Nasdaq Calypso

ETD Clearing Setup Guide

Version 16.1 – Version 18

Revision 33.0
April 2025
Approved

Document History

Revision	Published	Summary of Changes
1.0	April 2018	First edition for version 7.0.3
2.0	November 2018	Second edition - Updated for version 8.0.1.
3.0	April 2019	Third edition - Updated for version 8.2.1.
4.0	July 2019	Fourth edition - Updated for version 8.3.0.
5.0	September 2019	Fifth edition - Updated for version 16.1 monthly release – Added environment property XFER_PL_ON_CLOSE_TRADE.
6.0	November 2019	Sixth edition - Updated for version 16.1 monthly release – Added environment property ETD_SHOW_FILTER_PANEL.
7.0	February 2020	Seventh edition - Updated for version 16.1 monthly release – Added movement types "Balance NFA" and "Movements NFA".
8.0	April 2020	Eighth edition for version 8.6.1.
9.0	May 2020	Ninth edition for version 8.6.4.
10.0	June 2020	Tenth edition for version 8.6.6.
11.0	July 2020	Edition 11 for version 8.6.9.
12.0	November 2020	Edition 12 for version 8.8.1.
13.0	December 2020	Edition 13 for version 8.9.1.
14.0	April 2021	Edition 14 for version 8.12.1
15.0	June 2021	Edition 15 for version 8.15.0 – Added GCM, CGM reports
16.0	August 2021	Edition 16 for version 8.16.1.

Revision	Published	Summary of Changes
17.0	October 2021	Edition 17 for version 8.19.1.
18.0	December 2021	Edition 18 - As of the 16.1 November 2021 MR, the Clearing Module no longer has its own version number. It is an internal module.
19.0	February 2022	Edition 19 – Added domain value Clearing.OverrideETDSettlementLag to ProcessingConfig domain.
20.0	March 2022	Edition 20 – Added Position Change Submission (PCS) Report, Parent / Child relationships import.
21.0	October 2022	Edition 21 – Added Future Expiry Closeout trades settle date setting.
22.0	December 2022	Edition 22 – Updates for monthly release. As of 16.1 Nov MR and 17.0 Dec MR, the CCP trade keyword is no longer defined as a legal entity but is defined as a string – See Trade Keyword Configuration for details.
23.0	April 2023	Edition 23 – Updates for monthly release.
24.0	August 2023	Edition 24 – Updated for monthly release. New attributes in scheduled task CLEARING_VM_CALC – Domain value TDClearing.VM.CTLevel is no longer used.
25.0	December 2023	Edition 25 – Added Default Client and CounterParty Account Setup for Interfaces. Added Remove Zero Padding Configuration.
26.0	January 2024	Added ETD Multi Region
27.0	March 2024	Added ETD Clearing Multi region B2B Trade Support
28.0	April 2024	Edition 26 - Updates for monthly release. Added value ETDClearing.GenerateCashForInterestBearing in domain ProcessingConfig.
29.0	June 2024	Added Interest Bearing functionality in Statements.
30.0	August 2024	Added Switch sign on Client Statement and OCC Exchange CFTC Reporting
31.0	October 2024	Fee Definition, Uploading Multiple Clients / Counterparties, Templates and Client Account Configuration sections updated. Scheduled Task Clearing Account Statement section updated.
32.0	March 2025	Updates for version 18 monthly release – Added scheduled task EOD_FUTURES_MARKING to record daily value changes. **ETD Clearing processes and reports have been moved to the Calypso ETD Clearing Processes and Reports User Guide.**
33.0	April 2025	Updates for version 18 monthly release: • Added InterEntityTradeType trade keyword.

Revision	Published	Summary of Changes
		• Updated Uploading Multiple Clients / Counterparties • Added Managing Clearing Transfers for Daily Realized MTM Contracts

This document describes the setup of Calypso to process exchange-traded derivatives (ETD) clearing activity for clearing brokers on their behalf or on behalf of their clients.

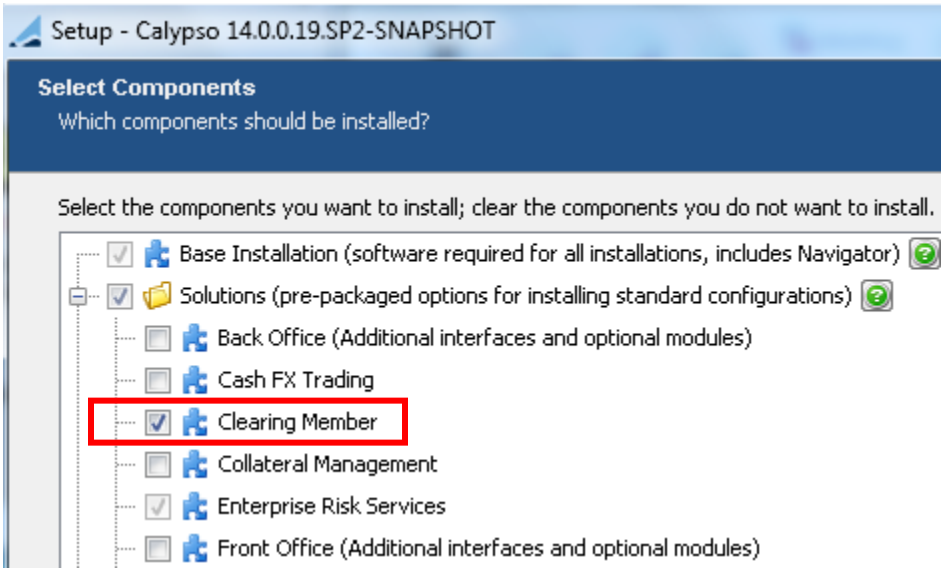
[NOTE: The Calypso License to use this Calypso Integration Module does not include a license for any third-party data services to which this module can interface. Clients are responsible for contracting with the appropriate third-party data service(s) prior to using this Calypso Integration Module]

For information on ETD Clearing processes and reports, please refer to the Calypso ETD Clearing Processes and Reports User Guide.

Table of Contents

Installation

The components of the ETD Clearing module are installed as part of the Calypso Installer when you select the "Clearing Member" solution.



You also need to select the interfaces "ATEO LISA middleware" and "FOW Trade Data".

CMF OTC Clearing – Back office processing – Valuation of open trades – Generation of client statements.

Collateral – Allocation of margin calls.

Data Uploader – Upload of trades received by the ATEO into Calypso.

ATEO LISA Middleware - Import of Listed Derivatives Trades

FOW Trade Data - Import of Listed Derivatives contracts

▶ Please refer to the *Calypso Installation Guide* for details on the Calypso Installer.

If you are installing a CUP (Calypso Upgrade Package) instead, the instructions are also in the Calypso Installation Guide.

Database Upgrade

When you run Execute SQL as part of your installation, the data files will be already loaded.

▶ Please refer to Calypso Collateral Management release notes for upgrade information, if any.

Overview

Calypso's ETD clearing solution combines Calypso's Back Office, Connectivity and Collateral to offer a complete solution for entities offering ETD clearing services to their internal trading desks as well as to external clients. The primary activities that the clearing member will be relying on Calypso for are:

- The automated creation of standardized Listed Derivatives contracts,
- The use of connectivity and STP workflow to automatically import cleared Listed Derivatives trades into clearing accounts,
- The automatic generation of fees and commissions on incoming trades,
- The calculation of Variation and Initial Margin on open positions
- Management of cash and collateral related to the clearing activities, and
- Generating client statements for their clients to summarize the day's activity.

To support these activities, Calypso provides an interface to ATEO's LISA to import cleared trades. These trades will flow into the system in real-time throughout the day. At the end of the day, the system will process the open positions. The processing results in the generation of Calypso trade objects which will facilitate the settlement of cashflows and contain the valuation of the open positions.

The Collateral Management module will then take over to manage any Margin Calls resulting from the day's activity for each account. This includes not only cashflows related to the cleared trades, but payments made to or from each clearing account as part of routine business.

As a last step, Calypso will aggregate all the information stored in the system from the activity of each account and generate a client statement which will be sent to the account holders as a record of their activity.

2.1 Clearing House and Product Coverage

Calypso's ETD clearing member solution includes "out-of-the-box" support for connectivity and integration with the clearing houses served by ATEO's LISA.

Calypso's ETD clearing member solution supports Futures, Future Option, and ETO trades.

2.2 Realtime Trade Connectivity

Out-of-the-box, the trades are imported in real-time from ATEO's LISA. They can be imported from other sources as needed or they can be manually entered.

The counterparty of the trades is the clearing house or the executing broker.

The trades navigate the Calypso workflow based on their clearing status, using straight-through processing and exceptions monitoring. Once the trades are cleared, they are liquidated as applicable and update the accounts positions.

2.3 EOD Processing

The key aspects of the EOD processing are as follows:

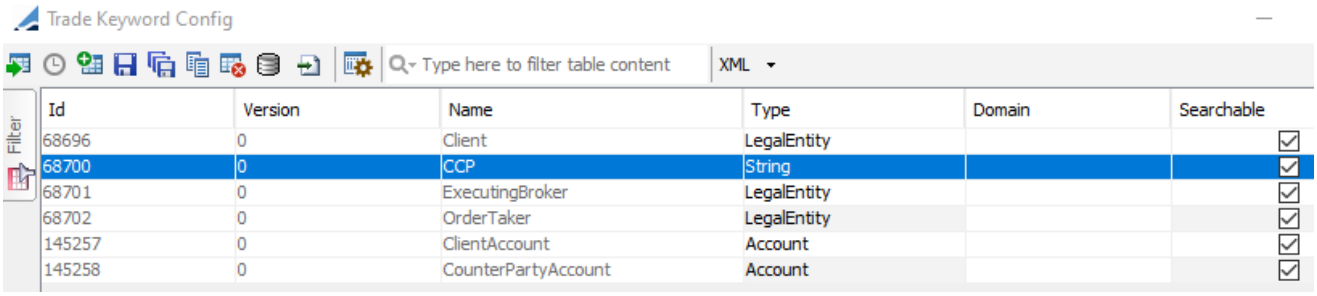
- Management of settlement activity flowing from this processing
- Position Management – Trade offsetting and lifecycle activity.
- Import and storage of settlement prices.
- Open positions processing – Generation of the variation margin and initial margin requirements related to trade activity and open positions.
- Collateral Management process
- Client Statement Generation
- Roll to next business date.

Before you Begin

Before you begin, you need to define the following reference data.

3.1 Trade Keyword Configuration

The Trade Keyword Config should be set up as follows:



[NOTE: As of 16.1 Nov MR 22 and 17.0 Dec MR 22, the CCP trade keyword is no longer defined as LegalEntity but is defined as String]

Upon upgrade to 16.1 Nov MR 22 and 17.0 Dec MR 22, Execute SQL automatically changes the CCP trade keyword definition from LegalEntity to String, and updates all ETD trades accordingly.

You need to manually modify any static data filter that contains the CCP trade keyword as an attribute and change it from LegalEntity to String:

3.2 Domain Values

Make sure that the following domain values are specified.

Domain Names	Values
DefaultETDPosSpec	Value = Name of the Position Specification which is configured as per this document. We call it "ETD Pos Spec". This domain provides the default Position Specification which is to be used in processes where positions and liquidations are required. The value of this domain should be equal to the name of the Position Specification which uses the Liquidation Aggregation of ClientAccount and CounterPartyAccount.
Liquidation.BookingDateStrategy	Value = Accounting Value = LastStatementDate **Value = POAttribute**

Domain Names	Values
ProcessingConfig	See below.
engineParam	Value = LIQUIDATION_CONFIG Value = XFER_NEXT_EVENT Value = XFER_PAST_GENERATION Value = XFER_POS_AGGREGATION_NAME Value = XFER_USE_POS_AGGREGATION_ONLY Refer to section Transfer Engine Value = ACCENGINE_PRDFAM_SELL_POSITION should be set to 'no' for the Accounting Engine Refer to section Accounting Engine
feeDefinitionAttributes	Value = Duplicate Fee Transfer Value = ETD.InventoryBucket Value = MarginCall Value = MarginCall.Category These attributes are used to control the behavior of fees, commissions and technical fees in the system.
feeDefinitionAttributes.ETD.InventoryBucket	Value = Commissions Value = Fees The two allowable Fee Inventory Buckets into which any fee or commission can be assigned.
feeDefinitionAttributes.MarginCall	Value = Account Level Value = Always Value = Never These attributes are used to control the behavior of fee, commissions and technical fees in the system.
liquidationKeyword	Value = ClientAccount Value = CounterPartyAccount
XferPosAggregation	Should be set to = ETD Liq Keys based on the rest of the setup of this user guide Should match the name of the Liquidation/Position Key set to liquidate by Client and Counterparty Accounts The recommended setup is to use the engine param for transfer engine Value = XFER_POS_AGGREGATION_NAME and not that domain

Domain Names	Values
InventoryCashBucketFactory	Value = ETD Activates the ETD inventory buckets.
Clearing.ExternalData.locations Clearing.ExternalData.localCache	External data locations and local cache locations. See Appendix – External Data Locations for details.

Domain "ProcessingConfig"

It allows configuring various features and can have the following values.

Value = ETDClearing.ClearingAccountTransferGeneration

Comment = true

Activates the generation/suppression of transfers as required by the ETD solution.

Value = ETDClearing.GenerateCashForInterestBearing

Comment = true

Interest Bearing entries remain in "Balance Cash Movements" and "Movements Cash Movements".

Setting Comment = false will remove Interest Bearing entries from the "Balance Cash Movements" and "Movements Cash Movements" buckets and add them to custom buckets instead.

Value = ETDClearing.IsActive

Comment = true

Activates additional fields in the Fee Definition and Account Definition.

Value = ETDClearing.SecurityTransferGeneration

Comment = false

Suppress the generation of the SECURITY transfer for an ETD transaction. The clearing solution only uses transfers to reflect the cash impact of transactions. Positions on contracts/products is shown in Position Keeper.

Value = BookingDateManager

Comment = tk.bo.bookingdate.POAttributeStrategy

Ensures Booking Date is used when creating Transfers and Trades

Value = LegacyProductDesc

Comment = false

Activates the custom product description which best suits listed products

Value = LegacyQuoteName

Comment = true

Uses the standard (v14) quote name creation

Value = ExchangeNameInProductyDesc

Comment = false

Value = ExchangeNameInQuoteName

Comment = false

Value = ETDClearing.SettlementLag

Default value is true – Setting it to true would be the same as being empty. Setting it to false would disable the lag. This domain allows to work with Settle Date = Trade Date + 1 Bus Day on Future & Options transactions and Clearing Transfer for statement purposes.

Settle Date of transaction is computed by the system adding a default of 1 Business Day lag (using contract exchange calendar).

If a different lag must be used by currency, we refer to the currency attribute ClearingTransferSettleLag.

This attribute can also be defined per Counterparty (CCP or broker) by using the LE Short Name + ClearingTransferLag attribute.

For example, if you have to apply a 2D lag for PLN, except when you clear PLN with BROKER1 (BROKER1 being the shortname of your LE), you will define ClearingTransferSettleLag = 0 for PLN and another PLN attribute BROKER1ClearingTransferSettleLag that would be set to 0.

Value = Clearing.OverrideETDSettlementLag

If Comment = true, the available date is set as the value date for ETD Clearing transfers and non-ETD Clearing transfers.

If Comment = false, for non-ETD Clearing transfers the available date is set as the trade date, and for ETD Clearing transfers the available date is set at the value date.

Value = ETDClearing.VM.UseNativePricers

Default value (if not set) is interpreted as true which means the CLEARING_VM scheduled task is using the standard Calypso pricer (pricers are more demanding in terms of market data but ensures consistency with numbers produced in accounting and TOQ report).

If you want to deactivate this feature, set Comment = false.

Value = ETDClearing.RenameOldETONonSVNContract

Comment = true

In this case, when renaming a contract via a CA transformation, the attribute CAClearingExchangeTicker is set on the old contract.

Value = Clearing.RandomAssignment.IgnoreLongPositions

When Comment = false (default), random assignment is not performed when long and short client positions are available.

When Comment = true, random assignment is performed on short client positions whether long client positions exist or not.

Value = ETDClearing.VM.PastQuoteDays

Comment = <number of business days to look up the market price if today's price is not set for CLEARING_VM_CALC scheduled task>

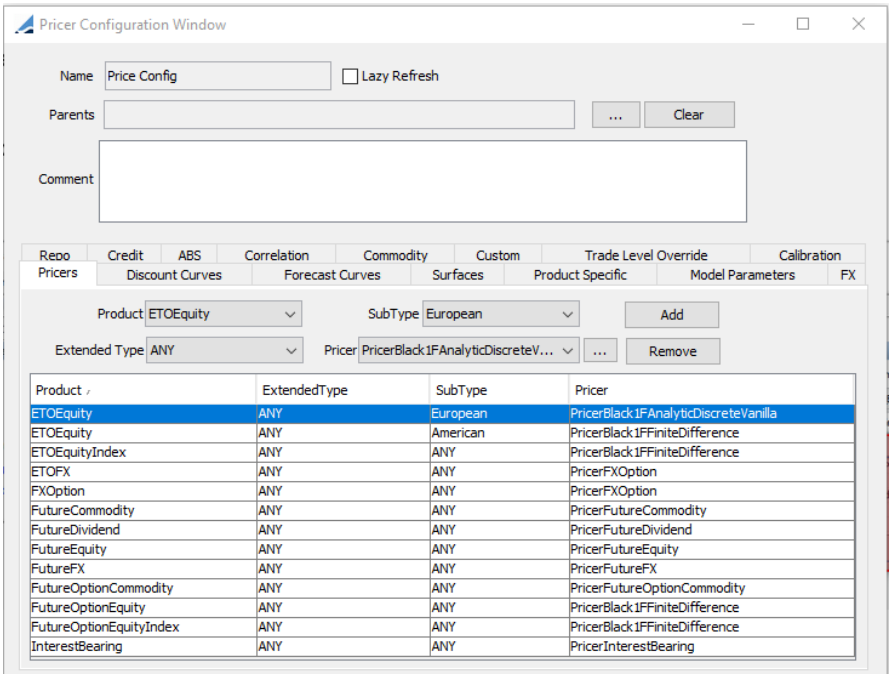
In case no market price is found, the latest available trade price is used.

3.3 Pricing Environment

You need a pricing environment to price Futures and Options from quotes when using the Calypso native pricers in reports like the Position Keeper, TOQ and Trade Browser.

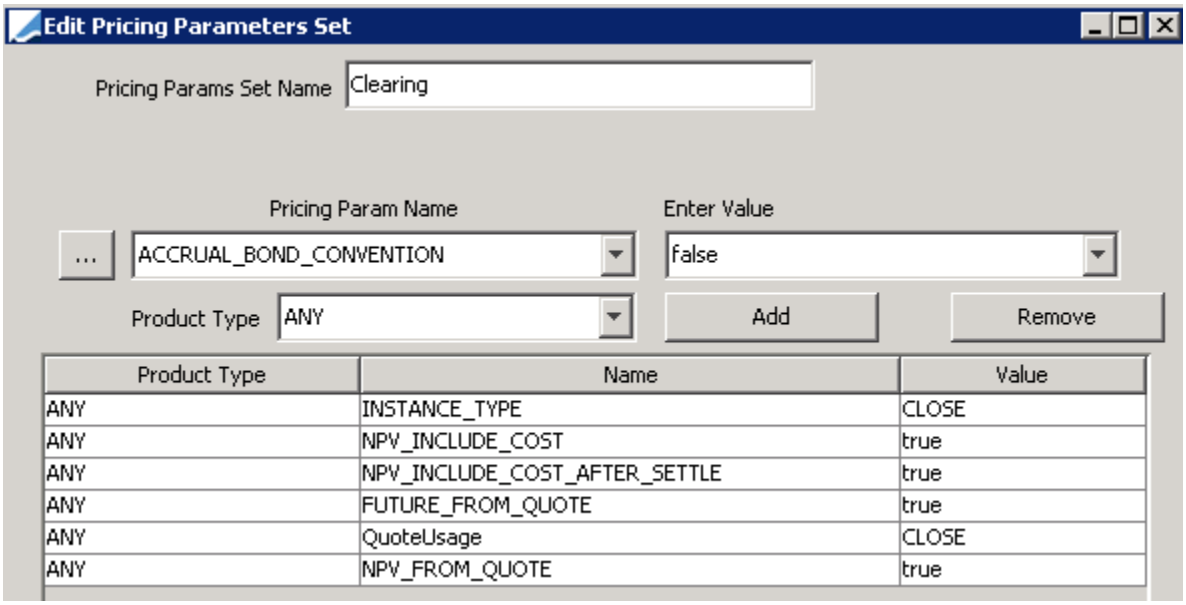
The calculation of CLEARING_VM through the EOD scheduled task process relies in native Calypso pricers as soon as in the domain ProcessingConfig, the value ETDClearing.VM.UseNativePricers is not added or set to true. When using native pricers, users will have to define all necessary market data (sometimes dummy curves would be needed) but this will ensure consistency with numbers produced in accounting and TOQ report). This is the recommended setup.

When set to false, the CLEARING_VM_CALC scheduled task does not rely on a pricer or pricing environment parameters – its logic is written in the scheduled task to match the market standard valuation and rounding specifications.



[NOTE: Apart from the above illustration there are more pricers available for ETOEquity and ETOEquityIndex – Please refer to the Equity Derivatives Analytics Guide for details and set the pricers as needed]

The following pricing parameters should be set.



For FutureOptionMM and FutureOptionBond, add the pricing parameter USE_IMPLIED_VOL = true which would eliminate the need for a vol surface.

Please note that the pricer needs a risk-free rate to calculate the option price, so a discount curve is required.

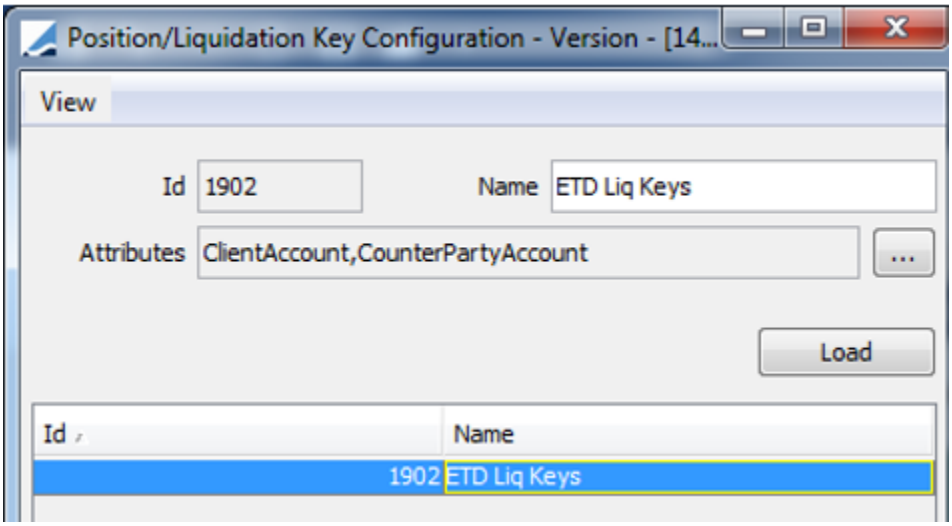
3.4 Position Configuration

Once the trades are imported, positions are computed by the liquidation engine.

3.4.1 Position/Liquidation Key Configuration

Positions in the listed clearing solution are only expected to be offset if both the Client and the CounterParty Accounts match, along with the book and product which are checked by default. This means that close outs will only occur when a trade on a specific product is in the same account on the client side as well as the counterparty side, otherwise the buys and sells will remain open.

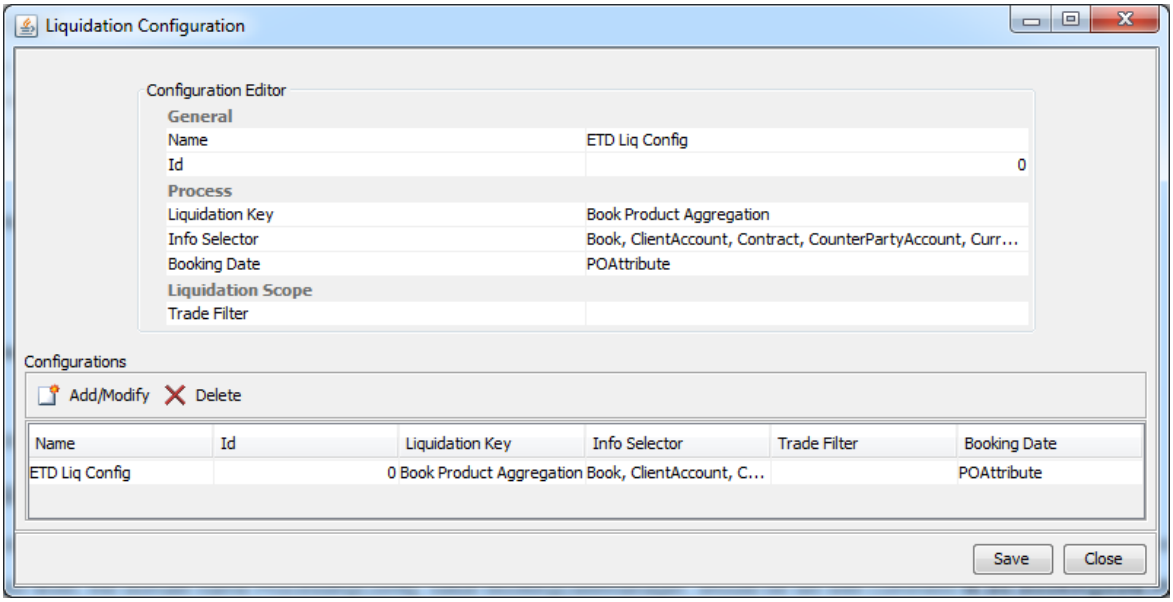
To achieve this, create a Position/Liquidation Key Configuration which uses the trade attributes ClientAccount and CounterPartyAccount as the additional liquidation criteria, as shown below.



