatic execution of extraction tasks as Processing User Groups in AFC.

Data extractor transaction codes:

- /BLACKLIN/BL01 Standard G/L extract
- /BLACKLIN/BL10 AP Subledger extract
- /BLACKLIN/BL11 AR Subledger extract
- /BLACKLIN/BL12 AA Subledger extract
- /BLACKLIN/BLMM MM Subledger extract

BlackLine

(Refer to Config Workbook [DD - FUN - 030 Configuration Workbook \(SAAS\) - R2R - Blackline.docx](#))

Configuration Requirements

The SAP extractor programs provided by Blackline require some functional configurations. Functional configuration is setup by members of the SyWay implementation team until go live and maintained by Syensqo BlackLine System Administrator going forward

- **BlackLine - Segment Combination Configuration (T-code: /BLACKLIN/BL00)**
This transaction code provides the access within S/4 to define the Sort Order Mapping for the fields included in all data extracts. This configuration controls how the data is positioned within the extract files. These positions correspond to the Segment Combination Configuration setup in BlackLine application. This setup is generally a one-time setup. There are ten (10) sort positions which can be defined in the extract, in which sort order position #1 and #2 by default are company code (BUKRS) and G/L account (SAKNR). Syensqo will be keeping the default position#1 and #2 with additional two sort order being: House Bank, and House Bank Account. These sort order fields are setup as "Normal key Fields" which will appear in the extraction transaction codes as "additional selection parameters". These key fields will also be setup in BlackLine application as "Enabled and part of key" on Import Configuration setting under Segment Combination Configuration. Note: If the fields are activated as "User defined parameters" as opposed to "Normal Key Fields", the fields will appear as "Categories"
- **BlackLine - User Defined Categories and Value (T-code: /BLACKLIN/BLUC and /BLACKLIN/BLUV)**
In conjunction with BlackLine - Segment Combination Configuration in S/4, if any of the fields are setup as "User Defined Parameters" then using these transaction codes, user can define the descriptions (labels) and values for those categories
This is not being considered for SyWay as there is no requirement for enriched data
- **BlackLine - Authorised server locations (T-code: /BLACKLIN/SRV_DIR).** This transaction code is required to whitelist server path where the extract files will be placed into. Failing to update this configuration, the extraction will show an error as "Directory XXXXX is not whitelisted"

Design Rationale

Data Structure

The following fields will be used to provide the required data structure of the interface:

Field	Description	Rules	Comments
ACDOCA-BUKRS	Company Code	Default	
ACDOCA-RACCT	G/L Account	Default	
ACDOCA-HBKID	House Bank	Default	As per BlackLine configuration
ACDOCA-HKTID	Account ID	Default	As per BlackLine configuration
SKAT-TXT50	G/L Account Description	Default	
-	Assignment Type	Default	"A" (applicable for BlackLine Account Reconciliation)
	Active Account	Default	"TRUE" (Account is marked as "Active" and/or available for posting in general ledger. Reconciliation will be created for the period)
	Activity in Period	Default	"TRUE" (Account had activities during the period even net Dr. and Cr. is zero.) "FALSE" (Account had no activities during the period)
ACDOCA-RHCUR	Company Code Currency	Default	Based on extract parameter
	Period End Date	Default	Based on parameter passed through from AFC Task List
ACDOCA-HSL	Amount in Company Code Currency	Default	

Processing Logic

An extraction program needs to be run in the source systems with pre-defined selection variants to start the extraction of the data for the respective accounting period. Once executed the file with the transactional data in it shall be transmitted to Blackline **via ftp-connection**

Delta or Full Load Requirements

As this is a data extraction tool, it will always use a full load process. Extraction volume can be controlled via selection parameters in the selection screen of the extraction program.

Interface Alert & Monitoring

The extraction will be triggered from AFC at month-end.