3.4.2 Liquidation Configuration

The liquidation configuration dictates how position-based products are liquidated (aka offset or closed out) and there is a standard configuration expected to process listed derivatives in Calypso. The liquidation configuration described below should be chosen in the Liquidation Info used in the listed clearing solution.

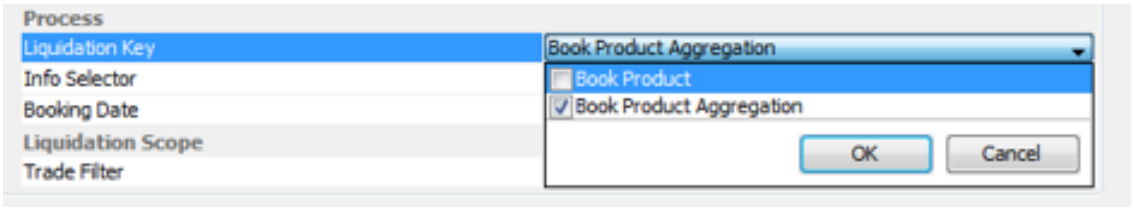
There are 3 key fields in the Liquidation Configuration window which drive the logic, as described below.



You can use the environment property XFER_PL_ON_CLOSE_TRADE to determine when REALIZED_PL transfers (for future trades liquidations) are generated. If set to true, REALIZED_PL transfers are generated on closing trades (the second trade which could be buy or sell). Default is false, REALIZED_PL transfers are generated on sell trades.

3.4.3 Liquidation Key

Calypso requires that the two transactions be on the same product and in the same trade book to be liquidated. This field allows the user to add one additional set of criteria called 'aggregation' to use for determining the eligibility of liquidation.

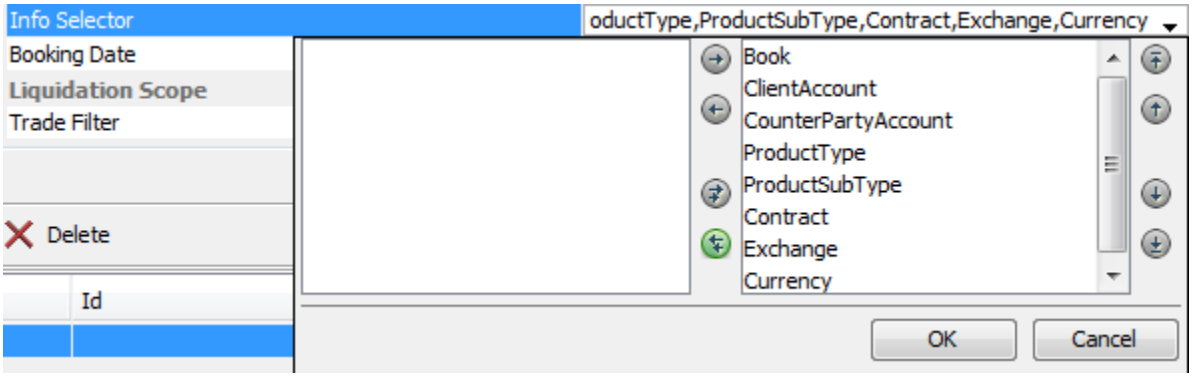


Selecting "Book Product Aggregation" will allow us to point to the additional trade criteria of Client Account and Counterparty Account to ensure only trades in the same client and counterparty account can be closed out.

[NOTE: This is the only supported aggregation configuration – Any other aggregation configuration is NOT supported]

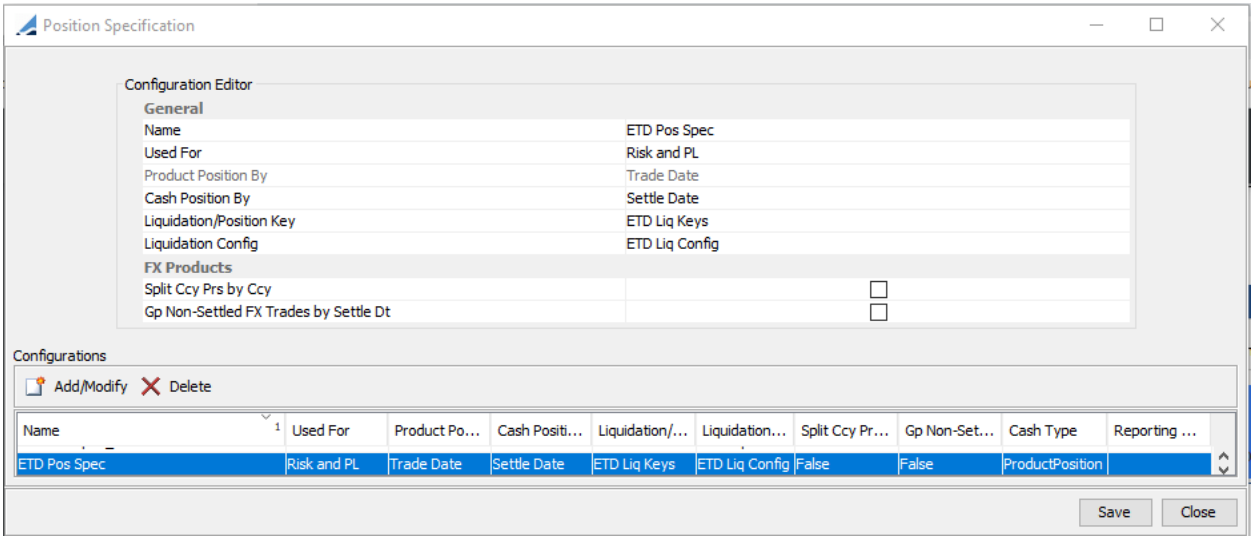
3.4.4 Info Selector

This field allows the user to include additional criteria of the position by which to define the liquidation rules at a more granular level. The position criteria available to select are shown in the panel on the right.



3.4.5 Position Specification

Configure the position specification as below for ETD Clearing.

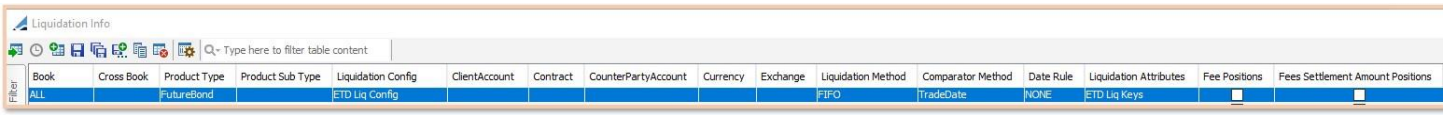


3.4.6 Liquidation Info

Selecting these categories simply makes them available to use when we configure the liquidation rules in the Liquidation Info window. By providing more criteria, we can set rules for a specific exchange, currency, contract etc.

Note: The hierarchy of the selection of a rule is dependent on the order in which the fields appear in the Info Selector window above. So, in the screenshot above, “Book” would be the priority, followed by ClientAccount, CounterPartyAccount, ProductType and so on.

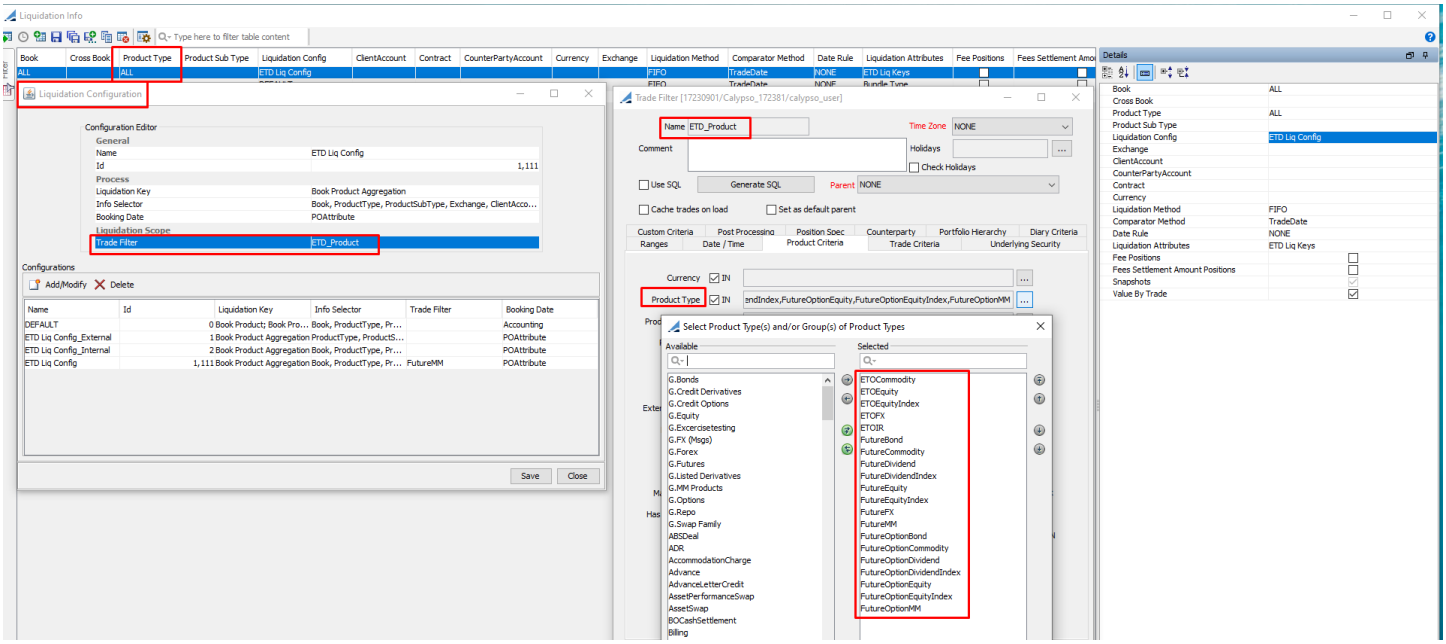
Once selected in the Info Selector field of the Liquidation Config, these fields will be available in the Liquidation Info panel as shown below.



The liquidation configuration "ETD Liq Config" described earlier in this document must be selected.

Note: The liquidation configuration = "ETD Liq Config" and liquidation attributes = "ETD Liq Keys" are specifically featured for listed derivatives product types; therefore, it is recommended to specify a listed derivatives product type for the liquidation info.

Alternatively, you can select Product Type = All and set a trade filter in the "ETD Liq Config" liquidation configuration that contains all listed derivatives product types:



A liquidation method, such as LIFO, FIFO, AvgPrice, Manual and MFIFO can be assigned to each configured set of criteria in the Liquidation Info based on the users' requirements.

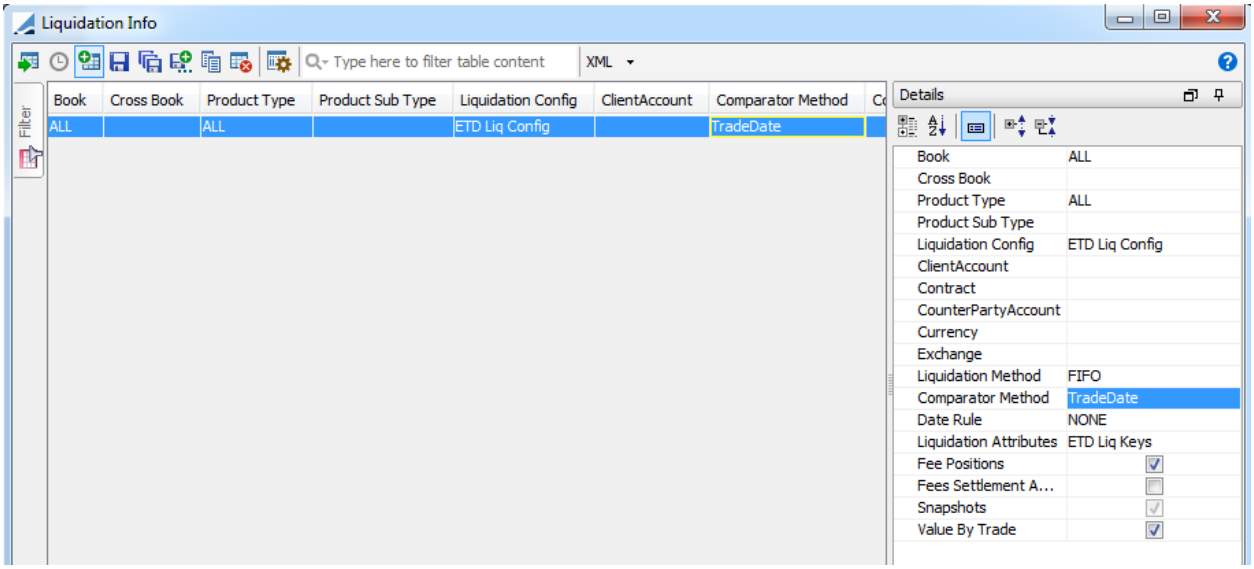
A comparator method of "**TradeDate**" is the standard choice for any out of the box liquidation methods, but the user can also choose a Dynamic Comparator which allows more complex comparison of trades based on price, trade time and quantity.

When producing client statement, Trade Date comparator is the only one supported.

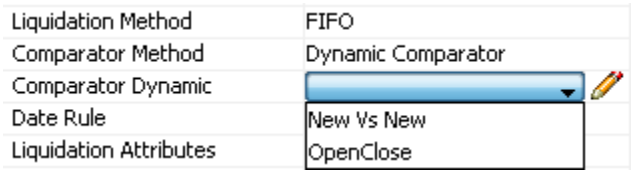
"Value by Trade" should be checked/true to allow positions to be valued based on the individual transaction prices rather than based on the average price of the position. Valuation by trade is the market standard used by clearinghouses and brokers.

3.4.7 Dynamic Comparator

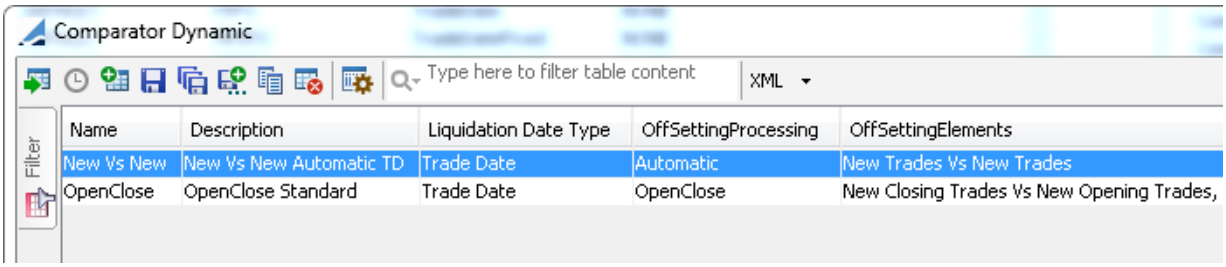
The comparator method, "Dynamic Comparator" must be used only with Liquidation Method FIFO or LIFO and the Liquidation engine in Batch Mode (Environment Property LIQUIDATION_TIMEOUT = -4).



Dynamic Comparator is available in the Comparator Method list.

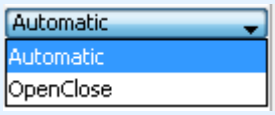
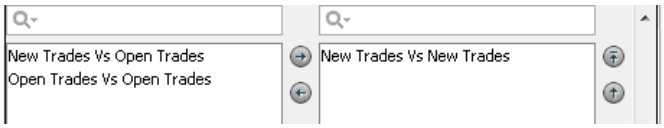


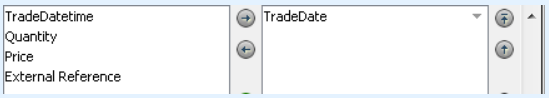
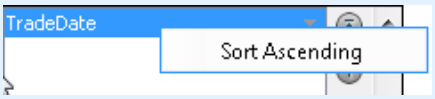
When selected, a Comparator Dynamic must be chosen or created by clicking on  to open the Comparator Dynamic Window.



The following fields should be set:

Fields	Description
Name	Name of the Comparator Dynamic Will be displayed in the Liquidation Info Window

Fields	Description
Description	Description of the Comparator Dynamic
Liquidation Date Type	 Date used to compute the Liquidation Date: • Trade Date • Settle Date • EOD Trade Date: based on Book EOD • Fixed Trade Date: based on Book Attribute LiquidationTime • Start of Day Trade Date
OffSettingProcessing	 Liquidation Processing Type: • Automatic: Liquidation is automatically performed • OpenClose: Liquidation is automatically performed only when a Closing Trade is input
OffSettingElements	 Comparator Elements used for Liquidation in decreasing priority. For OffSettingProcessing = Automatic • New Trades Vs New Trades: New Buy Trades are liquidated with New Sell Trades • New Trades Vs Open Trades: New Trades are liquidated with Open Trades • Open Trades Vs Open Trades: Open Trades are liquidated with Open Trades For OffSettingProcessing = OpenClose • New Closing Trades Vs New Opening Trades: New Closing Trades are liquidated with New Opening Trades • New Closing Trades Vs Open Trades: New Trades are liquidated with Open Trades The Closing Trades are identified by the Trade Attribute OpenClose = C **Example:** OffSettingProcessing = Automatic Offsetting Elements = Open Trades Vs Open Trades, New Trades Vs New Trades, New Trades Vs Open Trades

Fields	Description
	Liquidation Method = FIFO *Trades:* • T1: Open Trade 50 • T2: Open Trade 10 • T3: New Trade 40 • T4: New Trade -30 • T5: New Trade -30 *Process and results:* • Open Trades Vs Open Trades: no Liquidation as two Buy Open Trades only – T1: Open Trade 50 – T2: Open Trade 10 – T3: New Trade 40 – T4: New Trade -30 – T5: New Trade -30 • New Trades Vs New Trades: T4 fully liquidated by T3, T5 partially liquidated by T3 – T1: Open Trade 50 – T2: Open Trade 10 – T5: New Trade -20 • New Trades Vs Open Trades: T5 fully liquidated by T1 – T1: Open Trade 30 – T2: Open Trade 10
Ordering Criteria	 Criteria used for comparison in decreasing priority Each criteria can be sorted in Ascending or Descending Order using a Right click.  **Example:** OffSettingProcessing = Automatic Offsetting Elements = New Trades Vs New Trades Ordering Criteria = Trade Date (Asc) / Price (Asc) / Quantity (Desc) Liquidation Method = FIFO *Trades: All Trades are New Trades* • T1: TD: 17/11 Price: 100 Quantity: 50 • T2: TD: 17/11 Price: 102 Quantity: 50 • T3: TD: 17/11 Price: 101 Quantity: -40

Fields	Description
	• T4: TD: 17/11 Price: 101 Quantity: -10 • T5: TD: 17/11 Price: 103 Quantity: -10 • T6: TD: 17/11 Price: 102 Quantity: 70 • T7: TD: 14/11 Price: 107 Quantity: 10 *Process and results:* Buy Trades after ordering – T7: +10 – T1: +50 – T6: +70 – T2: +50 Sell Trades after ordering – T4: -10 – T3: -40 – T5: -10 Trade Open Quantities after Liquidation – T6: +70 – T2: +50

3.5 Booking Date

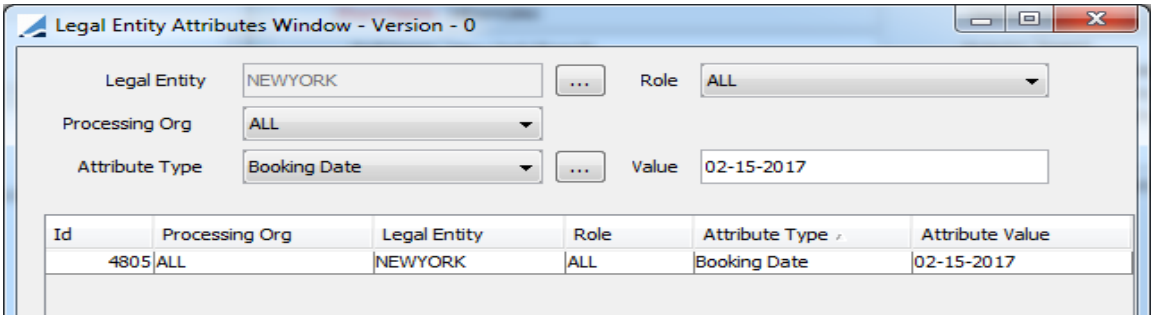
To support the processing of transactions and activity for a specific clearing date without changing the activity in the past or including any activity on T+1, Calypso associates a processing date to each Processing Organization. All clearing activity is 'stamped' with this date to tell the system when to include the activity in the end of day and in the client statement.

This concept applies to cleared transactions and all the related transfers that impact the account balance. The processing date is rolled forward when all the EOD activity is completed for a given day and shouldn't change until the next day's activity is complete.

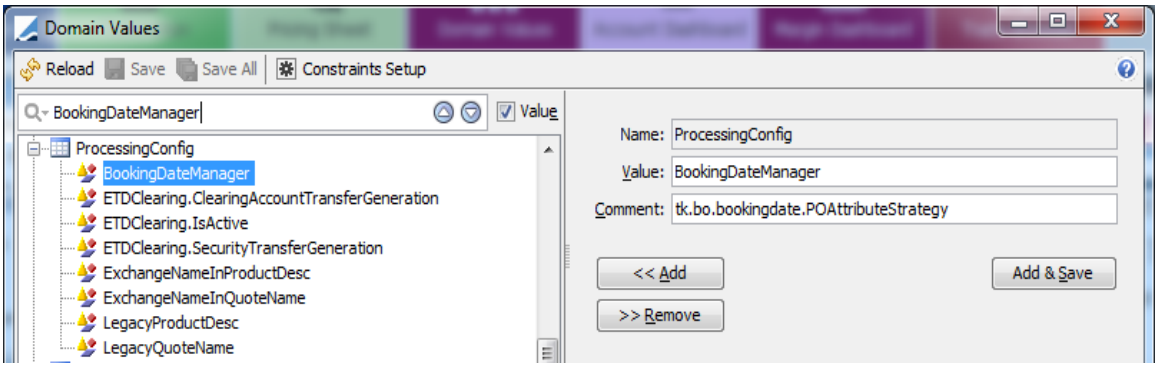
The Booking Date should not be rolled backward unless there is a requirement to do a back value adjustment (through **New,** Cancel or Amend). During the backward rollover process, ensure that the current days trade is not entered. If trade is entered, it will be recorded as a future dated trade as booking date is back value. TOQ will indicate that the liquidation status is "Non liquidable" and will only be liquidable when Booking Dated has been moved to the current date.

3.5.1 Set the Legal Entity Attribute 'Booking Date'

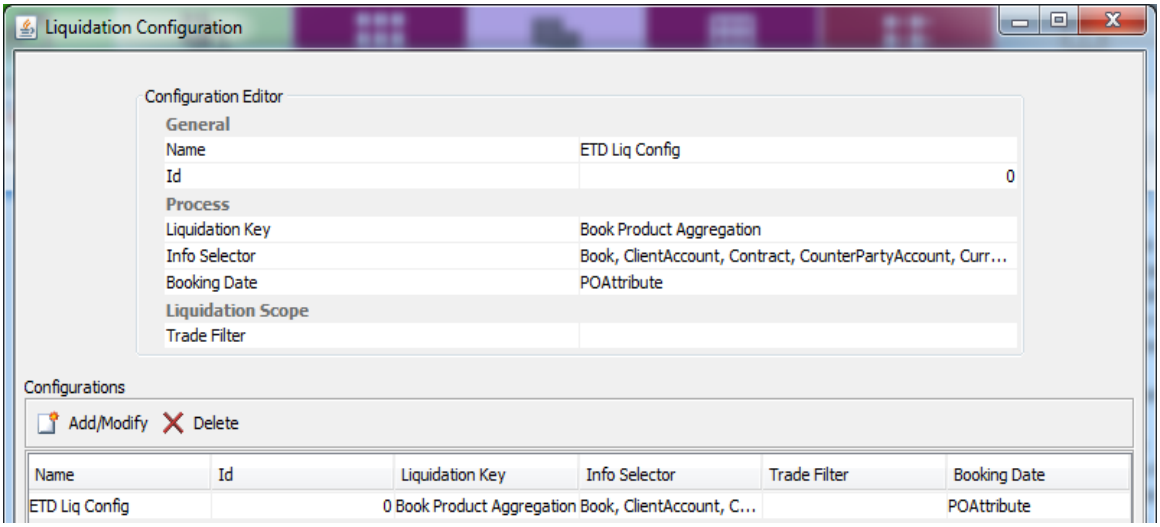
To set the processing date of the system for each Processing Organization, set the PO's LE Attribute 'Booking Date' to the desired processing date using the format mm-dd-yyyy as shown below.



In addition, we need to set the BookingDateManager domain value (found under the ProcessingConfig node) to a value of "tk.bo.bookingdate.POAttributeStrategy".

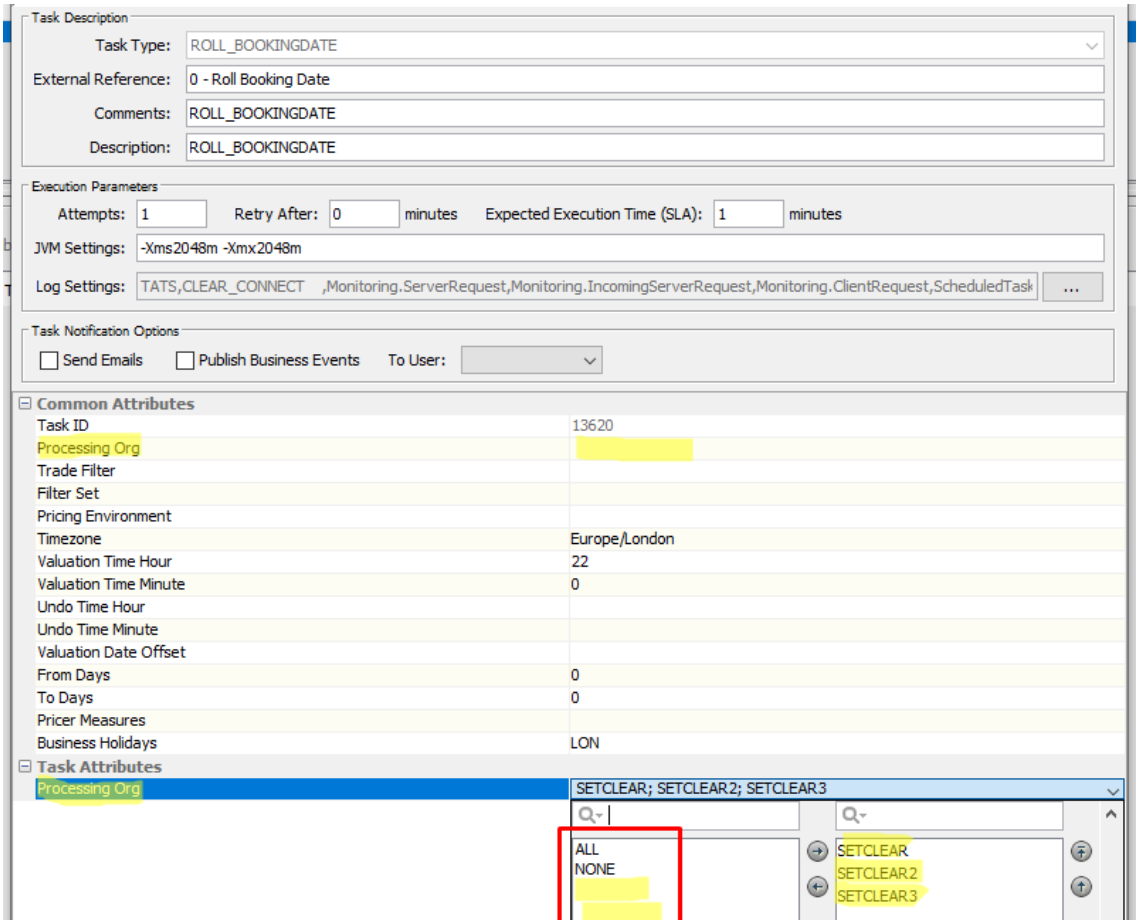


In the Liquidation Configuration set the Booking Date field to a value of "POAttribute" so that positions and 'trade open quantities' are also built using the concept of Booking Date. This ensures that T+1 transactions are not impacting open positions on T and are therefore not included in the offsetting process, IM/VM calculation, lifecycle or transaction confirmation reporting in the EOD.



3.5.2 Rolling the Booking Date Forward

The Booking Date can be moved forward by manually editing the LE Attribute value or can be rolled using the ROLL_BOOKINGDATE Scheduled Task which will roll the date forward one day according to the calendar set in the 'Business Holidays' Scheduled Task attribute.

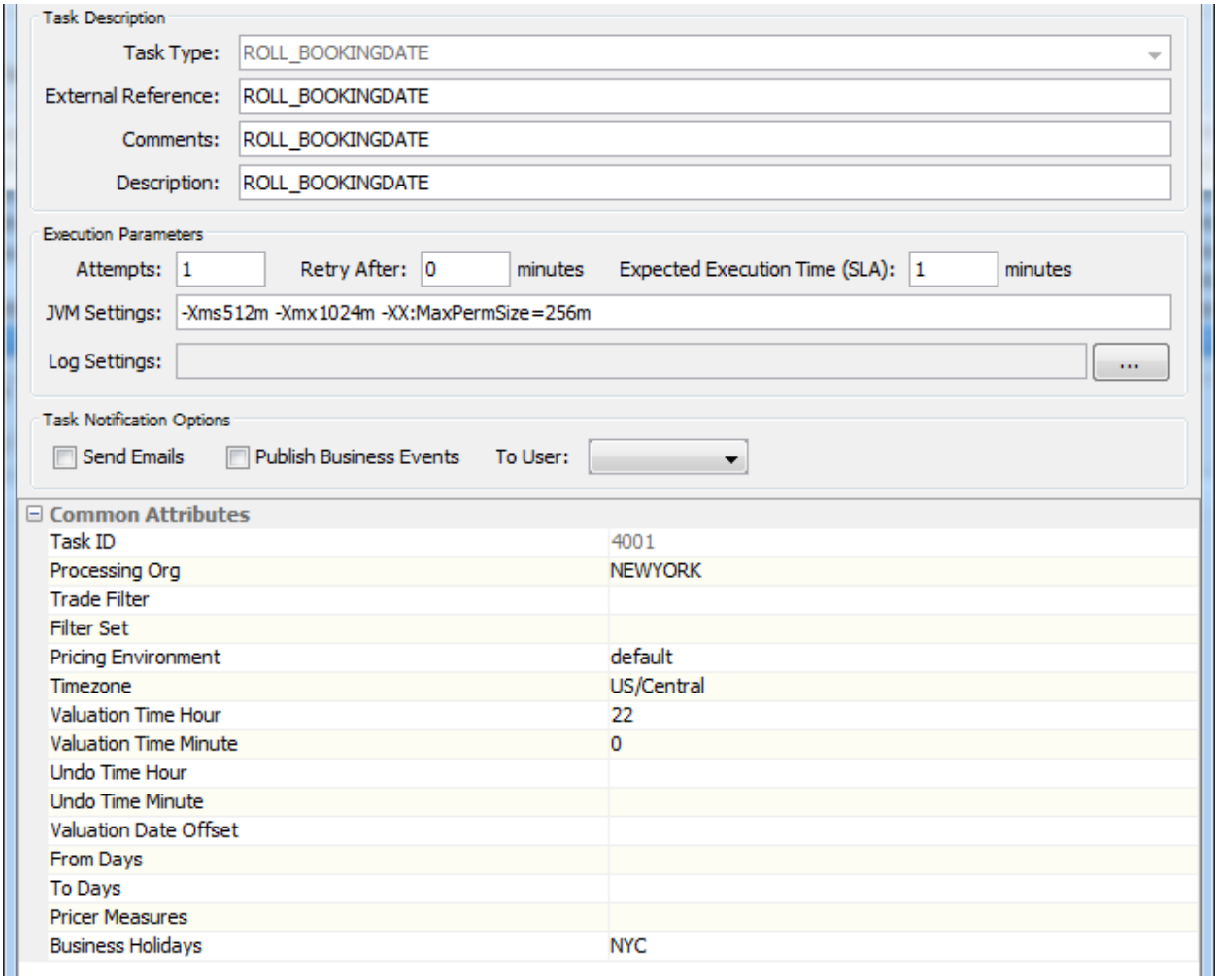


If task Attributes Processing Org is blank and the Common attributes Processing Org is selected with PO, then the Common attributes Processing Org Booking Date will be rolled to next business day.

If Common Attributes Processing Org is blank and the Task attributes Processing Org is selected with POs, then the Task attributes Processing Org Booking Date are rolled to next business day.

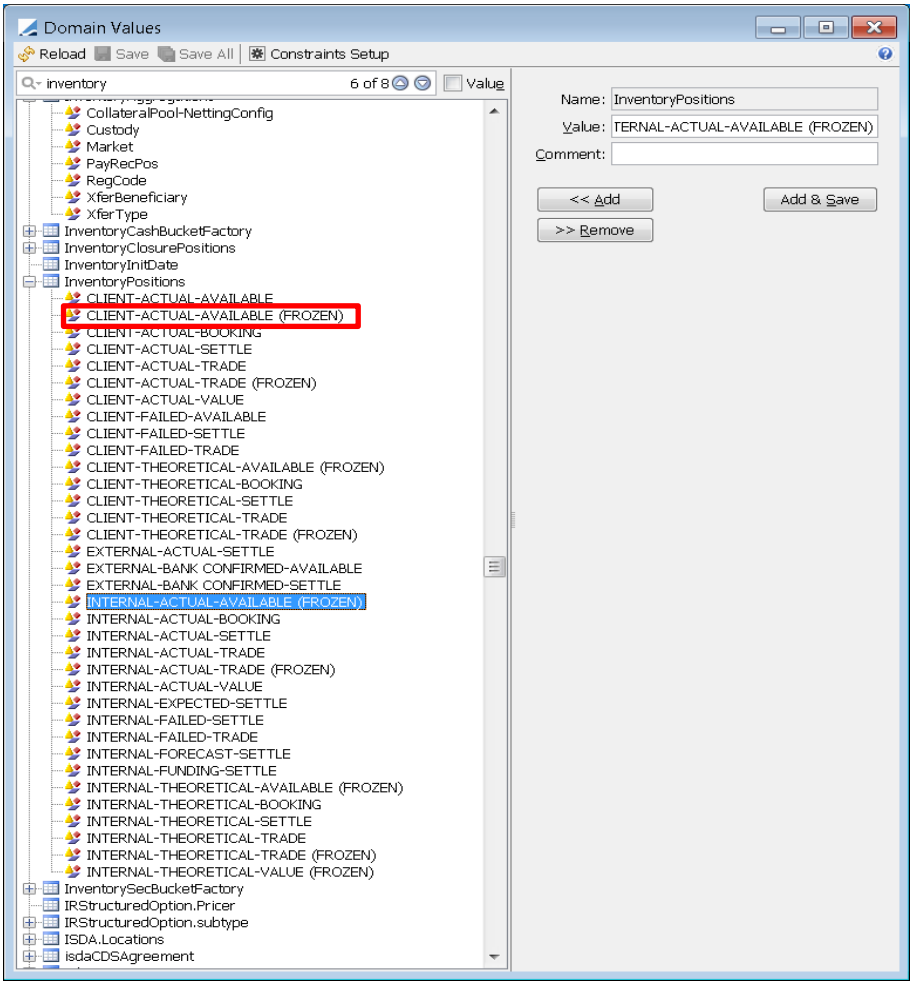
Note: When PO LE are added with the "Booking Date" attributes, the list of POs for selection will be displayed in the Task Attributes ProcessingOrg selection list.

The date should not be rolled backwards, as once the EOD processing is completed all corrections will happen on the next day – we don't expect to run past days.

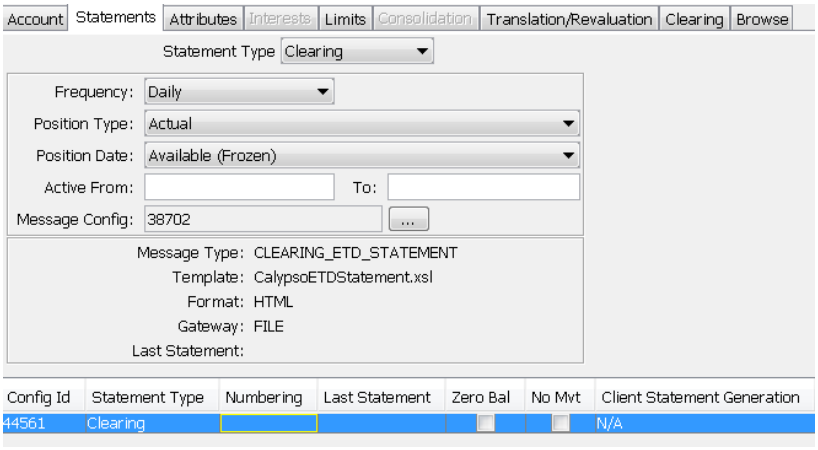


Whenever we're looking at cash positions, we want to use a Position Date of "Available (Frozen)" which returns the later of the transfer's Available Date and Booking Date. This way a transfer will never impact the balance prior to the processing date on which it's booked (since Booking Date will always be set to the Processing Date).

Available (Frozen) is used to report balances in the Client Statement, so to match these balances when generating cash and security inventory reports, the user should add the domain values as shown below, which makes them available for selection in the Inventory Cash position report.



Statement Configuration should also be set to use Available (Frozen) Position Date.



3.5.3 Transfer Engine and Workflow

To make sure the transfers behave as expected in this model, we want to set up the system so that we can cancel transfers which are generated intraday if needed, because they have not yet been reported as part of the EOD statement. However, we require that transfers from past days will be reversed by posting a credit/debit on the current processing date, since we don't want to impact the balances that were reported on past statements and have already been distributed to clients.

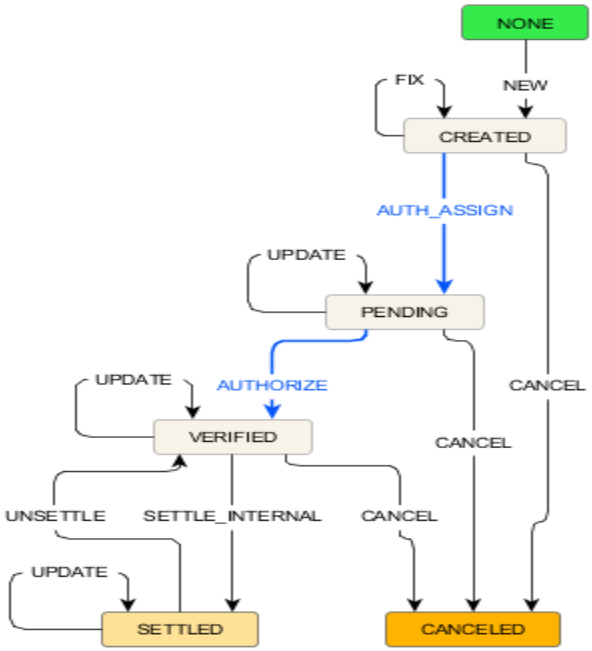
Transfer Workflow

The transfer workflow for all transfers other than those related to external payments between client and PO (typically only found on Margin Call trades) will always expect perfect settlement, but we will stop the STP path in VERIFIED status so that if they get updated or cancelled intraday, we can still cancel them. We use an action of SETTLE_INTERNAL to move them to SETTLED as part of the EOD process and can use the PROCESS_TRANSFERS scheduled task with an action of SETTLE_INTERNAL to isolate only these internal transfers.

External payments will be settled through a SETTLE workflow action, which can be triggered by a separate scheduled task or manually triggered.

Note that there is no CANCEL action from the SETTLED status. This ensures that any transfer which has been settled will be reversed out instead of cancelled.

The workflow presented below is only indicative.



Screenshot of the PROCESS_TRANSFER scheduled task used to move internal transfers to SETTLED status once all processing is done, but prior to generating the statement.

Task Attributes	
Process	Apply Action
Status	VERIFIED
Action to Apply	SETTLE_INTERNAL
Agent	
SD Filter	

3.5.4 Behavior of Transactions in the Statement

One of the benefits of using the Accounting Booking Date is that transactions can now be classified as new, backdated, corrected and cancelled by comparing the transactions Available and the Booking Date (the date that the PO was set to when the trade was accepted into the system). This classification is used in the Trade Confirmation section of the client statement is given below, including a description of the enhanced Trade Open Quantity and Liquidation Tables. Note that the statement period is from the day after the last statement until the processing date on which the statement is being run, so it could include more than one calendar day.

3.5.5 Trade Open Quantity (TOQ) Table

Trades which contribute to open positions are stored in Calypso in the Trade Open Quantity (TOQ) table. The structure of the TOQ gives us all the information we need to know about the trade economic details, when it was entered, when it was cleared and when/if it has been amended or cancelled. The columns in this table are referenced throughout the next sections to determine which transactions to include in each statement section and subsection.

TOQ Id	Trade Id	Trade Date	Settle Date	Quantity	Price	Booking Date	History	Status	Open Quantity
1	1000	30-Sep	30-Sep	10	99	30-Sep	New	Eligible	4
2	1001	30-Sep	30-Sep	-6	101	30-Sep	New	Eligible	0

3.5.6 Liquidation Table and Liquidation Deletion Tables

Similarly, the history of the offsets of buys and sells are stored in two tables, the Liquidation Table and The Liquidation Deletion Table. Through the combination of these two tables, we can determine what to include in the P&S section of the statement and characterize them appropriately as new offsets or cancelled offsets. The structure of the two tables is shown below and is referenced in the inclusion logic in the next section.

Liquidation Table

Trade 1	Trade 2	Liquidation Date	Quantity	Realized	Booking Date
1000	1001	30-Sep	6	24000	30-Sep

Liquidation Deletion Table

Trade 1	Trade 2	Liquidation Date	Quantity	Realized	Booking Date	Deleted Date
1000	1001	30-Sep	6	24000	30-Sep	2-Oct

3.6 Fees Setup

A number of fees need to be setup for the following trades:

- Future and Future Option trades – Exchange/Clearing Fees and Commissions (optional)
- Trade Exercise – EXERCISE_FEE
- Corporate Action Cash Adjustment for Options: OPT_CASH_ADJ

Additionally, the EOD process through CLEARING_VM creates the following technical fees to impact the collateral, the respective inventory bucket and, for NPV related fees, the inventory cash balance:

- Clearing Transfer and Collateral Exposure trades:
- SOV, SOV_REV: Short Option Value and its Reversal.
- LOV, LOV_REV: Long Option Value and its Reversal
- NPVFUT, NPVFUT_REV: NPV or Realized Variation Margin for Futures only. This fee is created when Account Margin Mode = Realized VM
- NPVOPT, NPV_OPT_REV: NPV or Realized Variation Margin for future-style options only. This fee is created when Account Margin Mode = Realized VM
- DISC_FWD_NPV, DISC_FWD_NPV_REV: This fee is created for LME contracts when Account Margin Mode = RealizedVM
- OTEFUT, OTEFUT_REV: OTE for Futures only. This fee is created when Account Margin Mode = OTE
- OTEOPT, OTEOPT_REV: OTE for future-style options only. This fee is created when Account Margin Mode = OTE
- DISC_FWD_OTE, DISC_FWD_OTE_REV: This fee is created for LME contracts when Account Margin Mode = OTE
- NFA: National Future Association fees

We have listed below the related transfer behavior for the EOD fees created by the CLEARING_VM Scheduled Task in terms of Margin Call enrichment (always except for LOV and SOV + reversal) and impact on the cash inventory balance used to produce Financial Summary for the client statement.

Xfer Type	Perisited Bucket	Impact Cash Balance	Impact MarginCall Balance	Margin Category
OTEFUT, OTEFUT_REV	OTE Futures	No	Always	OTE
OTEOPT,OTEOPT_REV	OTE Options			
DISC_FWD_NPV, DISC_FWD_NPV_REV	Discounted OTE			
NPVFUT, NPV_FUT_REV	Variation Margin Futures	Yes	Account Level	VM
NPVOPT, NPV_OPT_REV	Variation Margin Options			
DISC_FWD_OTE, DISC_FWD_OTE_REV	Discounted VM			
LOV, LOV_REV	LOV	No	Never	NOV
SOV, SOV_REV	SOV			

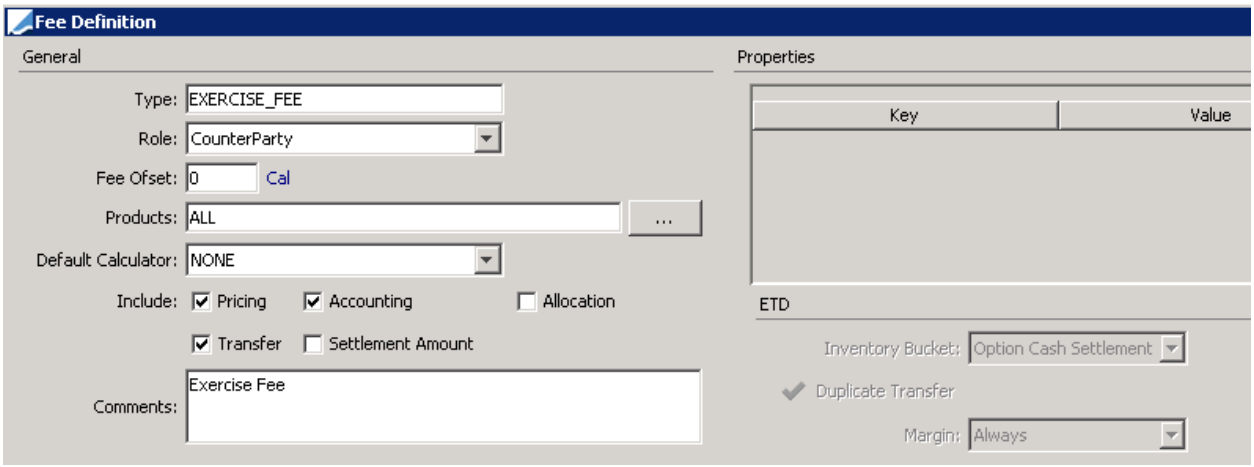
You can use the fee calculator ETDClearingTransferSettleDateCalculator to set the fee settlement date to Booking Date + Settle Lag.

Fees and Commissions

These optional fees can be defined by the user, but they must be classified in the Inventory Bucket of “Fees” or “Commissions” in order to be properly aggregated in the cash balance and client statement level.

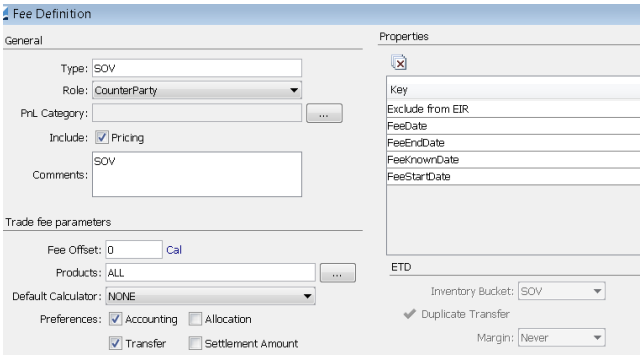
EXERCISE_FEE

Calculated upon exercise.



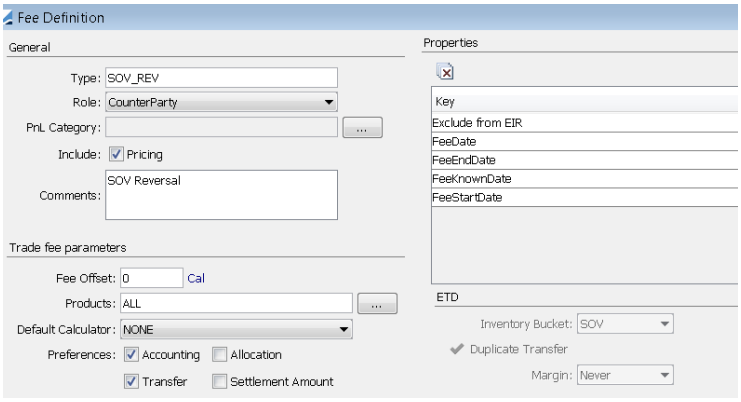
SOV (Short Option Value)

Calculated by the scheduled tasks CLEARING_VM_CALC only.



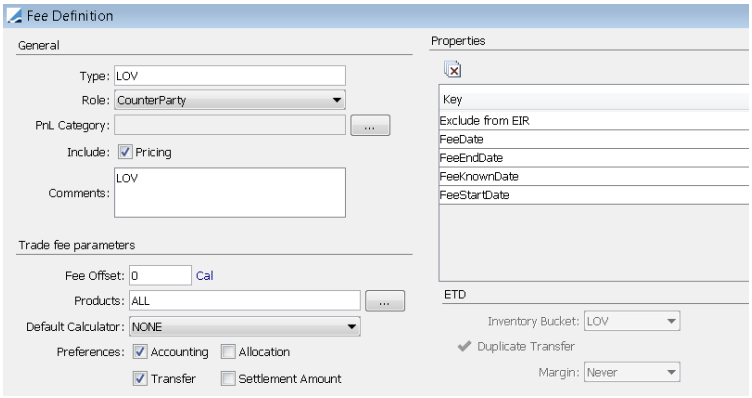
SOV_REV

Calculated by the scheduled tasks CLEARING_VM_CALC only.



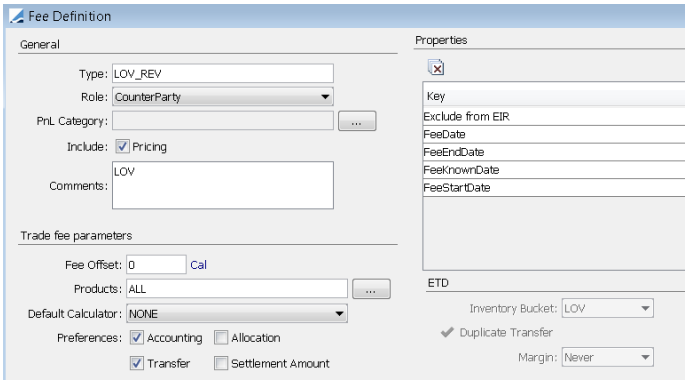
LOV (Long Option Value)

Calculated by the scheduled tasks CLEARING_VM_CALC only.