- When the task execution in AFC for BlackLine extracts are completed in error, General Ledger accountant (Processing Users) need to review the error log in AFC. If the error is technical in nature, users need to raise an Incident ticket to Syensqo SAP support.
- When the task execution in AFC for BlackLine extracts are completed successfully, BlackLine Preparer roles will receive an email notification from BlackLine that the file is ready for account reconciliation. However if there is no notification received, BlackLine Business Admin will need to raise an Incident ticket to Syensqo SAP support

See error handling section below

Language Requirements

The extraction program will always be executed as a batch job in the background by a batch user or as an ad-hoc run started by the Blackline System Administrator in SAP. As such it is not required to translate the selection screens of the provided program into other logon languages. The selection screen should contain meaningful field names in English only.

Volumetrics

Per extraction run the volume of records will remain relatively stable. Increases to the data volume are only expected in case new company codes have gone into operation or new B/S G/L accounts are added to the operational Chart of Accounts used in S/4. Both are events that will not occur in a high frequency or have a material impact.

Volumetrics per extraction:

- Number of Records: Approx. 37,000 - 38,000 records per extraction (estimate: 77 entities x 400 GL Balance Sheet accounts + 62 for Assets subledger accounts + 10 for Inventory accounts + 11 for AR subledger accounts + 8 AP subledger accounts)
- Expected Frequency: monthly
- Expected Long Term Growth: Records will grow by a factor of +/-500 additional records for each entity added.

Performance Consideration

Interface will only be required to extract data once a month. The account balances will be read from one source table and additional data will be read from a few master data related tables. The complexity of the extraction program is therefore very limited and as such no negative impact on system performance is expected.

Error Handling

Scenario 01 - Error during extraction

Extraction Task ended in "error" state in AFC.

Resolution: Review the error log in AFC. Rectify the issue and re-execute the program in AFC. If the error is technical error in nature (e.g. server path not whitelisted, unable to write to the server, etc), raise an Incident ticket to Syensqo SAP Support. Upon resolution from support team, the task to be re-executed from AFC to get status of the task as "Completed"

Scenario 02 - Extraction file(s) available in dedicated server path (AL11), however no file(s) received at BlackLine

"Balance Loaded for New Period - Preparers" alert is not received by preparer.

The expectation is that once the extraction tasks are completed successfully (AFC task shows Completed without Error), the file will be received in BlackLine instantly and BlackLine "Balance Loaded for New Period - Preparers" alert will be triggered and email received by Preparer.

Resolution: Raise an Incident Ticket to Syensqo SAP Support. Support team to check outbound log and SAP OData API / RFC-enabled function module or utilising AIF Monitor & Error Handling (/AIF/ERR) to review the interface errors. Correct the error and resend the file by Syensqo SAP Support if the file stuck at middleware

Scenario 03 - Extraction file(s) received successfully in BlackLine however data is not complete / inconsistent

Upon reconciliation, preparers identify some data missing (e.g. due to late adjustment posted after period is closed)

Resolution: BlackLine Business Admin to re-initiate the ad-hoc extraction (may limit to the specific company code in issue) in S/4, confirm the new file received in BlackLine.

Scenario 04 - If the issue requires BlackLine Support, raise the Incident via SAP Support Portal

Syensqo's BlackLine account is licensed as an SAP Solution Extension (Solex). For Solex products, SAP manages the entire support process as the primary point of contact. This is part of the partnership agreement under which the solution is sold. Therefore, direct case creation in the BlackLine portal is not available for Solex users. The correct and official channel is to log all support requests directly through your SAP Support Portal. This process ensures that every issue is properly triaged by SAP first. If they determine the issue lies with the BlackLine component, SAP will escalate it directly to BlackLine specialized support engineers on Syensqo behalf. This structure prevents being bounced between support teams and ensures the issue is handled by the right experts from the start.

Testing

How to Test

Tests can be performed by running the extraction program to check whether the data file gets created and saved in the application server. From there a web service or any other file transfer protocol service can pick up the file and transfer it to the Blackline server. An import job can be started there to import the data sets into Blackline's Account Reconciliation module.