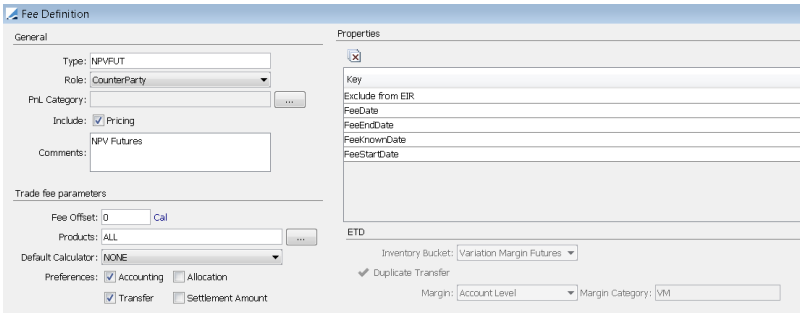
LOV_REV

Calculated by the scheduled tasks CLEARING_VM_CALC only.



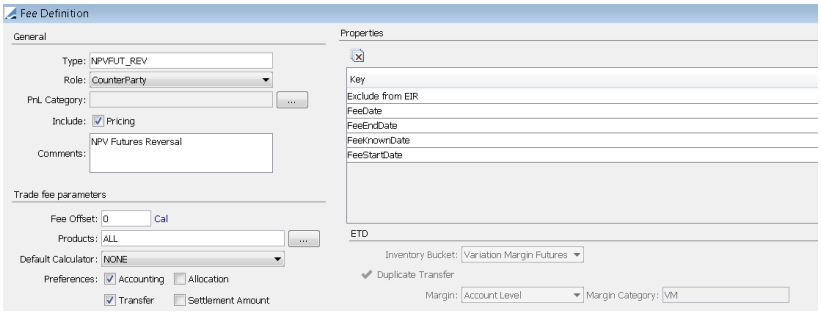
NPVFUT

Calculated by the scheduled tasks CLEARING_VM_CALC.



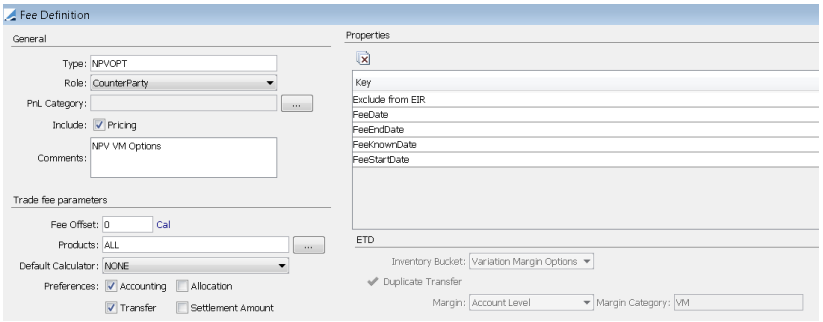
NPVFUT_REV

Calculated by the scheduled tasks CLEARING_VM_CALC.



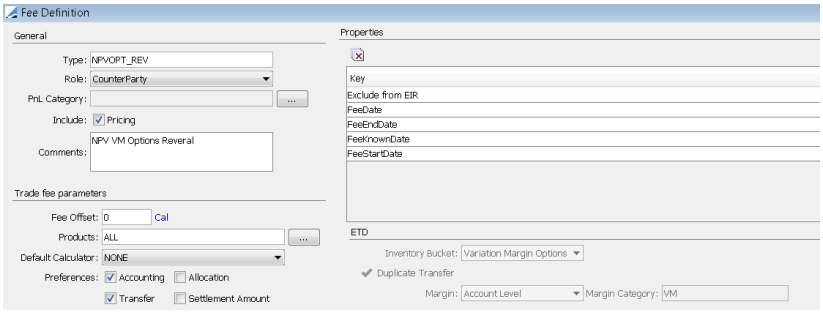
NPVOPT

Calculated by the scheduled tasks CLEARING_VM_CALC.



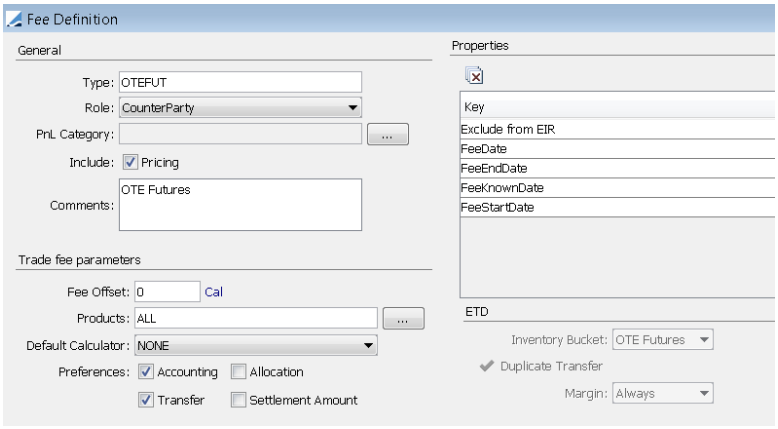
NPVOPT_REV

Calculated by the scheduled tasks CLEARING_VM_CALC.



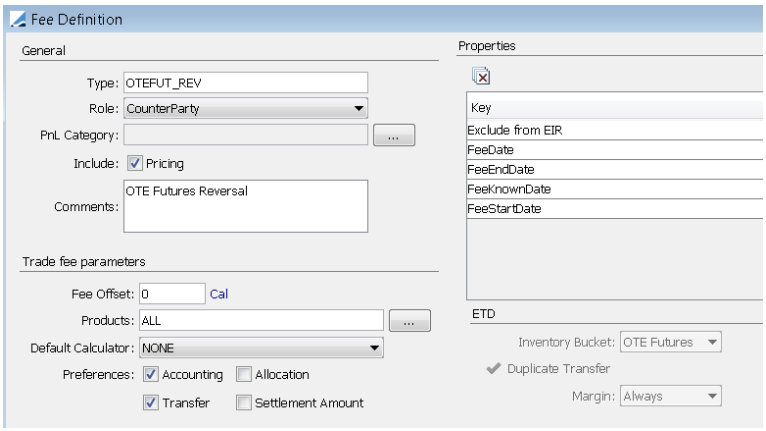
OTEFUT (Open Trade Equity – Futures Only)

Calculated by the scheduled tasks CLEARING_VM_CALC.



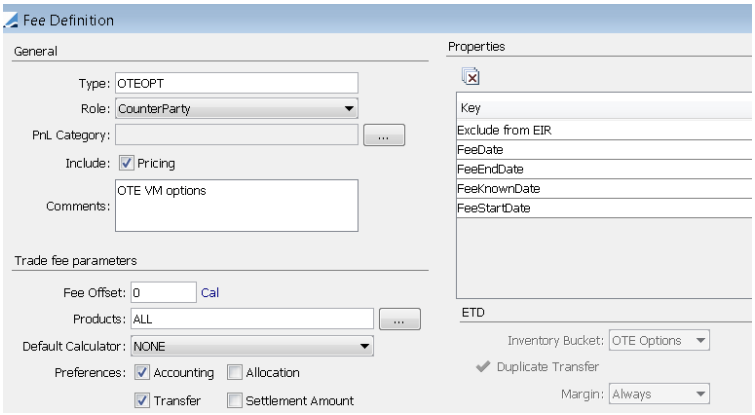
OTEFUT_REV

Calculated by the scheduled tasks CLEARING_VM_CALC.



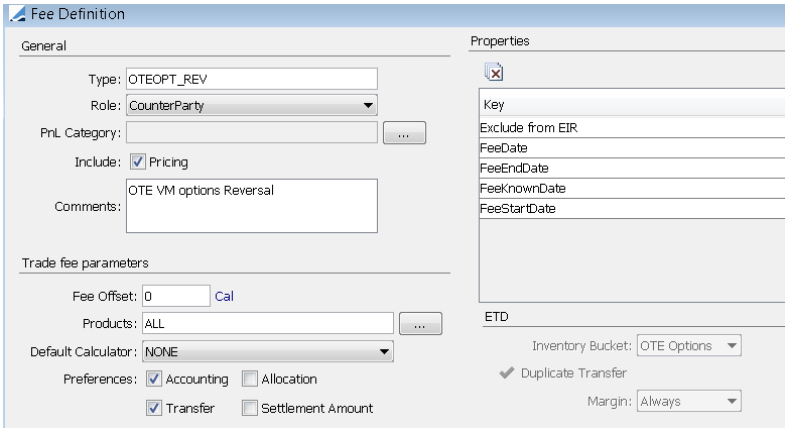
OTEOPT (Open Trade Equity – Future-Style Options Only)

Calculated by the scheduled tasks CLEARING_VM_CALC.



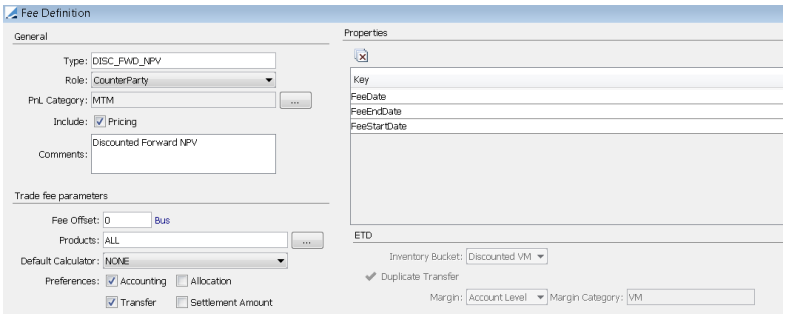
OTEOPT_REV

Calculated by the scheduled tasks CLEARING_VM_CALC.



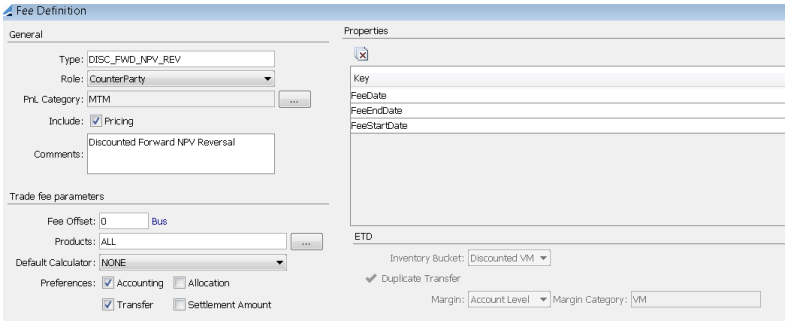
DISC_FWD_NPV

Calculated by the scheduled tasks CLEARING_VM_CALC.



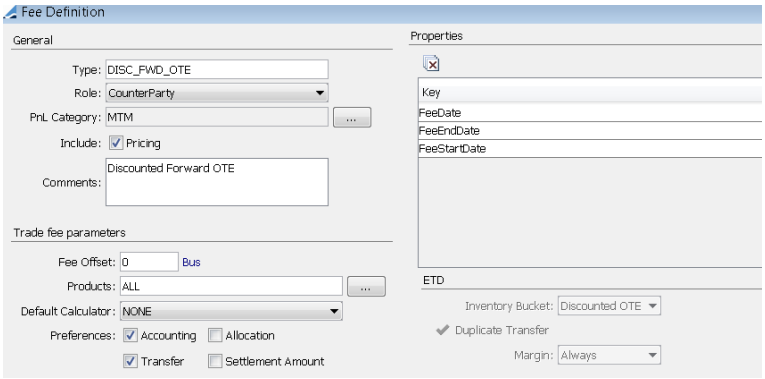
DISC_FWD_NPV_REV

Calculated by the scheduled tasks CLEARING_VM_CALC.



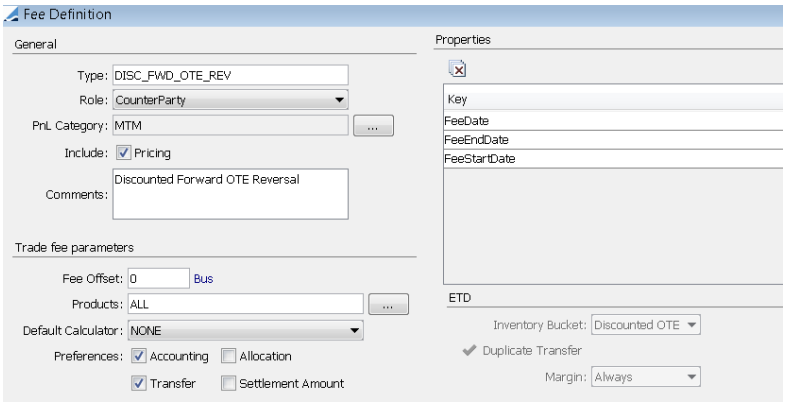
DISC_FWD_OTE

Calculated by the scheduled tasks CLEARING_VM_CALC.



DISC_FWD_OTE_REV

Calculated by the scheduled tasks CLEARING_VM_CALC.



3.7 Inventory Position

3.7.1 Inventory Buckets

We compute balances by buckets for client and internal accounts in order to prepare the financial summary part of our statements and reconcile specific types of cash.

The following buckets are supported:

Balance/Movements	Xfer Type
SOV	SOV + SOV_REV
LOV	LOV + LOV_REV
OTE Futures	OTEFUT+OTEFUT_REV
OTE Options	OTEOPT+OTEOPT_REV
Discounted OTE	DISC_FWD_OTE+DISC_FWD_OTE_REV
Variation Margin Futures	NPVFUT+NPVFUT_REV
Variation Margin Options	NPVOPT+NPVOPT_REV
Discounted VM	DISC_FWD_NPV+DISC_FWD_NPV_REV
Commissions	All transfer types fees defined as Inventory Bucket = Commissions
Fees	All transfer types fees defined as Inventory Bucket = Fees
Option Premium	PREMIUM
Option Cash Settlement	EXERCISE_FEE, OPT_CASH_ADJ
Futures PL	REALIZED_PL
Cash Settlement	All other xfer types including COLLATERAL
InMemory Buckets / computed from existing buckets	
Variation Margin	Variation Margin Futures + Variation Margin Options
NOV	SOV + LOV
OTE	OTE Futures + OTE Options

Balance NFA

Movements NFA

3.7.2 Available Inventory Position

To build statements (financial summary) and ensure consistency with our posting dates and margin call movements, we have added an Available (Frozen) Inventory position. This is the position to use at Client Account Statement level.

Available (Frozen) Inventory Position is used for statement and computed as:

- When transfer booking date <= available date, transfer is taken into the balance based on its available date
- When transfer booking date > available date, transfer is taken into the balance based on its booking date (back-value)

Available Date position is based on the Available set as described below.

Bucket Type	Transfer Type	Transfer Settle Date	Transfer Available Date	Transfer Booking Date
SOV	SOV, SOV_REV	CT Settle Date	CT Trade Date	PO Attribute Value
LOV	LOV, LOV_REV	CT Settle Date	CT Trade Date	PO Attribute Value
OTE Futures	OTE FUT, OTEFUT_REV	CT Settle Date	CT Trade Date	PO Attribute Value
OTE Options	OTEOPT, OTEOPT_REV	CT Settle Date	CT Trade Date	PO Attribute Value
Variation Margin Futures	NPVFUT, NPVFUT_REV	CT Settle Date	CT Trade Date	PO Attribute Value
Variation Margin Options	NPVOPT, NPVOPT_REV	CT Settle Date	CT Trade Date	PO Attribute Value
Discounted VM	DISC_FWD_NPV, DISC_FWD_NPV_REV	CT Settle Date	CT Trade Date	PO Attribute Value
Discounted OTE	DISC_FWD_OTE, DISC_FWD_OTE_REV	CT Settle Date	CT Trade Date	PO Attribute Value
Commissions	Fees defined in Commissions Bucket	Transaction Settle Date	Transaction Trade Date	PO Attribute Value
Fees	Fees defined in Fees Bucket	Transaction Settle Date	Transaction Trade Date	PO Attribute Value
Option Premium	PREMIUM	Transaction Settle Date	Transaction Trade Date for premium based options (Conventional); Liquidation Date for future style option (VariationMargin)	PO Attribute Value
Option Cash Settlement	EXERCISE_FEE, OPT_CASH_ADJ	CloseOut Settle Date	Transaction Trade Date	PO Attribute Value
Futures PL	REALIZED_PL	Liquidation Effective Date (= greater of settle date of liquidated trades, settle date being computed by the system. This used Comparator = TradeDate)	Liquidation Date	PO Attribute Value
Cash Settlement	All other Transfer Types	Transaction Settle Date	Transaction Settle Date	PO Attribute Value

Settle Date of transaction is computed by the system adding a default of 1 Business Day lag (using contract exchange calendar).

If a different lag must be used by currency, we refer to the currency attribute ClearingTransferSettleLag.

This attribute can also be defined per Counterparty (CCP or broker) by using the LE Short Name + ClearingTransferLag attribute.

For example, if you have to apply a 2D lag for PLN, except when you clear PLN with BROKER1 (BROKER1 being the shortname of your LE), you will define ClearingTransferSettleLag = 0 for PLN and another PLN attribute BROKER1ClearingTransferSettleLag that would be set to 0.

Available date is set based on the type of flow and how we want to build the inventory buckets for statement.

3.8 Collateral Setup

The workflow below supports collateral processing for ETD Clearing.

Client and Counterparty side use the bilateral model approach.

Id	Orig Status	Action	Resulting Status	Different User	Use STP	Priority	Log	Subtype	Product Type	Rules	Processing
332508	CALCULATED	CALCULATE	CALCULATED	☐	☐	0	☐	ALL	ALL		ALL
332129	CALCULATED	PROCESS	PROCESSED	☐	☑	0	☐	ALL	ALL		ALL
335425	CALCULATED	REFRESH	NONE	☐	☐	0	☐	ALL	ALL		ALL
335423	EXECUTED	CALCULATE	CALCULATED	☐	☐	0	☐	ALL	ALL		ALL
335424	EXECUTED	PROCESS	PROCESSED	☐	☐	0	☐	ALL	ALL		ALL
335426	EXECUTED	REFRESH	NONE	☐	☐	0	☐	ALL	ALL		ALL
332128	NONE	CALCULATE	CALCULATED	☐	☐	0	☐	ALL	ALL		ALL
332507	NONE	PROCESS	PROCESSED	☐	☐	0	☐	ALL	ALL		ALL
332510	PROCESSED	CALCULATE	CALCULATED	☐	☐	0	☐	ALL	ALL		ALL
332130	PROCESSED	EXECUTE	EXECUTED	☐	☑	0	☐	ALL	ALL	Execute	ALL
332509	PROCESSED	PROCESS	PROCESSED	☐	☐	0	☐	ALL	ALL		ALL
335427	PROCESSED	REFRESH	NONE	☐	☐	0	☐	ALL	ALL		ALL
335428	NONE	PRICE	PRICED_RECEIVE	☐	☐	0	☐	ALL	ALL	CheckReceive	ALL
335429	PRICED_RECEIVE	ALLOCATE	ALLOCATED	☐	☑	0	☐	ALL	ALL	AutoAdjust	ALL
335430	ALLOCATED	EXECUTE	EXECUTED	☐	☐	0	☐	ALL	ALL	Execute	ALL
335431	NONE	PRICE	PRICED_PAY	☐	☐	0	☐	ALL	ALL	CheckPay	ALL
335433	NONE	PRICE	PRICED_NO_CALL	☐	☐	0	☐	ALL	ALL	CheckNoCall	ALL
335434	PRICED_NO_CALL	ALLOCATE	ALLOCATED	☐	☑	0	☐	ALL	ALL	AutoAdjust	ALL
335435	PRICED_PAY	ALLOCATE	ALLOCATED	☐	☑	0	☐	ALL	ALL	AutoAdjust	ALL

3.9 Engines Configuration

Engines are configured using the Engine Manager in Web Admin.

3.9.1 Liquidation Engine

Use the filter LiquidationEngineEventFilter.

3.9.2 Transfer Engine

The Transfer engine must subscribe to PSEventAggLiquidatedPosition events.

It should also use the VerifiedEventFilter

The following engine parameters must be set:

LIQUIDATION_CONFIG = ETD Liq Config
XFER_NEXT_EVENT = true
XFER_PAST_GENERATION = true
XFER_POS_AGGREGATION_NAME = ETD Liq Keys
XFER_USE_POS_AGGREGATION_ONLY = true
XFER_USE_REVERSE = true

3.9.3 Margin Call Position Engine

Use the filter MarginCallEventFilter.

3.9.4 Accounting/CRE Engine

The Accounting engine must subscribe to PSEventAggLiquidatedPosition events.

The following engine parameters must be set:

ACCENGINE_PRDFAM_SELL_POSITION = 'no'

Legal Entities Configuration

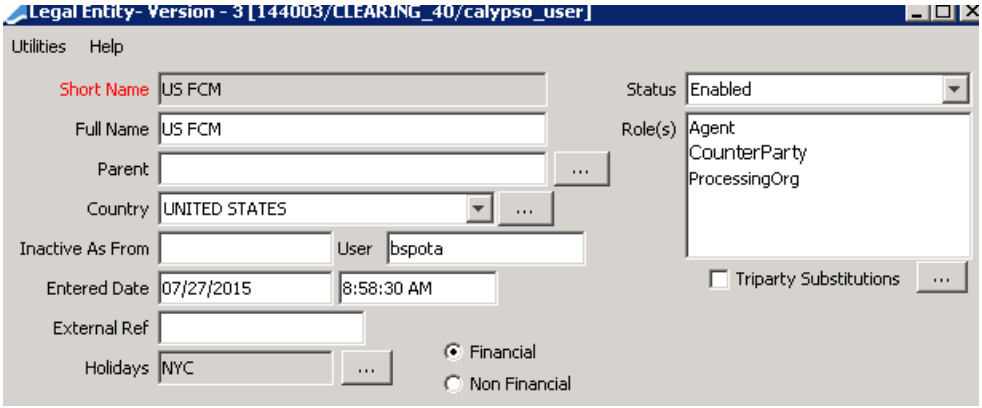
4.1 Processing Organizations

Summary

The primary information required for clearing processing on the Legal Entities is captured through the LE Attributes.

The Processing Organization represents the Clearing Broker operating the system.

The roles **Agent**, **CounterParty** and **ProcessingOrg** are mandatory.



It is mandatory to define at least one contact for settlement instructions.

Processing Org Attributes

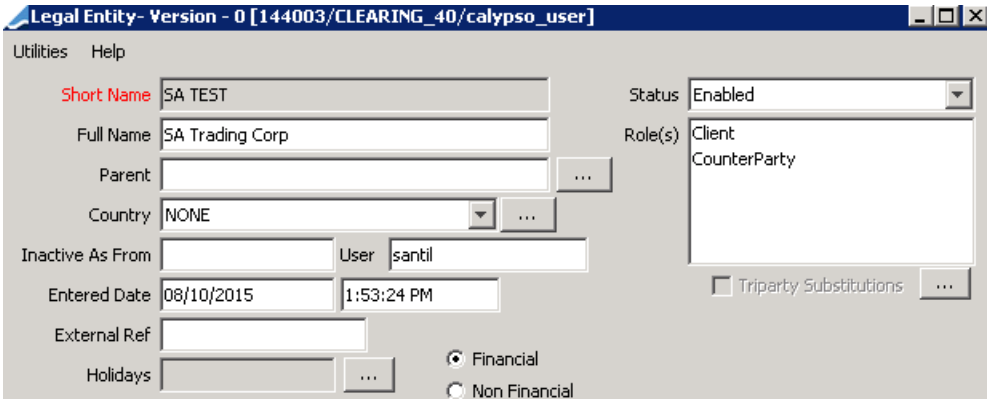
Attribute Name	Purpose/Impact
Booking Date	The current processing date, set in format of mm-dd-yyyy. This date can be set manually and can also be rolled forward using the ROLL_BOOKINGDATE scheduled task.
ClearingType	Set to FCM to allow onboarding clients using the ETD Client Onboarding Tool.
Client Clearing Book	Sets the Book on Trades based on the CCPOriginCode of the related Client Account.
Client Execution Book	Sets the Book on Cleared Trades based on the ServiceLevel keyword of the transaction for Client activity.
ClientErrorAccount	References the Account into which any trade which is entered or imported with an invalid account will be created.
House Clearing Book	Sets the Book on Trades based on the CCPOriginCode of the related Client Account.

Attribute Name	Purpose/Impact
House Execution Book	Sets the Book on Cleared Trades based on the ServiceLevel keyword of the transaction for House activity

4.2 Client

The Client represents either the external (client) or proprietary (house) entity clearing through the PO.

The roles **Client** and **CounterParty** are mandatory.



It is mandatory to define at least one contact for settlement instructions.

There are no mandatory client attributes, since most client specific information is captured by the account definition.

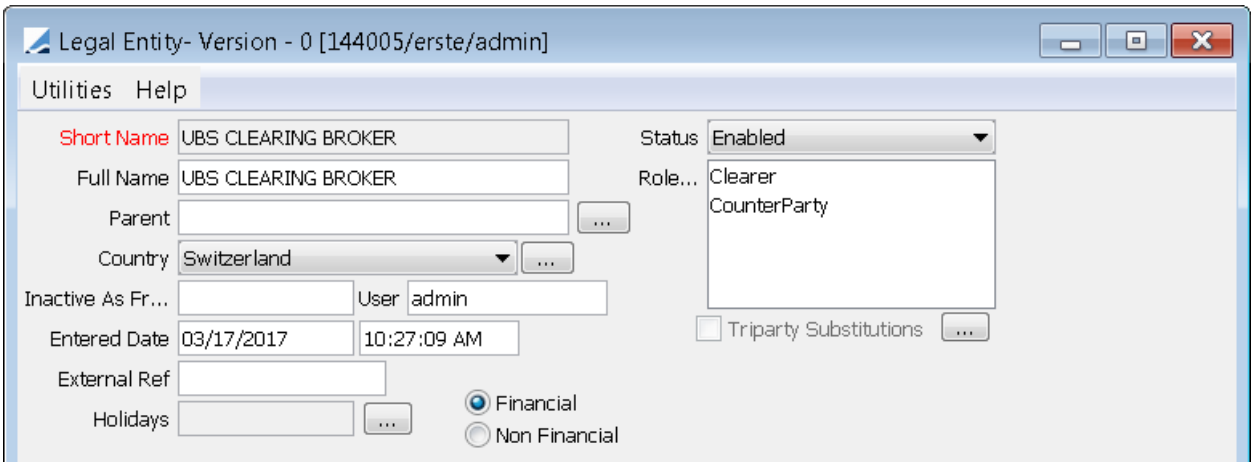
You can also onboard clients using the ETD Client Onboarding tool.

▶ See ETD Client Onboarding Tool for details.

4.3 Counterparty

The Counterparty represents the clearing house or Third-Party Broker through which the PO clears and/or executes its client trades.

The roles **CounterParty** and **Clearer** are mandatory.



It is mandatory to define at least one contact for settlement instructions.

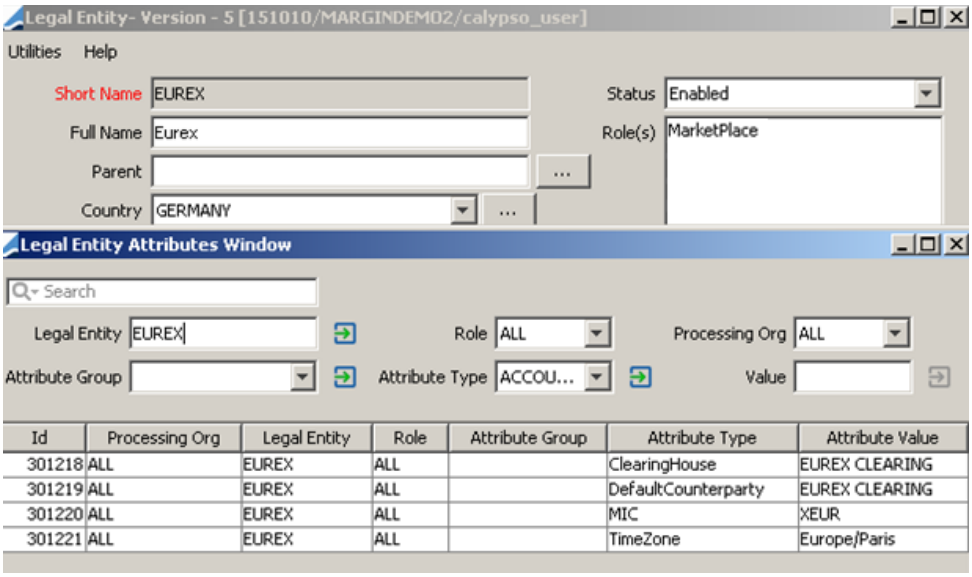
Counterparty Attributes

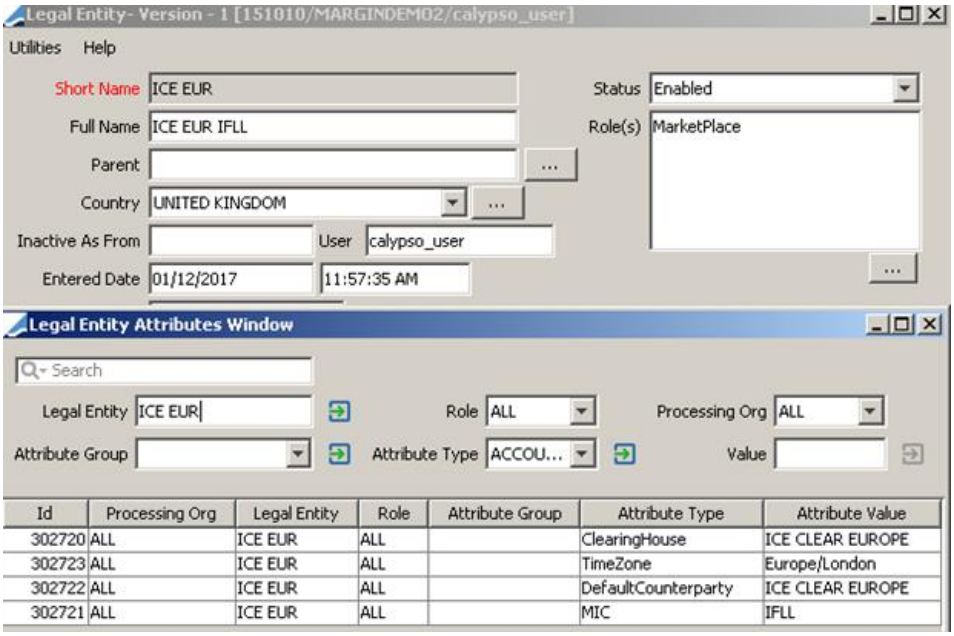
Attribute Name	Purpose/Impact
DefaultHouseAccount	Sets the Counterparty Account to be used for a trade cleared by a House account, when the Counterparty Account is not provided on the trade capture. The value must match a valid Counterparty Account with the LE as the Account owner.
DefaultClientAccount	Sets the Counterparty Account to be used for a trade cleared by a Client account, when the Counterparty Account is not provided on the trade capture. The value must match a valid Counterparty Account with the LE as the Account owner.
DefaultExecutionAccount	Sets the Counterparty Account to be used for an execution only trade executed by the PO. The value must match a valid Counterparty Account with the LE as the Account owner.

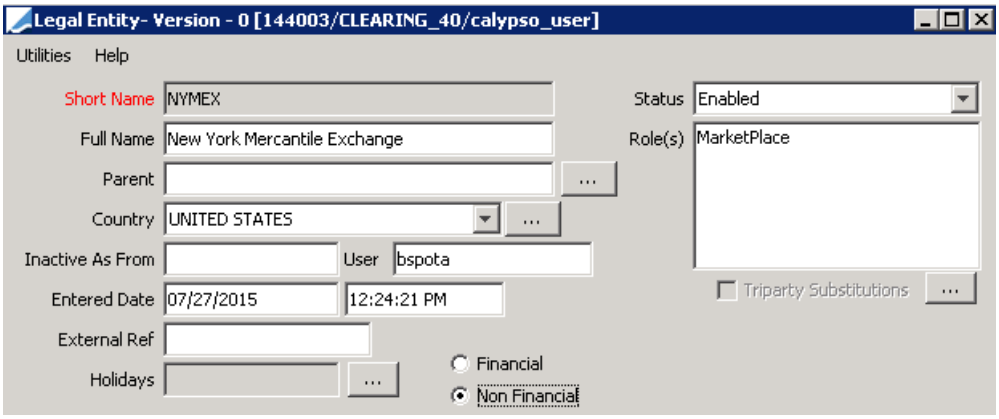
4.4 Exchange

The Exchange represents the entity that facilitates the trading of the products cleared by the PO.

The role **MarketPlace** is mandatory.







Exchange Attributes

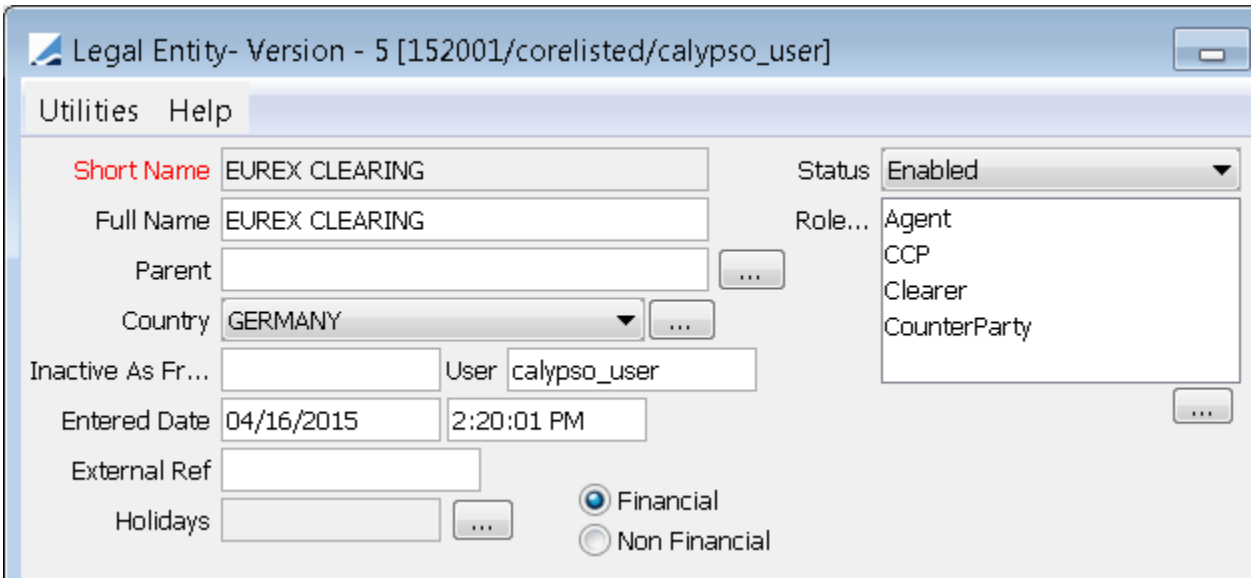
Attribute Name	Purpose/Impact
ClearingHouse	Indicates the Clearinghouse on which this exchange's products are cleared. The value should be the LE Short Name of a valid Counterparty.
MarginMethod	Sets the Initial Margin Calculation method for the exchange. This is set on the exchange rather than the Clearinghouse because some clearinghouses use different methodologies for different exchanges when they clear multiple exchanges. This attribute can be left blank, in which case it will default to the primary supported exchange methodology. The use can instruct the IM calculation to be done using simple strategy margining by entering a value of "Strategy" here ▶ See Initial Margin Calculation for details.
DefaultCounterparty	Indicates the Counterparty through which products on this exchange will be cleared for the indicated Processing Org. This allows the Counterparty of the cleared trade to be set if it's not provided in the trade capture process. This attribute allows the PO to indicate whether the products on this exchange are cleared directly on the Clearinghouse, or through a 3rd Party Broker.
MIC	The official Market Identification Code for this LE. This allows us to uniquely identify this exchange despite the users' choice of long or short name and is used to uniquely identify the exchange for our FOW interface and for SPAN calculations.
TimeZone	The Time Zone in which the exchange operates. Used for Last Trading Time.

Note that the attributes can be defined as associated to ALL Processing Orgs or to a specific PO. This is important, since in a multi-PO environment we expect all POs to use the same Exchange and Counterparty Legal Entities, but we also understand that some POs will clear a particular market on the clearinghouse, while others may set the DefaultCounteparty to a 3rd part broker. We should be able to define these attributes per PO and have the processing logic look for the specific PO name first, then look for the attribute associated to ALL POs.

4.5 Clearing House

The Clearing House represents the entity that compensates contracts of the exchange. Several exchanges can be linked to the same Clearing House. It is mandatory to define Clearing House and assign the Clearing House to each Exchange through attributes as stated above.

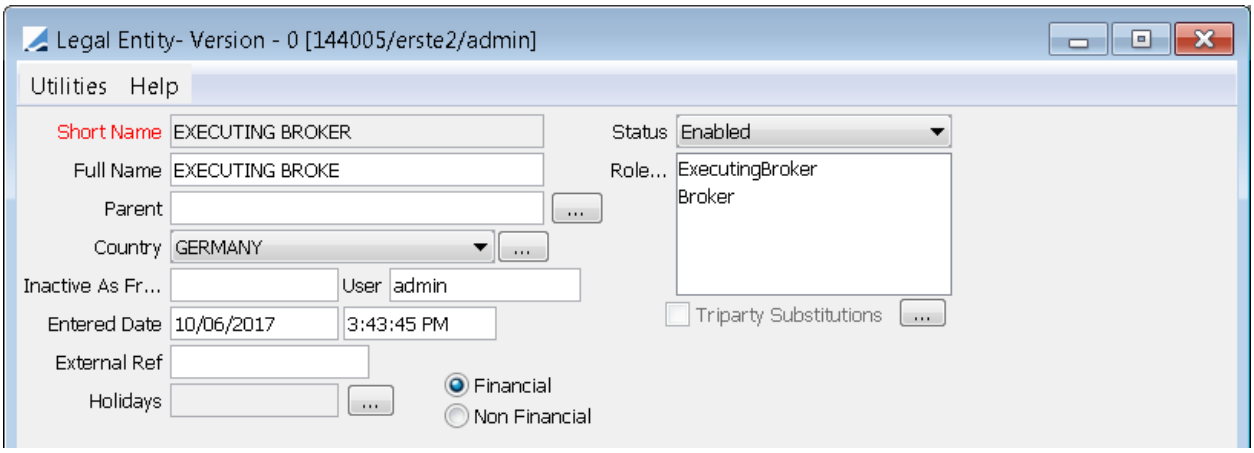
The role **CCP** is mandatory. When the PO is a clearing member, the Clearing House must also be defined with Role **Clearer** and **CounterParty**.



4.6 Executing Broker

The Executing Broker represents an entity that may execute transactions for the PO's clients, with the intent of giving the up to the PO to clear. The PO may also execute trades.

The roles **ExecutingBroker** and **Broker** are mandatory. The Role Broker is used to select the LE in the Pricing Sheet, the role ExecutingBroker is used to define the fee grid and fee configuration when we want to generate fees on this Legal Entity. SDI for fee settlement is only needed for the Role ExecutingBroker used for the fee generation.



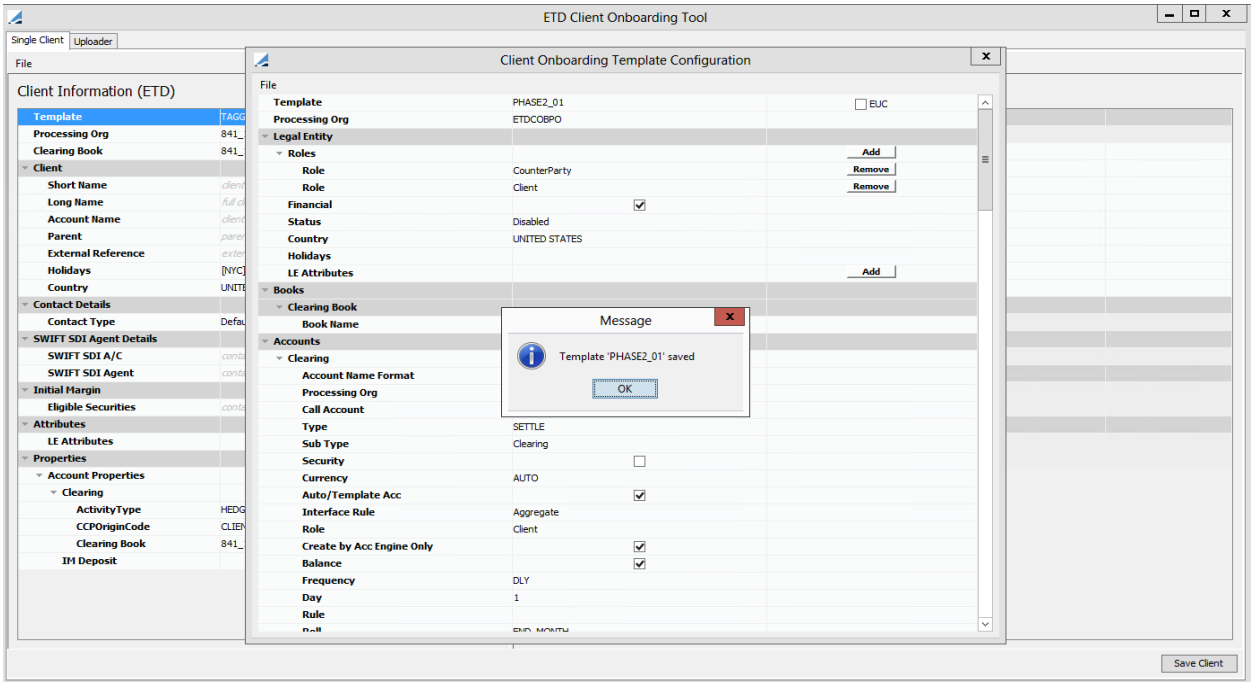
ETD Client / Counterparty Onboarding Tool

It allows defining a client / counterparty based on a client / counterparty template, previewing the data that will be created, and saving the required data:

- Legal entities
- Contacts
- Legal entity attributes
- Settlement instructions
- Clearing account and IM deposit account
- Margin call contracts for IM and VM

[NOTE: You can only onboard clients for Processing Orgs with attribute ClearingType = FCM]

Open the ETD Client Onboarding Tool using menu action `onboarding.ETDOnboardingWindow`.

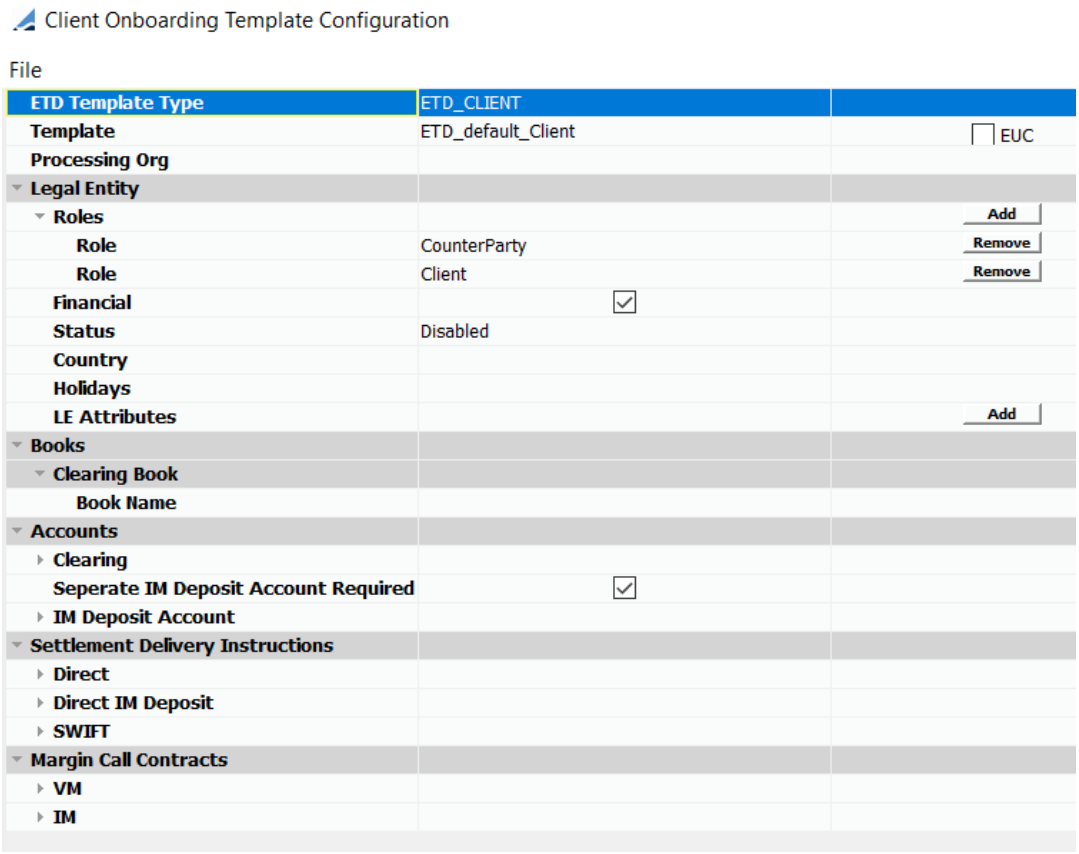


5.1 Templates

Templates are provided out-of-the-box: “ETD_CLIENT” for Client onboarding and “ETD_COUNTERPARTY” for counterparty onboarding. They contain the basic required data. They are described below.

You can choose **File > Configure** to save the out-of-the-box template as a new template, in order to modify it.

Choose **File > Save** or **File > Save As New** to save your changes if any.



Select the processing org and modify the following fields as needed.

Legal Entity

Field Name	Sub field	Derived From
Processing Org		Select the Processing org for the template
Roles	Role	By **default**, will always be ‘Client' (Mandatory) – Only for ETD_CLIENT
	Role	By **default**, will always be ‘Counterparty' (Mandatory)
	Role	By **default**, will always be ‘Clearer’ (Mandatory) – Only for ETD_COUNTERPARTY

Field Name	Sub field	Derived From
	Role	User can add more roles as per requirements
Financial		By default, its ticked and untick to this if not a financial entity
Status		Status must be set to Active to be able to select the account for clearing activity.
Country		Select the country for entity
Holidays		Select the holidays which needs to apply throughout the process
LE Attributes		Select the LE attributes

Books

Field Name	Sub field	Derived From
Clearing book	Book name	Select the clearing book for transactions

Accounts – Clearing Account

Field Name	Sub field	Derived From
	Account name format	This field will get auto populated after saving the template
	Processing Org	Auto populate once you select the PO in earlier field
	Call Account	Need to tick if this is call account, and it's used for client custody management
	Type	Need to select for which purpose this account is getting used (In ETD, SETTLE type is getting used mainly)
	Sub type	Need to select sub type of the account (In ETD, Clearing sub type is getting used mainly) or Only applies to SETTLE accounts.
	Security	Check the Security checkbox to indicate that the account is a security account.
	Currency	Select the currency of the postings to this account
	Auto/Template Acc	Check the "Auto/Template Acc" to create account numbers based on user-defined attributes for this account.

Field Name	Sub field	Derived From
	Interface rule	Select the rule for exporting postings on this account to the general ledger
	Role	By default, will always be 'Client'
	Create by Acc Engine Only	This checkbox only appears for automatic accounts. If checked, the automatic account number will only be generated by the Accounting engine. If not checked, the automatic account number can be generated by both the Accounting engine and the Transfer engine.
	Balance	Check the Balance checkbox to specify that the account can generate balances.
	Frequency	Select a frequency from the Freq field to generate the balance according to that.
	Day	If using date rule, then can select the day of the week or month in this day field.
	Rule	Select the date rule as per requirements
	Roll	Select the date roll convention to roll the dates in case of holidays
	Billing	Check the Billing checkbox to allow the calculation of management fees. It can only calculate on SETTLE accounts.
	Interest Bearing	Check the "Interest Bearing" checkbox to allow the calculation of interests. It can only calculate on SETTLE accounts.
	ISIMVMByRegCode	
Account Properties	Activity type	Select either hedge or speculator. This field can impact the way initial margin is calculated for the account.
	CCPOriginCode	For a client account select "Client", and for house/proprietary accounts select "House".
	Clearing Book	Select the clearing book for transactions as above
Account Attributes	1.OriginalAccountName	Select the account attributes as per requirements
	2.Constant	Select the account attributes as per requirements
	3.XferCcy	Select the account attributes as per requirements
Clearing Base Ccy		Represents the base currency for the account, used to convert balances in the client statement to a single currency.

Field Name	Sub field	Derived From
Is Collateral	Clearing margin mode	Select between "OTE" (open trade equity) and "Realized VM" modes to drive how unrealized PL is treated in the account, statement and margin call calculation.
	Clearing Risk multiplier	User entered value which can be used to mark up the Margin Requirement calculation. Default value is 1.0 which implies no markup (multiply calculated margin by 1). Value can be greater than or less than 1.
	Clearing risk Netting	Indicates how to calculate risk on the positions in this account: • 'Net' will calculate risk on all positions in the account considering any risk offsetting available in the methodology. • 'Gross' will calculate risk on each position in the account individually.
Clearing parent account		Select if any parent account is their
Clearing statement frequency		Identifies this statement config as eligible to be run daily. Does not control the format or content of the output, just the timing.
Clearing statement position type		The field controls how the account balances are displayed in the statement, based on the status of the inventory transfers. Actual is the standard value but is configurable based on the user's business logic.
Clearing statement position date		The field controls how the account balances are displayed in the statement, based on the status of the inventory transfers.
Clearing Advise Config		Allow to select multiple message configuration such as PDF, XML, HTML in template configuration
Clearing statement active from		Allows the statement configuration to be active for a set period. When the user triggers the statement run for a processing date outside of this range, no statement will be generated.
Clearing statement active to		
Clearing advice config		Select the message configuration which is applicable to the account statement generation.

Accounts – IM Deposit Account

Field Name	Sub field	Derived From
Separate IM deposit account required		Tick if Separate IM deposit account required. By default, this field is unticked.

Field Name	Sub field	Derived From
	Account name format	Auto populated field after saving the template
	Processing Org	Auto populate once you select the PO in earlier field
	Call Account	Need to tick if this is call account, and it's used for client custody management
	Type	Need to select for which purpose this account is getting used (In ETD, SETTLE type is getting used mainly)
	Sub type	Need to select sub type of the account (In ETD, clearing sub type is getting used mainly) or Only applies to SETTLE accounts.
	Security	This field only appears for SETTLE accounts. Check the Security checkbox to indicate that the account is a security account.
	Currency	Select the currency of the postings to this account
	Auto/Template Acc	Check the "Auto/Template Acc" to create account numbers based on user-defined attributes for this account.
	Interface rule	Select the rule for exporting postings on this account to the general ledger
	Role	By default, will always be 'Client'
	Create by Acc Engine only	This checkbox only appears for automatic accounts. If checked, the automatic account number will only be generated by the Accounting engine. If not checked, the automatic account number can be generated by both the Accounting engine and the Transfer engine.
	Balance	Check the Balance checkbox to specify that the account can generate balances.
	Frequency	Select a frequency from the Freq field to generate the balance according to that.
	Day	If using date rule, then can select the day of the week or month in this day field.
	Rule	Select the date rule as per requirements
	Roll	Select the date roll convention to roll the dates in case of holidays
	Billing	Check the Billing checkbox to allow the calculation of management fees. It can only calculate on SETTLE accounts.