Quality of the extracted data in Blackline must be checked by functional consultant, this would be the end result of testing. i.e. that S/4 GL data is extracted correctly and Blackline balances agrees with S/4 data

Test Conditions and Expected Results

ID	Condition	Expected Results
1	Full Close Task (RFOB52) is executed in AFC	Success
2	Task Blackline Extracts executed automatically (dependency is completed)	Data file generated and saved in AL11 directory as per parameter specified
3	Web service started to transfer data to BlackLine	Data file transferred to BlackLine and alert ""Balance Loaded for New Period - Preparers" received
4	Account Balance imported into BlackLine (functional testing)	S/4 GL data extracted correctly and BlackLine balances agrees to extracted S /4 data

Test Considerations/Dependencies

- AFC Task List released for execution
- Any S/4 company codes can be used as source data based on availability and completeness, ideally from a closed accounting period to verify the account balances after transmission

Other Information

Data Encryption

Encryption in Transit (SAP BlackLine): All data sent to BlackLine uses HTTPS with TLS encryption. For SAP Connector specifically SAP BlackLine communication uses TLS1.2 or higher and Certificate-based trust. No clear-text financial data travels over the network

Encryption at REST (Inside BlackLine): Once data reaches BlackLine it is stored using AES-256 encryption. Encryption is applied at database level and storage level (documents, files).

BlackLine encryption has earned certification for ISO/IEC 27001 (information security management), 27017 (cloud security), 27018 (cloud privacy and personal data protection), 27701 (privacy information system), SOC1 Type 2, SOC2 Type 2, SOC 3 attestation reports. These certifications confirm the rigorous security controls BlackLine applies to its SaaS platform

Development Details

Package

Package Name	Parent Package

Other Development Objects

Object Type	Object Name	Purpose/High Level Logic	Design Rationale Reference

Appendix

See also

<https://www.blackline.com/legal/learn/>

File	Modified
File Blackline Integration Flow_01 draw.io diagram	Jan 06, 2026 by ANGGREANI-ext, Lisa
File ~Blackline Integration Flow_01.tmp draw.io Draft	Jan 06, 2026 by ANGGREANI-ext, Lisa

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Change log

Version	Published	Changed By	Comment
CURRENT (v. 31)	Jan 21, 2026 07:12	WEINERT-ext, Patrick	
v. 30	Jan 21, 2026 07:03	WEINERT-ext, Patrick	
v. 29	Jan 21, 2026 07:01	WEINERT-ext, Patrick	
v. 28	Jan 20, 2026 09:42	WEINERT-ext, Patrick	
v. 27	Jan 16, 2026 11:12	ANGGREANI-ext, Lisa	
v. 26	Jan 12, 2026 04:56	ANGGREANI-ext, Lisa	
v. 25	Jan 12, 2026 04:37	ANGGREANI-ext, Lisa	
v. 24	Jan 12, 2026 04:34	ANGGREANI-ext, Lisa	
v. 23	Jan 12, 2026 04:24	ANGGREANI-ext, Lisa	
v. 22	Jan 12, 2026 04:22	ANGGREANI-ext, Lisa	

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Workflow history

This view shows the 5 most recent entries. The complete workflow log is available from the 'Document Activity' menu item.

Mar 06, 2026	Actor	Type	Activity	Version
Approved	 BOUMSSAHAL-ext, Mohamed	State	changed state to Approved at 12:40 pm	v31
Lead Approval	 BOUMSSAHAL-ext, Mohamed	State	gave <i>POD Lead Review</i> approval at 12:40 pm	
Jan 23, 2026	 ANGGREANI-ext, Lisa	State	assigned approval <i>POD Lead Review</i> to  BOUMSSAHAL-ext, Mohamed at 12:47 pm	
			Hi Mohamed, appreciate your review and approval. Thank you	

Tech Review	WEINERT-ext, Patrick	State	changed expiry date to '30 Jan, 2026 10:22 am' at 10:22 am	
		State	changed state to Lead Approval at 10:22 am	v31
	WEINERT-ext, Patrick	State	gave <i>Tech Review</i> approval at 10:22 am	