Field Name	Sub field	Derived From
Interest Bearing	Interest config	You can select No, Yes, or Both for Penalty. The penalty configuration is applied when the account balance is below a certain amount. Limits are defined in the Limits panel.
	Interests valid from	Enter the validity dates of the configuration.
	Interests valid to	
	Interests type	Select the type of configuration: Interest or Margin
	Interests penalty	If the interest rule is defined as both interest and penalty, an interest will be computed when the balance on the account is above its overdraft limit or minimum balance requirement, and a penalty will be computed otherwise. Limits are defined in the Limits panel. If the interest rule is defined as interest only (Penalty = No), an interest will be computed when the balance on the account is above its overdraft limit or minimum balance requirement. In this case, you can also associate a penalty configuration if you have defined one. Check the Penalty checkbox and add a penalty configuration to the account.
Account Properties	Activity type	Select either hedge or speculator. This field can impact the way initial margin is calculated for the account.
	CCPOriginCode	For a client account select “Client”, and for house/proprietary accounts select “House”.
Account Attributes	1.OriginalAccountName	Select the account attributes as per requirements
	2.Constant	Select the account attributes as per requirements
	3.XferCcy	Select the account attributes as per requirements

Settlement and Delivery Instructions

Field Name	Sub field	Derived From
Direct SDI	Role	Select the role for SDI
	Currency	Select the settlement currencies to which the SDI applies, or ANY.
	Pay/Receive	Select the direction of the transfer to which the SDI applies: PAY, RECEIVE, or BOTH.

Field Name	Sub field	Derived From
	Cash/Security	Select the type of transfer to which the SDI applies: CASH, SECURITY or BOTH.
	Contact	Select the contact of the beneficiary for retrieving address information.
	Processing Org	Select the processing org to which the SDI applies, or ALL.
	Products	Select product types to which the SDI applies, or ALL.
	SD filter	Select a static data filter to restrict the validity of the SDI based on trade, product and legal entity attributes as applicable.
	Preferred	Check the Preferred checkbox to allow the SDI to be automatically associated with a trade upon trade capture.
	Priority	You can enter a priority in the Priority field (0 being the highest priority).
	Method	Select the settlement method. The settlement method is used to match SDI instructions between each party of a trade. Both parties need SDIs that use the same settlement method. By default, method will be clearing.
	Trade Counterparty	Select the trade counterparty to which the SDI applies.
	Is direct	Check the Direct checkbox to indicate that the beneficiary has a direct account with the processing org. No agent or intermediary is used. This usually indicates that the beneficiary is a client of the processing org. This only applies if the beneficiary is not a processing org, and the processing org is specified in the Processing Org field. The Direct panel will be enabled to specify the account.
	DDA	Auto populated field after saving the template
Direct IM Deposit	Role	Select the role for SDI
	Currency	Select the settlement currencies to which the SDI applies, or ANY.
	Pay/Receive	Select the direction of the transfer to which the SDI applies: PAY, RECEIVE, or BOTH.
	Cash/Security	Select the type of transfer to which the SDI applies: CASH, SECURITY or BOTH.
	Contact	Select the contact of the beneficiary for retrieving address information.
	Processing Org	Select the processing org to which the SDI applies, or ALL.
	Products	Select product types to which the SDI applies, or ALL. Here by default product will be margin call only.

Field Name	Sub field	Derived From
	SD filter	Select a static data filter to restrict the validity of the SDI based on trade, product and legal entity attributes as applicable.
	Preferred	Check the Preferred checkbox to allow the SDI to be automatically associated with a trade upon trade capture.
	Priority	You can enter a priority in the Priority field (0 being the highest priority).
	Method	Select the settlement method. The settlement method is used to match SDI instructions between each party of a trade. Both parties need SDIs that use the same settlement method. By default, method will be clearing.
	Trade Counterparty	Select the trade counterparty to which the SDI applies.
	Is direct	Check the Direct checkbox to indicate that the beneficiary has a direct account with the processing org. No agent or intermediary is used. This usually indicates that the beneficiary is a client of the processing org. This only applies if the beneficiary is not a processing org, and the processing org is specified in the Processing Org field. The Direct panel will be enabled to specify the account.
	DDA	Auto populated field after saving the template
SWIFT	Role	Select the role for SDI
	Currency	Select the settlement currencies to which the SDI applies, or ANY.
	Pay/Receive	Select the direction of the transfer to which the SDI applies: PAY, RECEIVE, or BOTH.
	Cash/Security	Select the type of transfer to which the SDI applies: CASH, SECURITY or BOTH.
	Contact	Select the contact of the beneficiary for retrieving address information.
	Processing Org	Select the processing org to which the SDI applies, or ALL.
	Products	Select product types to which the SDI applies, or ALL. Here by default product will be margin call only.
	SD filter	Select a static data filter to restrict the validity of the SDI based on trade, product and legal entity attributes as applicable.
	Preferred	Check the Preferred checkbox to allow the SDI to be automatically associated with a trade upon trade capture.
	Priority	You can enter a priority in the Priority field (0 being the highest priority).

Field Name	Sub field	Derived From
	Method	Select the settlement method. The settlement method is used to match SDI instructions between each party of a trade. Both parties need SDIs that use the same settlement method. By default, method will be SWIFT.
	Trade Counterparty	Select the trade counterparty to which the SDI applies.
	Is direct	Check the Direct checkbox to indicate that the beneficiary has a direct account with the processing org. No agent or intermediary is used. This usually indicates that the beneficiary is a client of the processing org. This only applies if the beneficiary is not a processing org, and the processing org is specified in the Processing Org field. The Direct panel will be enabled to specify the account.
	DDA	Auto populated field after saving the template
	Intermediary	Tick to select the intermediary
	Agent Contact	Select the contact of the agent for retrieving address information.
	Agent Identifier	Enter the member identifier for the place of settlement.
	Sub-Account	Displays the sub account specified in the SDI relationship if any.
	Msg to Agent	Check the Msg checkbox to indicate that a payment message should be sent to the agent or uncheck otherwise.

Margin Call Contracts – VM

VM margining is categorized broadly as:

- **Single Currency Margining:** In this model FCM settles all underlying cleared currency's cashflow i.e. VM+Commission+Fees etc in base currency depending upon preference of the client. For e.g. if client is clearing GBP, EUR, USD, JPY, AUD, CAD and CHF then it will only be settled say in USD or EUR or GBP depending upon preference of client.

  So, for this case COB tool will create one VM MCC which will have all these currencies defined in currencies multi select dropdown in details tab (under perimeter node) and eligible currency panel with base currency marked (checked) as adjusted currency

- **Native Currency Margining:** In this model FCM settles all underlying cleared currency's cashflow i.e. VM+Commission+Fees etc in respective currencies. For e.g. if client is clearing GBP, EUR, USD, JPY, AUD, CAD and CHF then it will be settled in respective currency.

  So, for this case COB tool will create seven VM MCC which will have individual currency defined in currencies multi select dropdown in details tab (under perimeter node) and eligible currency tab, have each currency marked as adjusted (checked) in respective VM MCC

Field Name	Sub field	Derived From
VM	Margining Scenario	Select the currency type for generation of margin call i.e., Native or single. Native means margin calls will be generating in different currencies and in single, margin calls will be generating in single currency
	Contact name format	Auto populated field after saving the template
	Legal entity role	Select the LE role 'Counterparty or client'
Details	Currencies	Select the applicable currencies
	Start date	Select the start date for the operations and processes related to VM margin call
	EOD pricing environment	Select the pricing environment
	ITD pricing enviornment	Select the pricing environment
	Position type	Select the position type which is getting in consideration for generating margin call.
	position date	By default, it will be 'POSITION_DATE_VALUE'
	Val date frequency	This rule should select, COL_MIGR_DAILY_BUS – A date rule which sets the processing date to business dates on the configured calendar.
	Val time offset	This rule should select, COL_MIGR_VAL_REL - A date rule which is relative to the rule above and falls one business day prior. This sets the Collateral processing so that the process date is always T+1 based on end of day balances on T and generates a Margin Call which is settled on T+1.
	Holidays	Select the holidays which needs to apply throughout the process
Collateral Dates	Method	Refer to Calypso Collateral documentation for the details under “Setting Collateral Dates”
	Currency	Refer to Calypso Collateral documentation for the details under “Setting Collateral Dates”
	Cash	Refer to Calypso Collateral documentation for the details under “Setting Collateral Dates”
Eligible book	book	Select the book which is capturing the trades i.e., clearing book

Field Name	Sub field	Derived From
Contract currencies	Base currency	Define an Exposure Group per Currency cleared on this CCP/Clearer account and define the Base Currency as Exposure Group Currency. In the screenshot below, we define an Exposure Group for EUR and Define Base Currency = EUR. We need to do the same for each currency that the CCP/Clearer account is clearing in order to generate a margin call per cleared currency.
Eligible Currencies	Currency	Add the Exposure Group Currency as eligible currency and define it as Adjustment Currency. Do the same for each Exposure Group you define per currency.
	Adjustment Currency	Select the currency which will be using for adjustment in the contracts which are in different currency.
Additional Info	Margin type	By **default**, will always be 'VM'
	CCP origin code	By **default**, will always be 'Client'
	Product type	By **default**, will always be 'ETD'
Native currencies for exposure groups		Select the native currencies

Margin Call Contracts - IM

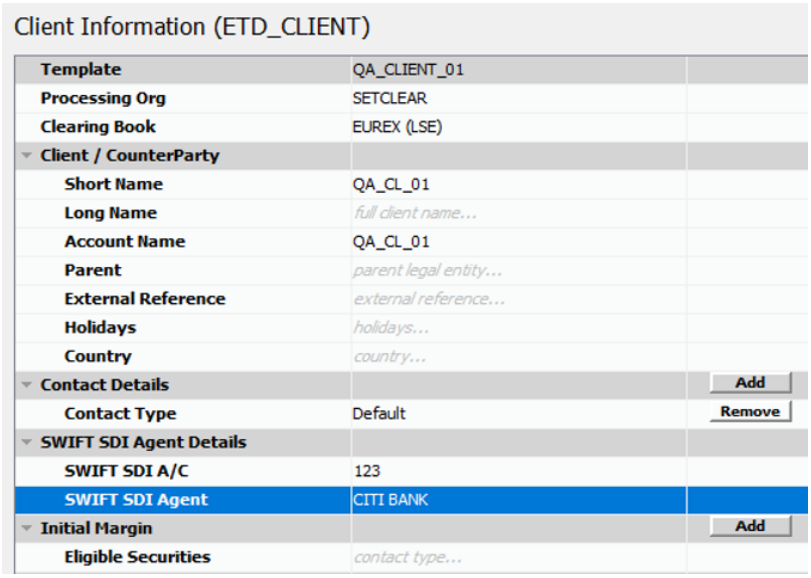
Field Name	Sub field	Derived From
IM	Margining Scenario	Select the currency type for generation of margin call i.e., Native or single. Native means margin calls will be generating in different currencies and in single, margin calls will be generating in single currency
	Contact name format	Auto populated field after saving the template
	Legal entity role	Select the LE role 'Counterparty or client'
	Collateral Type	Select the collateral type 'Security or cash' or both
Details	Start date	Select the start date for the operations and processes related to VM margin call
	EOD pricing environment	Select the EOD pricing environment

Field Name	Sub field	Derived From
	ITD pricing environment	Select the ITD pricing environment
	Position type	Select the position type which is getting in consideration for generating margin call.
	position date	By default, it will be 'POSITION_DATE_VALUE'
	Val date frequency	This rule should select, COL_MIGR_DAILY_BUS – A date rule which sets the processing date to business dates on the configured calendar.
	Val time offset	This rule should select, COL_MIGR_VAL_REL - A date rule which is relative to the rule above and falls one business day prior. This sets the Collateral processing so that the process date is always T+1 based on end of day balances on T and generates a Margin Call which is settled on T+1.
	Holidays	Select the holidays which needs to apply throughout the process
Collateral Dates	Method	Refer to Calypso Collateral documentation for the details under “Setting Collateral Dates”
	Currency	Refer to Calypso Collateral documentation for the details under “Setting Collateral Dates”
	Cash	Refer to Calypso Collateral documentation for the details under “Setting Collateral Dates”
	Any	Refer to Calypso Collateral documentation for the details under “Setting Collateral Dates”
Eligible book	book	Select the book which is capturing the trades i.e., clearing book
Contract currencies	Base currency	Define an Exposure Group per Currency cleared on this CCP/Clearer account and define the Base Currency as Exposure Group Currency. In the screenshot below, we define an Exposure Group for EUR and Define Base Currency = EUR. We need to do the same for each currency that the CCP/Clearer account is clearing in order to generate a margin call per cleared currency.
Securities	Haircut type	Select the type of haircut, which will use to calculate the value of non-cash collateral
Additional Info	Margin type	By **default**, will always be ‘IM'
	CCP origin code	By **default**, will always be ‘Client'
	Product type	By **default**, will always be ‘ETD'

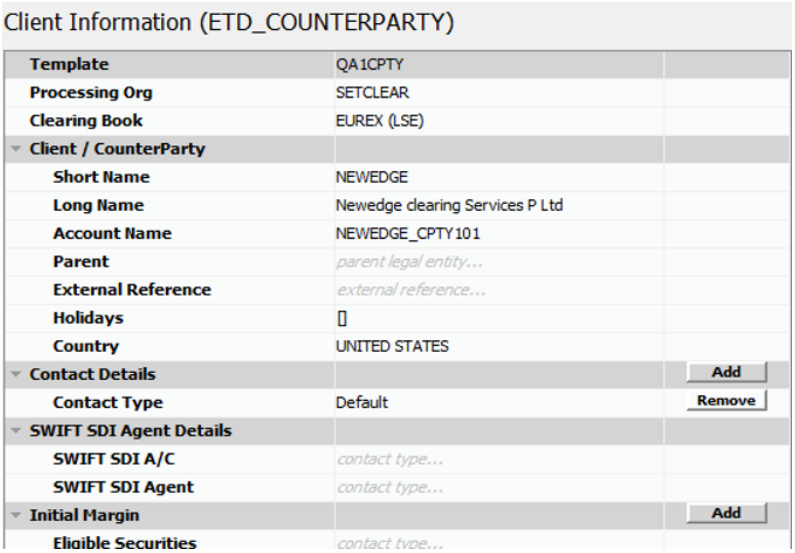
5.2 Single Client / Counterparty Onboarding

Select a Client template or a Counterparty template and fill in the client information as needed.

Sample Client template

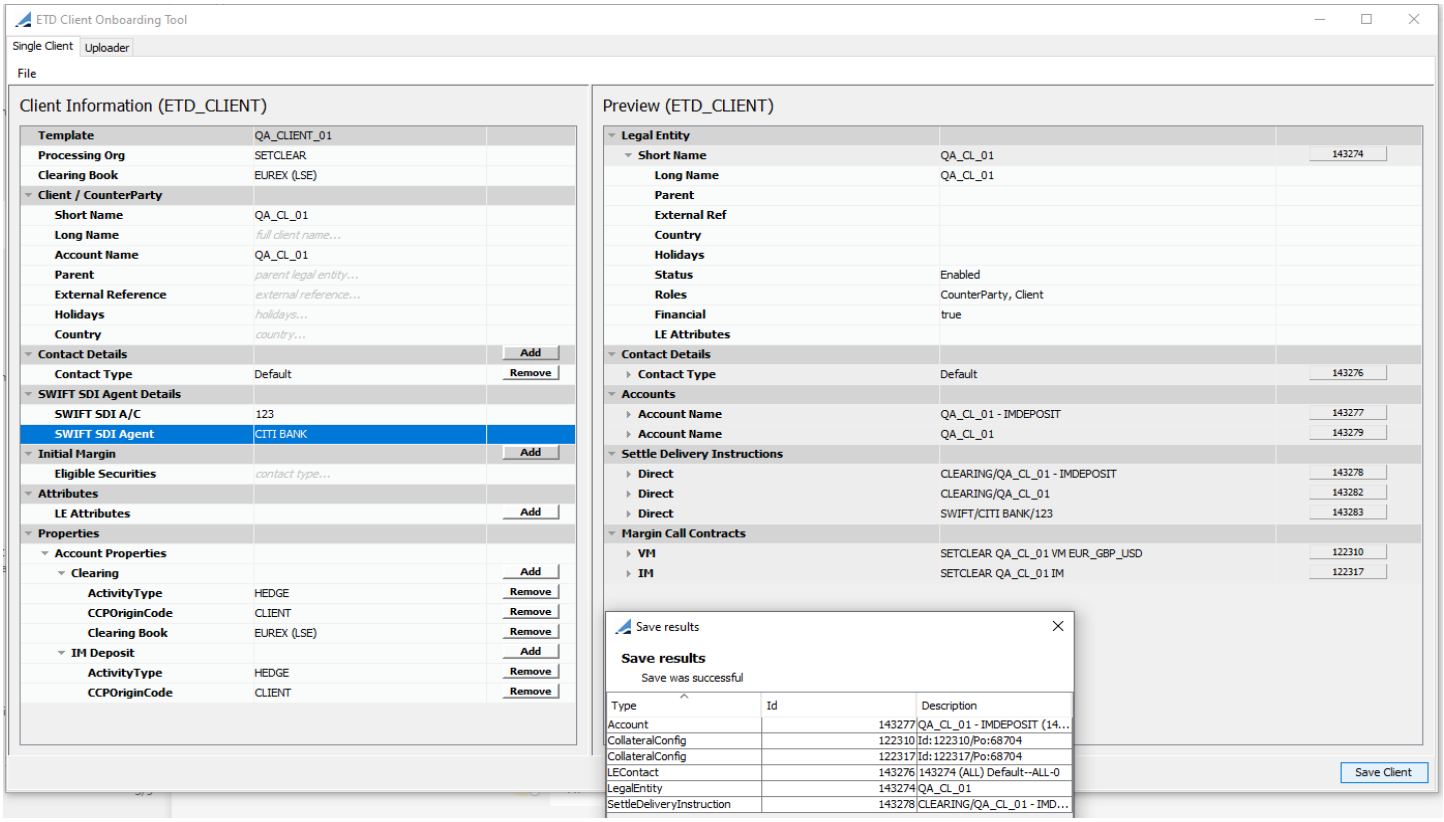


Sample Counterparty template



Fields

Area	Field Name	Sub field	Derived From
	Processing Org		This field will get auto populated after selecting the template in above step.
	Clearing Book		This field will get auto populated after selecting the template in above step. But you can select another clearing book and that will reflect throughout.
Client / Counterparty	Short Name		Give short name for client
	Long name		Give long name for client
	Account name		Give account name for client
	Parent		Select parent for given client, if any
	External reference		Select external reference, if any. It can be used for selection and reporting purposes.
	Holidays		This field will get auto populated after selecting the template in above step. But you can select another holidays and that will reflect throughout.
	Country		This field will get auto populated after selecting the template in above step. But you can select another Country and that will reflect throughout.
Contact Details	Contact Type		This field will get auto populated after selecting the template in above step. But you can select another Contact Type and that will reflect throughout
SWIFT SDI Agent Details	SWIFT SDI A/C		Select SDI A/C for SWIFT process
	SWIFT SDI Agent		Select SDI Agent for SWIFT process
Initial Margin	Eligible Securities		Select the eligible securities for getting exposure in initial margin.
Attributes	LE Attributes		Select the attributes for legal entity.
Properties	Account Properties	Clearing	Select account properties for clearing and IM deposit account
		IM Deposit	



Then click **Save Client** if you are satisfied with the results. A summary of the results will be displayed.

5.3 Uploading Multiple Clients / Counterparties

You can upload multiple clients using a CSV file from the Uploader tab.

CSV File Format

Fields	Values in csv (for reference)	Mandatory Fields (True / False)	Description
Template	STD CLIENT	TRUE	Select the pre-saved template to onboard the client
Account Type	Standard	FALSE	Defaults to Standard if not set. Set to Parent / Child for Parent / Child accounts, see below.
Processing Org	SETCLEAR	TRUE	User to specify legal entity short name of Processing Org
Clearing Book	EUREX	FALSE	User to provide name for Clearing Book which is link to above processing org
Short Name	STD CLI	TRUE	User to provide desired short name to create Client Legal Entity
Long Name	STD CLIENT003	FALSE	User to provide desired long name to create Client Legal Entity
Account Name	STD CLI	TRUE	User to provide desired account name to create Client account
Parent	ASX	FALSE	Select parent for given client, if any
External Reference	STANDARD CLIENT	FALSE	User to provide External reference for client
Holidays	[NYC]	TRUE	User to provide Holidays for client LE. But user may select multiple holidays, and, in that case, another holiday is segregated by

			"Semicolon(;)" only. For e.g. LON; NYC
Country	UNITED STATES	TRUE	User to provide Country for client LE
Contacts Type	Default; Payments	TRUE	User to provide Contacts Type for client and user can add multiple contact type by i " Semicolon(;)" separation. For e.g. Default; Payments
SWIFT SDI A/C	1124321	FALSE	User to provide SDI A/C for SWIFT process
SWIFT SDI Agent	AGENT	FALSE	User to provide SDI Agent for SWIFT process
Create Swift SDI			User can provide value as “Yes” or “No” “Yes” or Blank will allow to create SWIFT SDI when LE and account is onboarded. “No” value is to not to create SWIFT SDI. Note: This field is useful when an LE has many child accounts and does not wish to create multiple Swift SDIs.
Eligible securities	12345-AO; ACC NOT Zero-Coupon Bond	FALSE	user to select SD filter for eligible securities, user may select Multiple filters and, in that case, segregates each SD filter by "Semicolon(;)". For e.g. 12345-AO; ACC NOT Zero-Coupon Bond
Client.LEAttribute. ClearingReportingCurrency	USD	FALSE	Select the attributes for legal entity. For this field, user may select 1st attribute and after that its value. There can be multiple attributes. So, attributes are segregated by "dot (.)" For e.g. ClientLEAttribute.ClearingReportingCurrency

Client.LEAttribute. ClearingBook	EUREX		
Client.LEAttribute. CFTCID	CFTC_STD033		Note: If you have multiple values for specific to columns then separate the value by semi colon.
Clearing.accountproperty. CFTCAccountNumber	12345_A	FALSE	Select account properties for clearing account. For this field, user may select 1st attribute and after that its value. There can be multiple attributes. So, attributes are segregated by "dot (.)" For e.g. Clearing.accountproperty.CFTCAccountNumber
Clearing.accountproperty. CFTCSubAccount	12_CFTC		
Clearing.accountproperty. CFTCNetGrossReportingFlag	Gross		
IM.accountproperty. CFTCAccountNumber	98345_A	FALSE	Select account properties for IM deposit account. For this field, we have to select 1st attribute and after that its value. There can be multiple attributes. So, attributes are segregated by "dot (.)" For e.g. Clearing.IM.accountproperty.CFTCAccountNumber
IM.accountproperty. CFTCSubAccount	82_CFTC		
IM.accountproperty. CFTCNetGrossReportingFlag	Net		
MCC.IM.Configurations.Sweeping between exposure groups		Yes	Enabling Collateral Sweeping. To make an IM (Initial Margin) margin call contract eligible for the collateral sweeping process, enter "Yes" in the designated field.
		No	Disabling Collateral Sweeping. To ensure an IM (Initial Margin) margin call contract is not eligible for the collateral sweeping process, enter "No" in the designated field.
		Blank	Default Collateral Sweeping Behavior. If the designated field is left blank or if this column is not included in your configuration, the IM

			margin call contract will not be eligible for the collateral sweeping process by default.
MCC.VM.Configurations.Sweeping between exposure groups		Yes	Enabling Collateral Sweeping. To make a VM (Variation Margin) margin call contract eligible for the collateral sweeping process, enter "Yes" in the designated field.
		No	Disabling Collateral Sweeping. To ensure a VM (Variation Margin) margin call contract is not eligible for the collateral sweeping process, enter "No" in the designated field.
		Blank	Default Collateral Sweeping Behavior. If the designated field is left blank or if this column is not included in your configuration, the VM margin call contract will not be eligible for the collateral sweeping process by default.
MCC.IM.PO.Haircut.Type		Regular	Enter Regular to set the quote convention to regular. If this field is left empty or is not included in your configuration, the system will automatically default to "Regular". Entering any other value will result in an "Invalid Input" error.
		Inverse	Enter Inverse to set the quote convention to inverse. If a value other than Inverse or Regular is entered, an Invalid Input error will be displayed. Note: Leaving this field empty or omitting it will default the convention to Regular.

MCC.IM.LE.Haircut.Type		Regular	Enter Regular to set the quote convention to regular. If this field is left empty or is not included in your configuration, the system will automatically default to "Regular". Entering any other value will result in an "**Invalid Input**" error.
		Inverse	Enter Inverse to set the quote convention to inverse. If a value other than Inverse or Regular is entered, an Invalid Input error will be displayed. Note: Leaving this field empty or omitting it will default the convention to Regular.
MCC.IM.PO.Haircut.Rule	Haircut Rule Name		Enter the name of a single Haircut Rule. The system will validate if this rule exists; otherwise, the Haircut Rule does not exist error will be displayed. If valid, the entered Haircut Rule will be automatically applied to the "Haircut" field within the Parties Tab. **Note:** Ensure the desired Haircut Rule is configured in the system beforehand. Leaving this column empty or omitting it will result in the Haircut Rule field remaining blank for the corresponding party.
MCC.IM.LE.Haircut.Rule	Haircut Rule Name		Specify a single Haircut Rule to be applied. The system will verify if the entered Haircut Rule name exists. If not, the Haircut Rule does not exist error will appear. Upon successful validation, the mentioned Haircut Rule

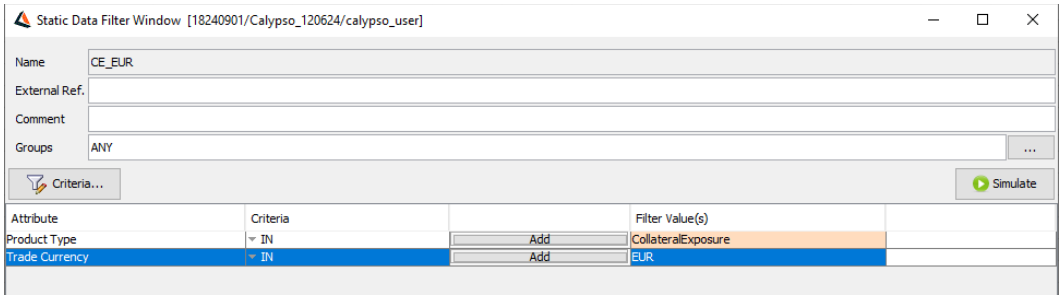
			will be populated in the Haircut field within the Parties Tab. **Note:** Ensure the Haircut Rule is set up beforehand. If this field is left empty or omitted, the Haircut Rule value in the system will remain blank.
MCC.IM.POEligible.currencies	USD		In the Eligibility tab, under Eligible Currencies, specify currencies for PO processing. Enter single or multiple currency codes separated by semicolons (e.g., EUR;GBP;USD). The system validates each entered currency. For each valid currency (single or in a multiple entry), a separate entry is created in the "PO Eligible currencies" section of the "Eligible Currencies" tab. An CCY does not exist error appears for invalid codes. Note: Leaving the Eligible Currencies field empty or omitting, will result in no currencies added as PO eligible. Ensure you provide valid and existing currency codes to enable PO processing for those currencies.
MCC.IM.POEligible.currencies.call cutoff	HH:MM:SS		Define specific processing cut-off times for different currencies. In the "Call Cut-Off Times for Eligible Currencies" field (e.g., MCC.IM.POEligible.currencies.callcutoff), enter a sequence of desired cut-off times in 24-hour format (HH:MM:SS), separated by

			semicolons (e.g., 11:00:00;11:20:00;11:30:00). In the "Eligible Currencies" field (e.g., MCC.IM.POEligible.currencies), list the currencies in the desired order (e.g., EUR;GBP;USD). The system will automatically assign the cut-off times to the currencies based on their respective sequence. For instance, EUR will get 11:00:00, GBP 11:20:00, and USD 11:30:00. **Note:** Ensure the time format is valid (HH:MM:SS). Incorrect formats will trigger an "Invalid time format for call cut off" error. This cut-off time setting is optional. If the "Call Cut-Off Times for Eligible Currencies" field is empty or omitted, no specific cut-off times will be assigned to the currencies.

Static Data (SD) filter configuration

Ensure you create SD filter with default name format as "CE_Base Currency Name". For example: CE_EUR.

Navigator > Configuration > Filters > Static Data Filter



Once you flag the Margin call contract for account with Sweeping between exposure groups, the system captures the SD filter for each expoeure currency under Exposure Group tab as mentioned below:

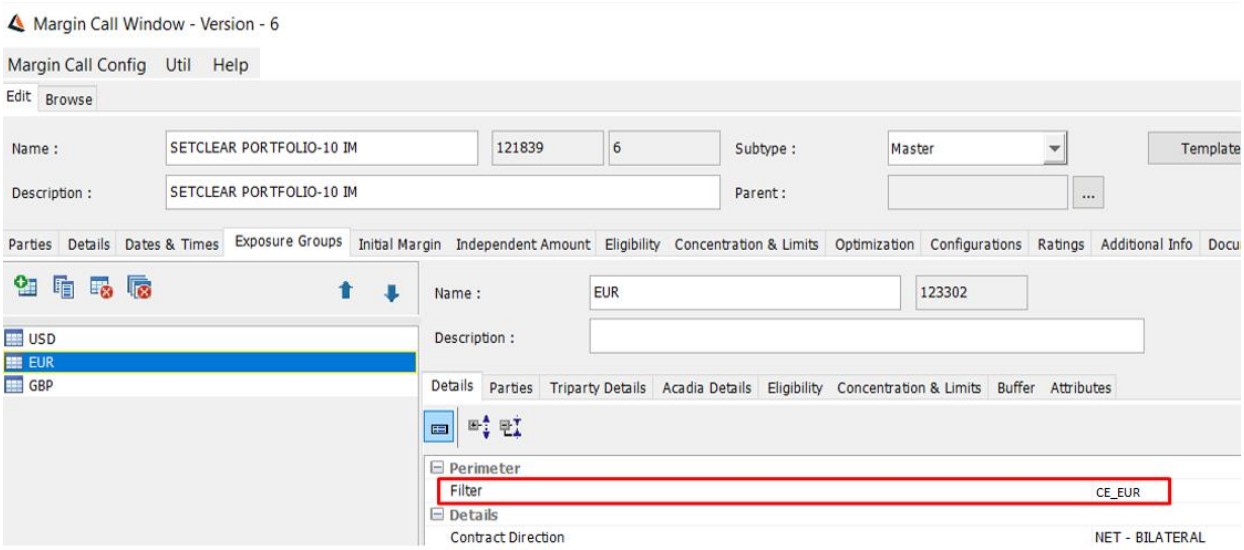
Configuring Margining Scenario and Exposure Currency Filters

The Margining Scenario field in the COB template determines how exposure currency filters are handled.

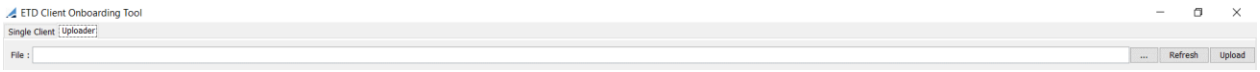
- **Single Currency:** If you select "Single currency" in the "Margining Scenario" field, the system will not apply any specific SD filters based on the exposure currency.
- **Native Currency:** If you select "Native currency" in the "Margining Scenario" field, you need to configure the "Native Currencies for Exposure Groups" under the IM section of the margin call contract template. For each native currency listed, the system will look for a corresponding SD filter. The SD filter name should clearly indicate the currency it applies to. For Example, If you have EUR listed as a native currency and an SD filter named "CE_EUR" exists, this filter will be applied to exposures in EUR.

Note:

1. **SD Filter Existence:** Before uploading accounts, ensure that an SD filter exists in the system for each exposure currency you have defined in the "Native Currencies for Exposure Groups". If a corresponding SD filter is not found, an error message "**SD filter does not exist**" will be displayed during the upload process.
2. **Separate SD Filters:** You must create a unique SD filter for each individual exposure group currency you intend to use with the "Native currency" margining scenario.
3. **IM Margin Calls Only:** The system will only apply these SD filters to IM (Initial Margin) margin call contracts.

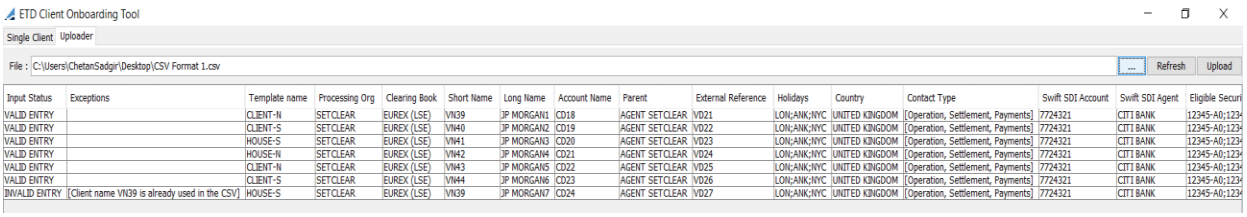


Uploader

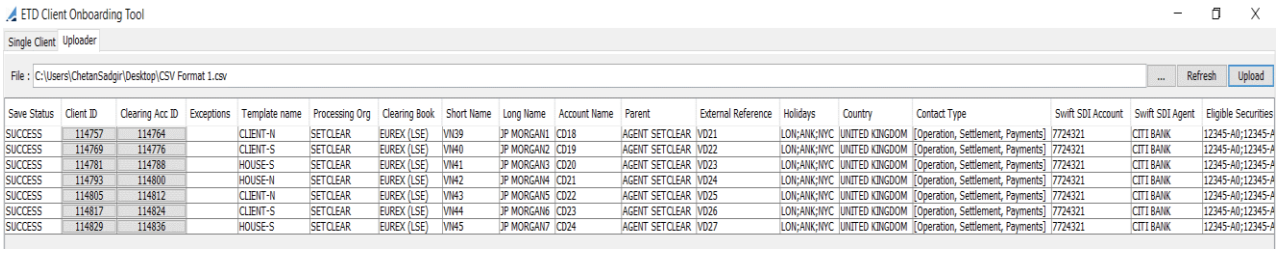


Select a file.

Once the file is selected, it will provide the "Input status" whether the content in the file is valid or invalid.



You can then click **Upload** to upload the file.



5.4 Uploading Parent / Child Relationships

You can upload parent / child relationships using Account Type = Parent or Child.

The following fields need to be specified for parent / child relationship upload in addition to the standard fields described above.

Fields	Mandatory Fields (True / False)	Description
Clearing.Margining.Collateral	TRUE	Margin account, "Yes" or "No". Parent - This column is mandatory. If mentioned as "Yes" then margin payment will be settled through this account. If mentioned as "No" then only positions will be managed at this account. For parent account, this column should always be “Yes”. Child - This column is mandatory. If mentioned as "Yes" then margin payment will be settled through this account. If mentioned as "No" then only positions will be managed at this account.
Clearing.Margining.Has Children	TRUE	"Yes" to identify parent account, or “No” otherwise.
Clearing.Margining.Is Grouping	TRUE	Group margined account, "Yes" or "No". Parent - If mentioned as "Yes" then this field allows PO to create a child account grouping structure which allows margin to be calculated across one or more child accounts. If mentioned as "No" then child account under this parent account behaves independently for margin calculation. Child - This column is always "No" in case of child account.
Clearing.Margining.RiskSetting.Multiplier	FALSE	Numerical value, which can be greater than or less than 1. It is used to mark up the Margin Requirement calculation for each defined margin group. Parent - This column is not mandatory for independently or non-Group margined parent account. Child - This column is mandatory for independently margined child account. Default

Fields	Mandatory Fields (True / False)	Description
		value is 1.0 which implies no markup (multiply calculated margin by 1).
Clearing.Margining.RiskSetting.Netting	FALSE	"Gross" or "Net" to indicate how to calculate risk on the positions in this account. Parent - This column is not mandatory for independently or non-Group margined parent account. Child - This column is mandatory for independently margined child account.
Clearing.Margining.MarginGroupForChildren.Name	FALSE	Name of margin group into which a child account can be placed. For a single parent account with multiple margin groups, all margin group names must be unique. Parent - This column is mandatory for Group margined parent account. Multiple margin groups must be separated with ";" – Example: BalnMG1;BalnMG2;BalnMG3. Child - This column is not mandatory.
Clearing.Margining.MarginGroupForChildren.Multiplier	FALSE	Numerical value, which can be greater than or less than 1. It is used to mark up the Margin Requirement calculation for each defined margin group. Parent - This column is mandatory for Group margined parent account. Default value is 1.0 which implies no markup (multiply calculated margin by 1). Multipliers for multiple margin groups must be separated with ";" – Example: 1;1.1;1.2. Child - This column is not mandatory.
Clearing.Margining.MarginGroupForChildren.Netting	FALSE	"Gross" or "Net" to indicate how to calculate risk on the positions in this account. Parent - This column is mandatory for Group margined parent account. Netting values for multiple margin groups must be separated with ";" - Example: Net;Gross;Net. Child - This column is not mandatory.

Fields	Mandatory Fields (True / False)	Description
Clearing.AccountHierarchy.Parent	FALSE	Parent account name for a child account. Restricted to Parents Accounts with the same LE and PO. Parent - This column is not mandatory. Child - This column is mandatory for child account.
Clearing.AccountHierarchy.ParentMarginGroup	FALSE	Name of margin group into which a child account is placed. References the margin group to which the account belongs. Restricted to margin groups defined on the selected parent account. Parent - This column is not mandatory. Child - This column is mandatory for Group margined child account.
Clearing.AccountHierarchy.RiskSettingForParentMargining.Multiplier	FALSE	Numerical value, which can be greater than or less than 1. It is used to mark up the Margin Requirement calculation for each defined margin group. Parent - This column is not mandatory. Child - This column is mandatory for independently or non-Group margined child account. Default value is 1.0 which implies no markup (multiply calculated margin by 1).
Clearing.AccountHierarchy.RiskSettingForParentMargining.Netting	FALSE	"Gross" or "Net" to indicate how to calculate risk on the positions in this account: Parent - This column is not mandatory. Child - This column is mandatory for independently or non-Group margined child account.

Collateral Configuration

Collateral contracts hold the configuration that drives the calculation of margin excess/deficit and the generation of predictive margin calls facing clients and counterparties. Both sides are using the collateral bilateral model.

This section will not go into deep detail of the configuration, as that is already documented in the Collateral documentation. This document will simply highlight the configurations that are critical to the clearing model.

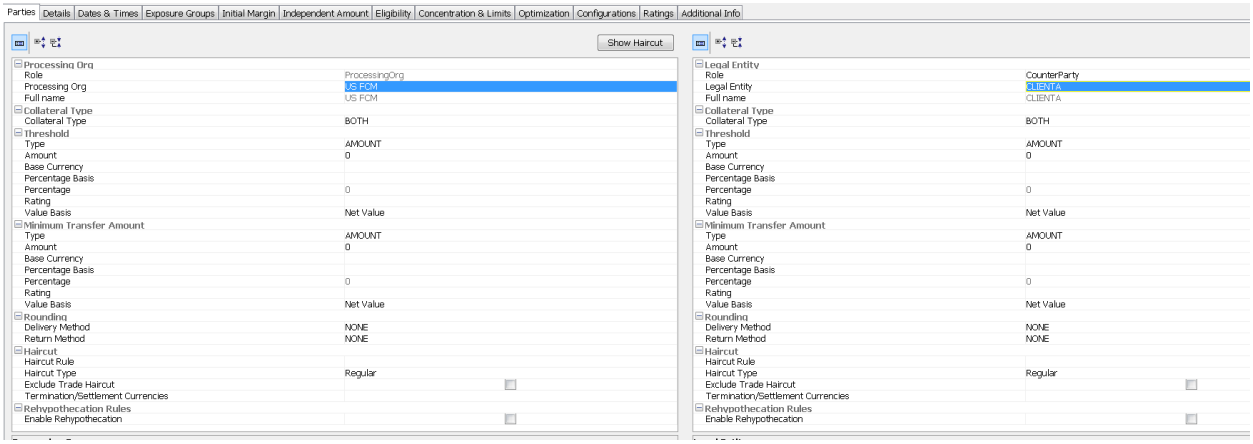
6.1 Client Collateral – "Deposit Contract" for VM Settlement in Original Currency

To be able to settle the variation margin in the original trade currency we rely on the concept of a **Master margin call contract with Exposure Groups** per currency (or child contracts). Each transfer will be enriched with the contract id of the Exposure Group associated with the transfer currency. Each exposure group is a subset/child margin call contract. The Master is only defined to link these child contracts and is used as the Deposit Contract in the Clearing tab of the Client or Counterparty Account. This allows the system to link collateral information with the clearing account activity.

To define a Deposit Collateral Contract, go to the menu Margin Call and Choose the SubType Master. Then follow the steps below:

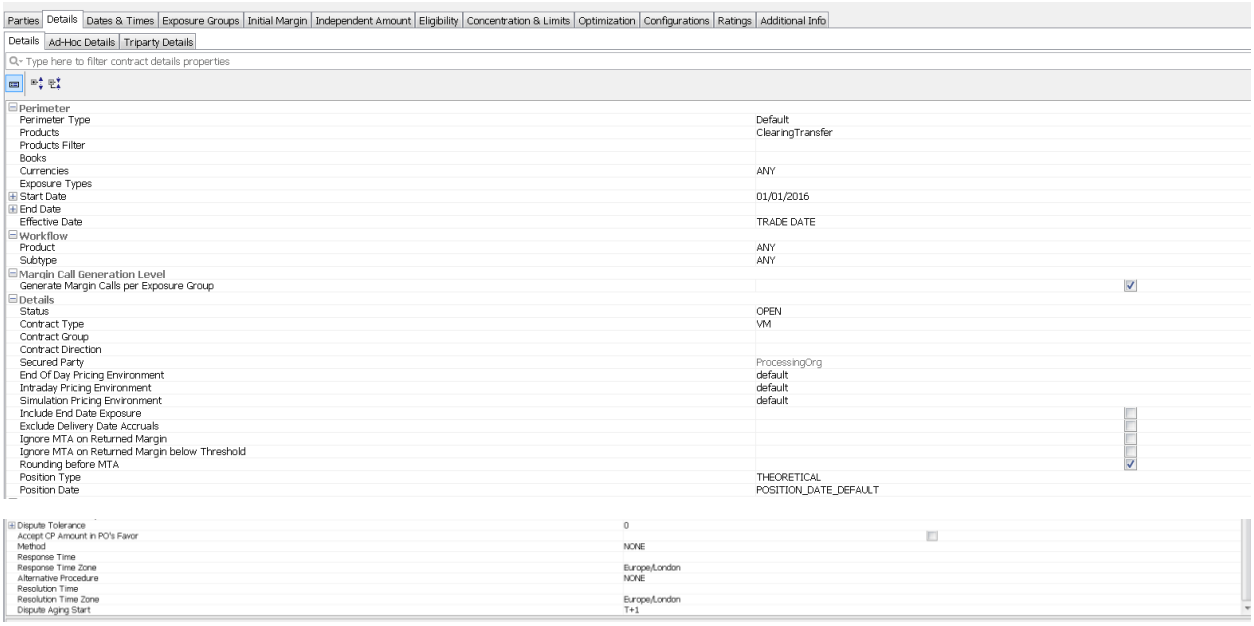
Parties Tab

Field Name	Purpose/Impact
Processing Org	The PO Legal Entity that is managing the Client Account.
LE Role	Set this to 'Counterparty'.



Details Tab

Field Name	Purpose/Impact
Products	ClearingTransfer.
Books	Should be set to the Book in which the client's trades are captured. The ETD model does not recommend multiple Books, especially not for a single client, so this should just be a single value.
Currencies	Any.
Start Date	Set to a date in the past.
Position Type	THEORETICAL
Position Date	POSITION_DATE_DEFAULT
Contract Direction	NET-BILATERAL
End of Day/Intraday Pricing Environment	Set to the PE used for clearing activity.
Generate a Call	This is set to 'True' if you want to generate a Margin Call

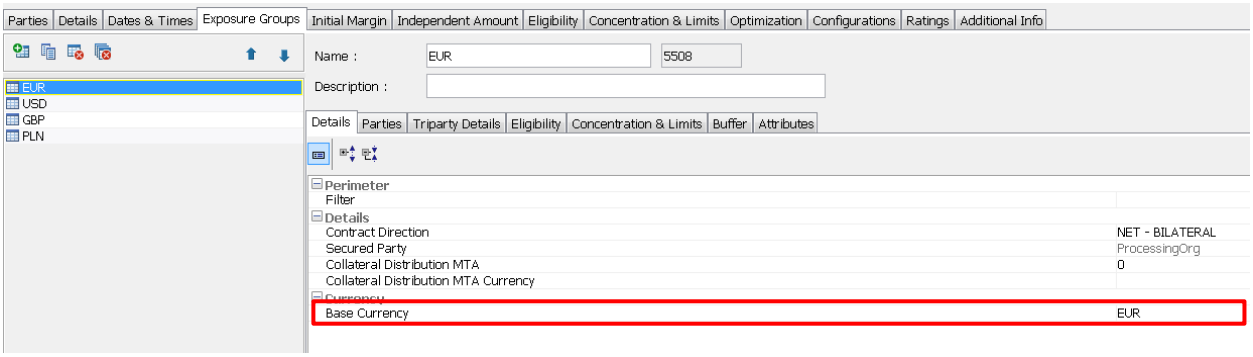


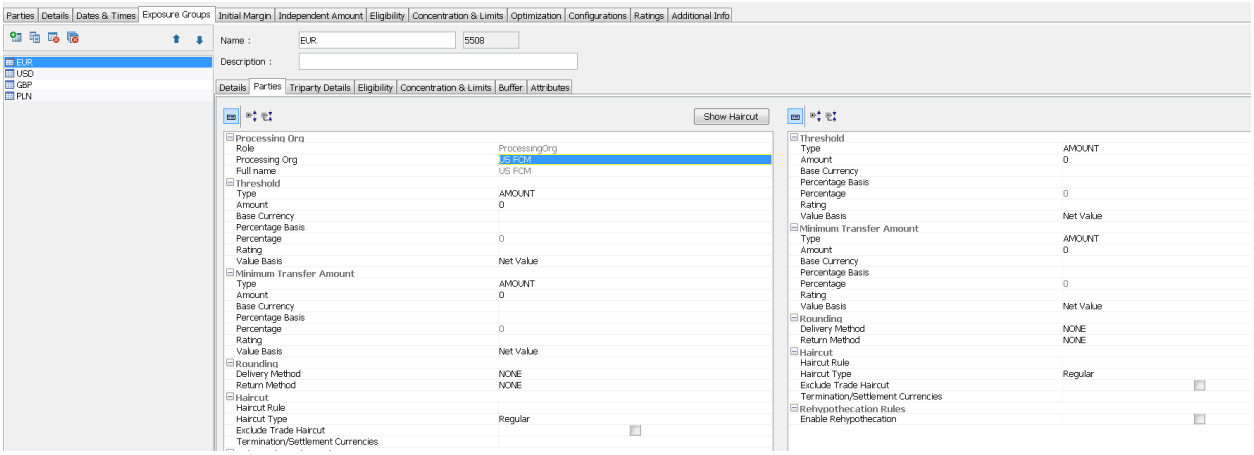
Dates & Times Tab

Field Name	Purpose/Impact
Value Date Frequency	COL_MIGR_DAILY_BUS – A date rule which sets the processing date to business dates on the configured calendar.
Valuation Time Offset	COL_MIGR_VAL_REL - A date rule which is relative to the rule above and falls one business day prior. This sets the Collateral processing so that the process date is always T+1 based on end of day balances on T and generates a Margin Call which is settled on T+1.
Valuation Time	Set to the same time as the Book EOD time.
Valuation Time Zone	Set to the same time zone as the Book.

Exposure Groups Tab

Field Name	Purpose/Impact
Details/Base Currency	Define an Exposure Group per Currency cleared on this client account and define the Base Currency as Exposure Group Currency. In the screenshot below, we define an Exposure Group for EUR and Define Base Currency = EUR. We need to do the same for each currency that the client account is clearing in order to generate a margin call per cleared currency.
Eligibility/Eligible Books	Inherit from the Master contract
Eligibility/Eligible Currencies	Add the Exposure Group Currency as eligible currency and define it as Adjustment Currency. Do the same for each Exposure Group you define per currency
Attributes	Define MARGIN_TYPE = VM and PRODUCT_TYPE = ETD
No other specificity to define at Exposure Group level for standard VM settled in the original trade currency. All elements not defined at the exposure group level are inherited from the Master	




Parties
Details
Dates & Times
Exposure Groups
Initial Margin
Independent Amount
Eligibility
Concentration & Limits
Optimization
Configurations
Ratings
Additional Info
EUR
USD
GBP
PLN
Name :
EUR
5508
Description :
Details
Parties
Triparty Details
Eligibility
Concentration & Limits
Buffer
Attributes
Show Haircut
Processing Org
Role
ProcessingOrg
Processing Org
US FCM
Full name
US FCM
Threshold
Type
AMOUNT
Amount
0
Base Currency
Percentage Basis
Percentage
0
Rating
Value Basis
Net Value
Minimum Transfer Amount
Rounding
Delivery Method
NONE
Return Method
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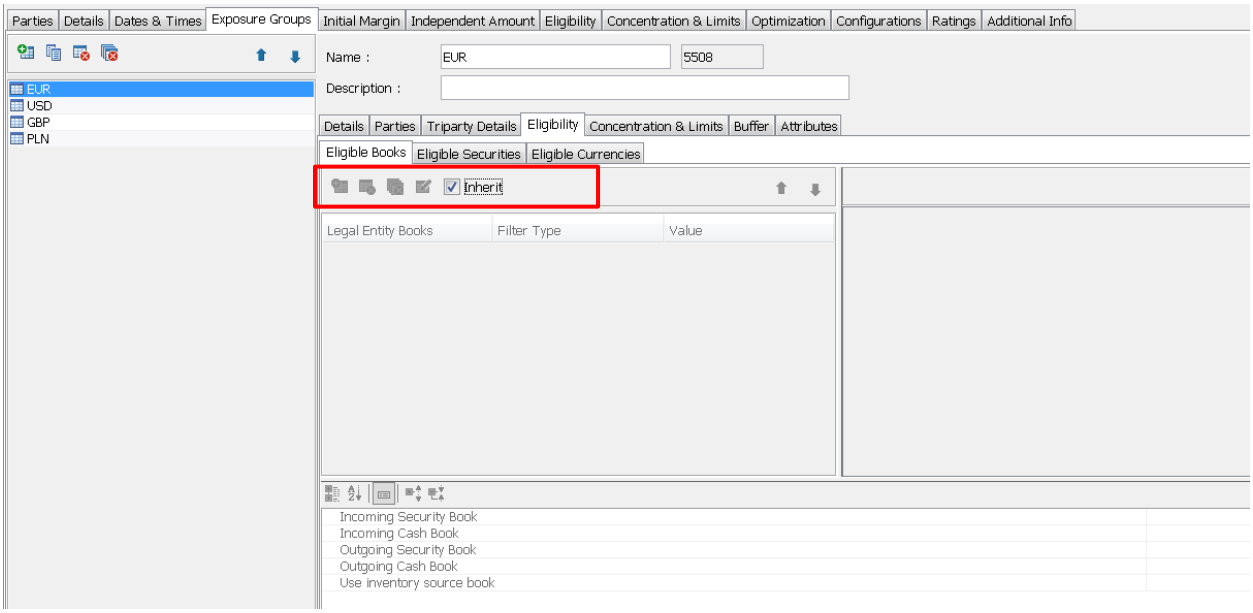
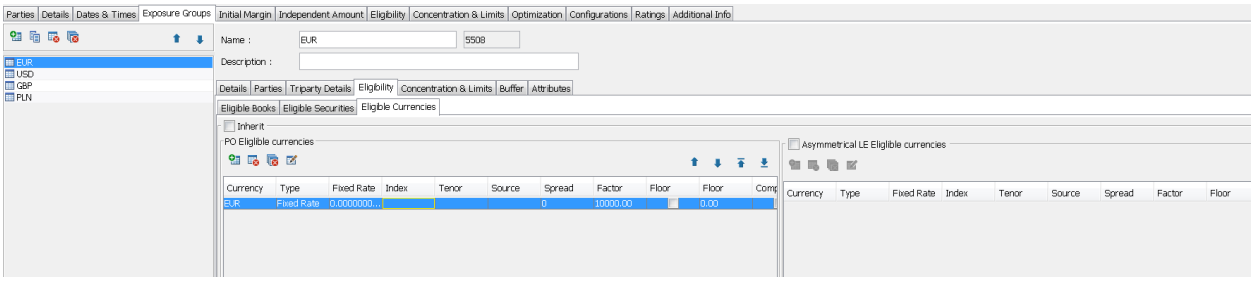
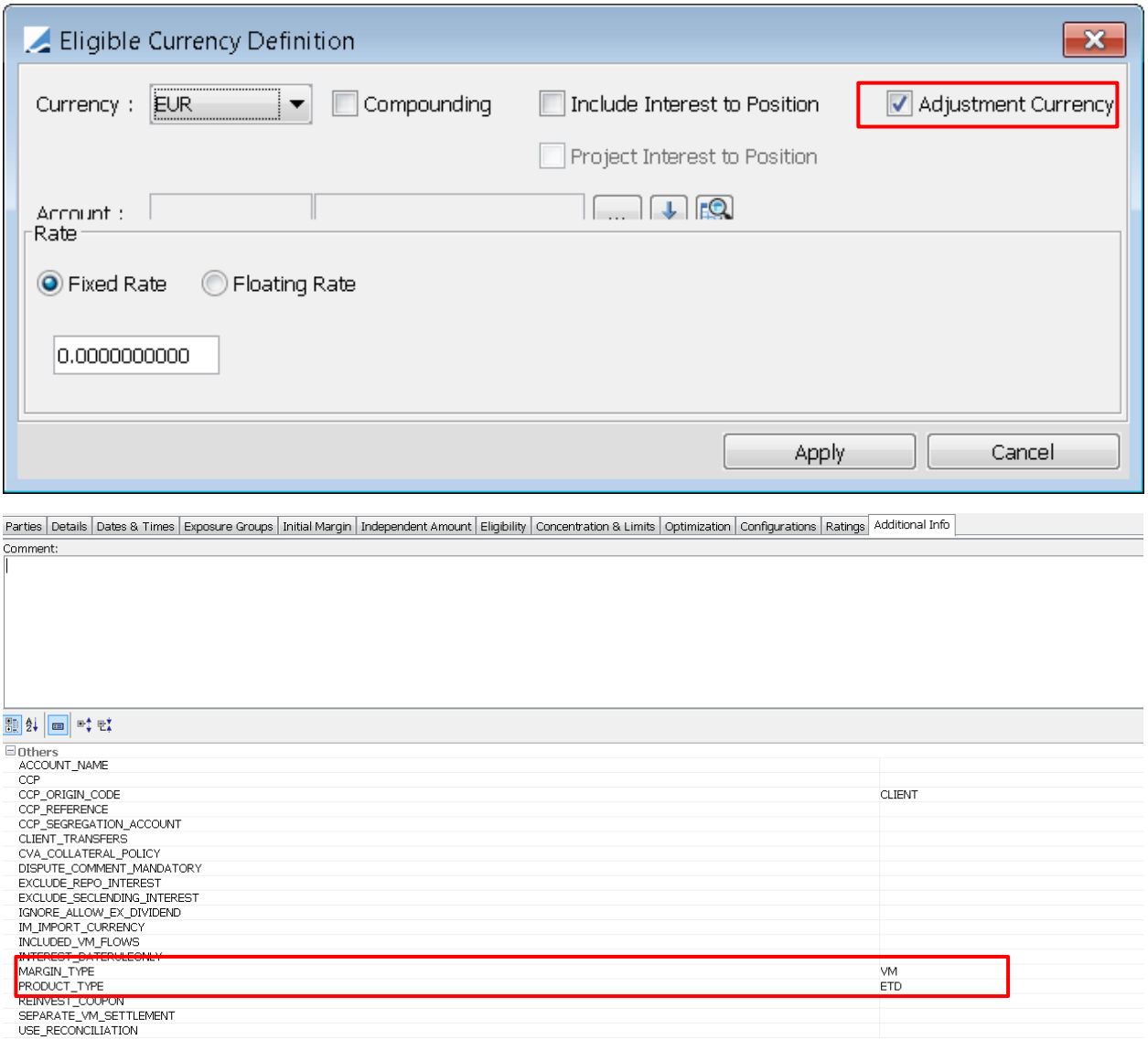
Regular
Exclude Trade Haircut
Termination/Settlement Currencies
Rehypothecation Rules
Enable Rehypothecation


Parties
Details
Dates & Times
Exposure Groups
Initial Margin
Independent Amount
Eligibility
Concentration & Limits
Optimization
Configurations
Ratings
Additional Info
EUR
USD
GBP
PLN
Name :
EUR
5508
Description :
Details
Parties
Triparty Details
Eligibility
Concentration & Limits
Buffer
Attributes
Eligible Books
Eligible Securities
Eligible Currencies
Inherit
Legal Entity Books
Filter Type
Value
Incoming Security Book
Incoming Cash Book
Outgoing Security Book
Outgoing Cash Book
Use inventory source book


Parties
Details
Dates & Times
Exposure Groups
Initial Margin
Independent Amount
Eligibility
Concentration & Limits
Optimization
Configurations
Ratings
Additional Info
EUR
USD
GBP
PLN
Name :
EUR
5508
Description :
Details
Parties
Triparty Details
Eligibility
Concentration & Limits
Buffer
Attributes
Eligible Books
Eligible Securities
Eligible Currencies
Inherit
PO Eligible currencies
Asymmetrical LE Eligible currencies
Currency
Type
Fixed Rate
Index
Tenor
Source
Spread
Factor
Floor
EUR
Fixed Rate
10000.00
0.00



Eligibility Tab – Eligible Books Sub-Tab

Enter incoming/outgoing Cash and Security Books for that PO.

Eligibility Tab – Eligible Currencies Sub-Tab

Field Name	Purpose/Impact
Base Currency	Equal to the Base Currency of the Account. This currency is not used when contract is defined with Exposure Group per currency.
Cash MarginCall Account	True.

Field Name	Purpose/Impact
Security MarginCall Account	True.
Orderer Role	Set this to '**Client**' as this will trigger the generation of a second transfer on the Margin Call trade that will credit the internal client account when a client makes a payment.
Eligible Currencies	Leave it empty when using Exposure Group per Currency.

Additional Info Tab

Field Name	Purpose/Impact
CCP_ORIGIN_CODE	Set to "HOUSE" or "CLIENT" (note caps) based on account status.
MARGIN_TYPE	Set to "**VM**" for the Deposit Contract.
PRODUCT_TYPE	Set to "**ETD**" for ETD accounts.

You will then have to attach the Master VM contract to the Clearing tab on the Client Account as a Deposit Account (See Client Account section).

6.2 Client Collateral - Liability or IM Contract

The liability contract does not refer to exposure group as initial margin is settled in a unique/consolidated currency. The Eligible currency is therefore defined at the contract level as adjustment currency.

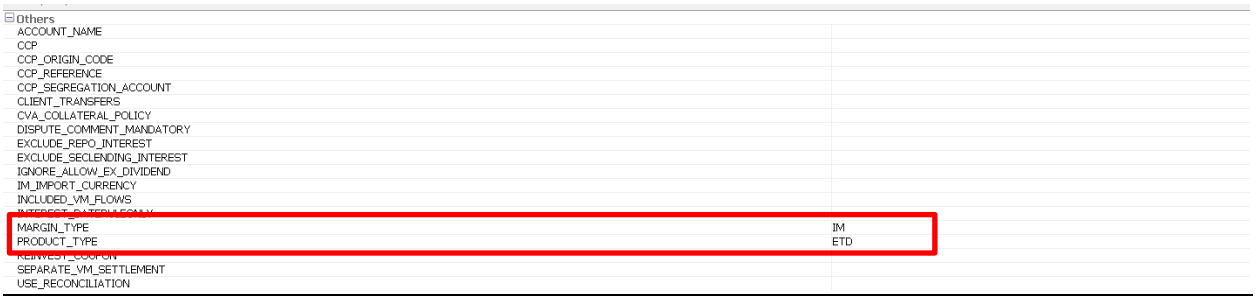
We only outline below the differences between the Deposit and Liability contract definition.

Details Tab

Field Name	Purpose/Impact
Exposure Types	Initial Margin. This ensures that collateral exposures that represent actual IM as well as those that represent OTE will be collected by the contract.
Products	CollateralExposure.

Additional Info Tab

Field Name	Purpose/Impact
PRODUCT_TYPE	Still set to '**ETD**'
MARGIN_TYPE	Set to "**IM**" for the Liability Contract.

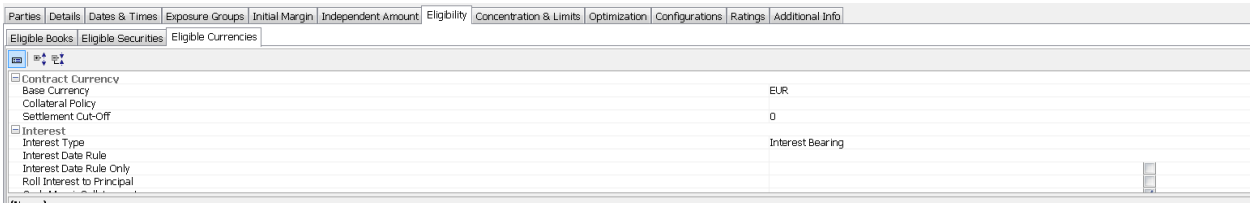


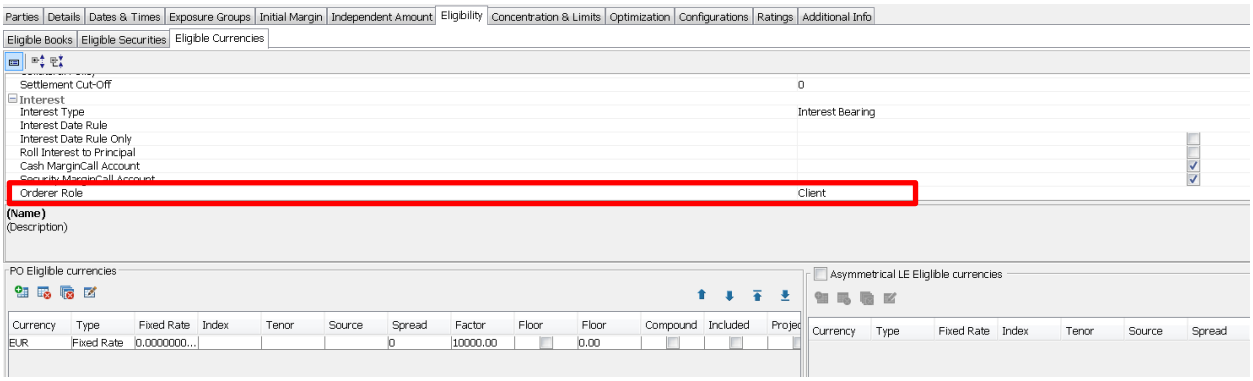
Eligibility Tab - Eligible Currency Sub-Tab

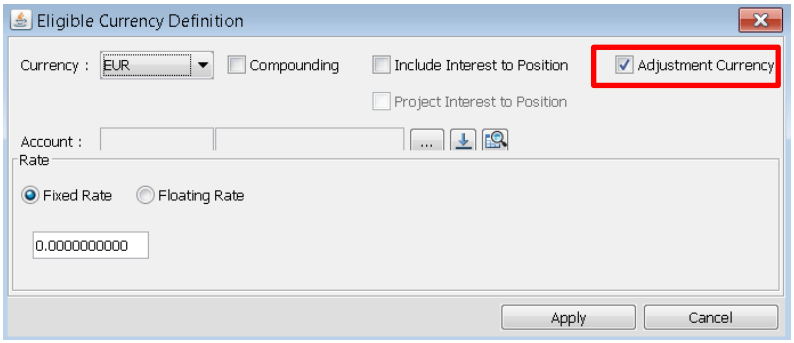
We do not refer to Exposure group and define the IM payment currency as the unique eligible currency in the Eligible currency part of the IM contract. This currency is also defined as Adjustment Currency for that contract

Field Name	Purpose/Impact
Base Currency	Set the IM Settlement Currency
Orderer Role	Set Role '**Client**' as this will trigger the generation of a second transfer on the Margin Call trade that will credit the internal clearing account when a client makes a payment.

Field Name	Purpose/Impact
Eligible Currency	Set the IM Settlement Currency and define that currency as Adjustment Currency







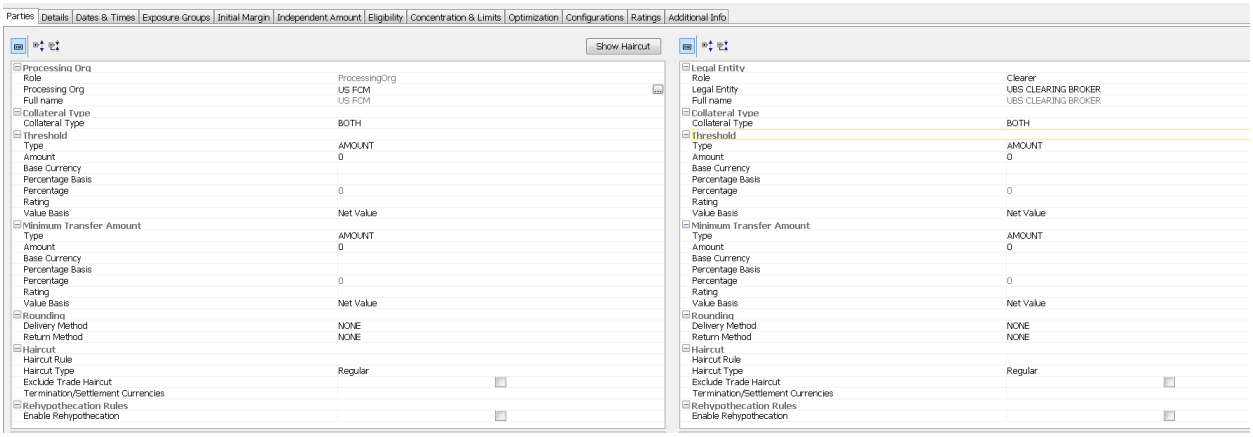
You will then have to attach the IM contract to the Clearing tab on the Client Account as a Liability Account (See Client Account section).

6.3 Counterparty Collateral – Variation Margin Contract

The counterparty VM contract is defined using Master Contract and Exposure Group, similarly to what we do on the client side. Only the Role used in the parties and eligibility tab are different. See details below.

Parties Tab

Field Name	Purpose/Impact
Processing Org	The PO Legal Entity that is clearing through the Counterparty Account.
Legal Entity	The Clearer (clearinghouse or carry broker).
LE Role	Set this to '**Clearer**'.



Details Tab

Field Name	Purpose/Impact
Products	ClearingTransfer.
Books	Should be set to the Book in which trades are captured. The ETD model does not recommend multiple Books, especially not for a single client, so this should just be a single value.
Currencies	Any.
Contract Type	VM
Status	OPEN
Contract Direction	NET-BILATERAL
Position Type	THEORETICAL
Position Date	POSITION_DATE_DEFAULT

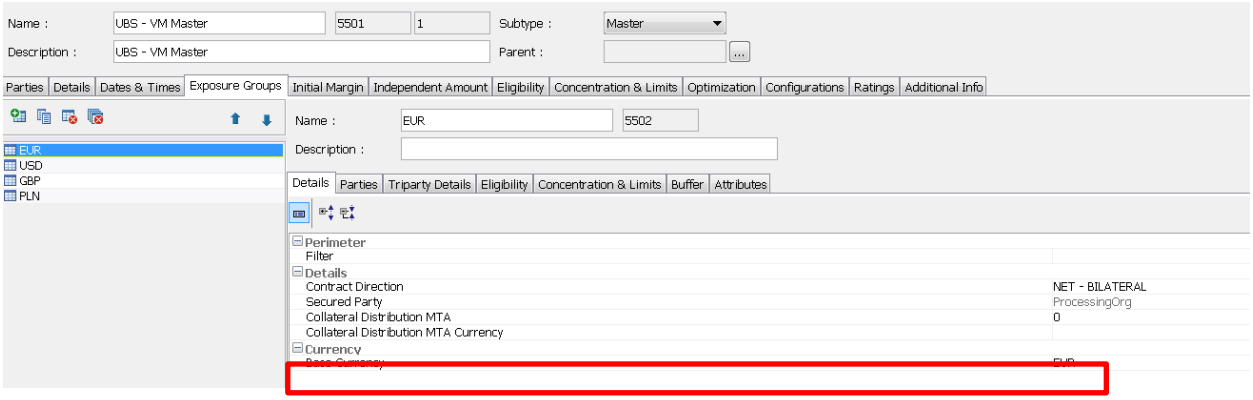
Field Name	Purpose/Impact
End of Day/Intraday Pricing Environment	Set to the PE used for clearing activity.
Generate a Call	This is set to 'True' if you want to generate a Margin Call

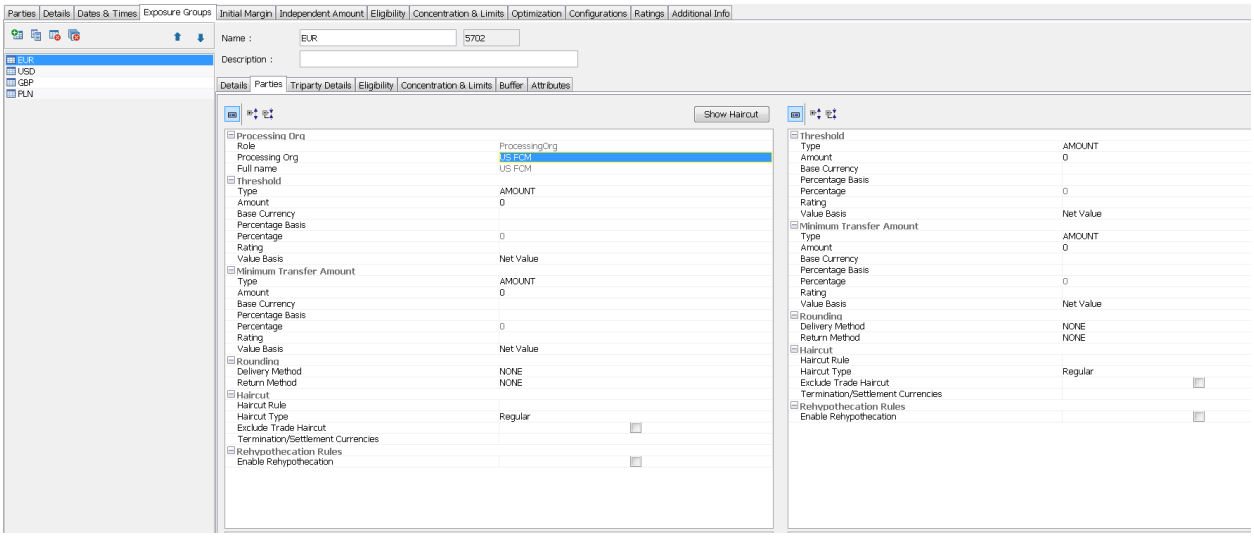
Dates & Times Tab

Field Name	Purpose/Impact
Value Date Frequency	COL_MIGR_DAILY_BUS – A date rule which sets the processing date to business dates on the configured calendar.
Valuation Time Offset	COL_MIGR_VAL_REL - A date rule which is relative to the rule above and falls one business day prior. This sets the Collateral processing so that the process date is always T+1 based on end of day balances on T and generates a Margin Call which is settled on T+1.
Valuation Time	Set to the same time as the Book EOD time.
Valuation Time Zone	Set to the same time zone as the Book.

Exposure Groups Tab

Field Name	Purpose/Impact
Details/Base Currency	Define an Exposure Group per Currency cleared on this CCP/Clearer account and define the Base Currency as Exposure Group Currency. In the screenshot below, we define an Exposure Group for EUR and Define Base Currency = EUR. We need to do the same for each currency that the CCP/Clearer account is clearing in order to generate a margin call per cleared currency.
Eligibility/Eligible Books	Inherit from the Master contract
Eligibility/Eligible Currencies	Add the Exposure Group Currency as eligible currency and define it as Adjustment Currency. Do the same for each Exposure Group you define per currency
Attributes	Define MARGIN_TYPE = VM and PRODUCT_TYPE = ETD
CCP ORIGIN CODE	CLIENT/HOUSE
No other specificity to define at Exposure Group level for standard VM settled in the original trade currency. All elements not defined at the exposure group level are inherited from the Master	


Name :
UBS - VM Master
5501
1
Subtype :
Master
Description :
UBS - VM Master
Parent :
Parties
Details
Dates & Times
Exposure Groups
Initial Margin
Independent Amount
Eligibility
Concentration & Limits
Optimization
Configurations
Ratings
Additional Info
EUR
USD
GBP
PLN
Name :
EUR
5502
Description :
Details
Parties
Triparty Details
Eligibility
Concentration & Limits
Buffer
Attributes
Perimeter
Filter
Details
Contract Direction
NET - BILATERAL
Secured Party
ProcessingOrg
Collateral Distribution MTA
0
Collateral Distribution MTA Currency
Currency
EUR


Parties
Details
Dates & Times
Exposure Groups
Initial Margin
Independent Amount
Eligibility
Concentration & Limits
Optimization
Configurations
Ratings
Additional Info
EUR
USD
GBP
PLN
Name :
EUR
5702
Description :
Details
Parties
Triparty Details
Eligibility
Concentration & Limits
Buffer
Attributes
Show Haircut
Processing Org
Role
ProcessingOrg
Processing Org
US FCM
Full name
US FCM
Threshold
Type
AMOUNT
Amount
0
Base Currency
Percentage Basis
Percentage
0
Rating
Value Basis
Net Value
Minimum Transfer Amount
Type
AMOUNT
Amount
0
Base Currency
Percentage Basis
Percentage
0
Rating
Value Basis
Net Value
Rounding
Delivery Method
NONE
Return Method
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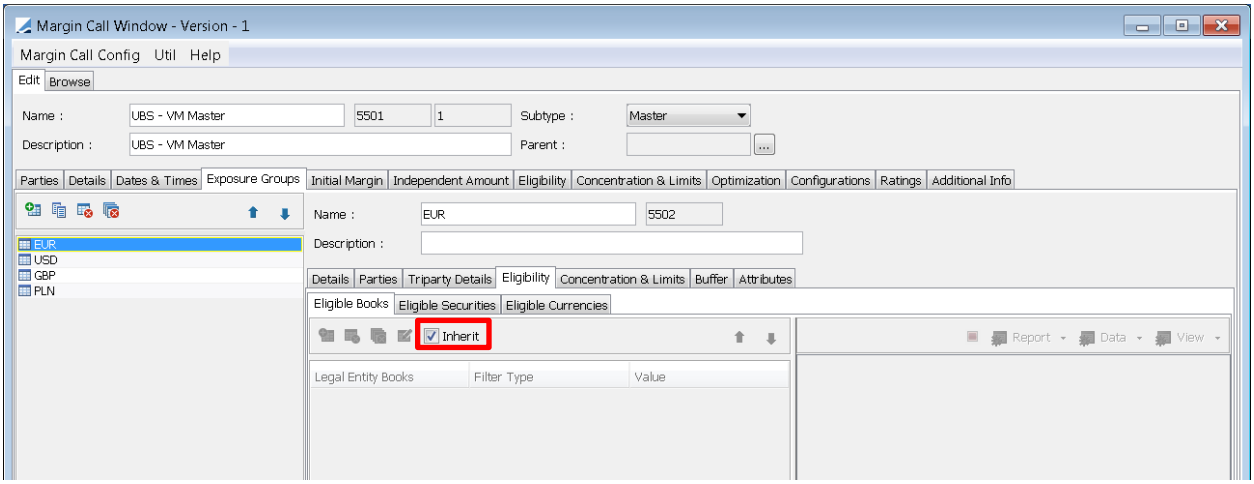
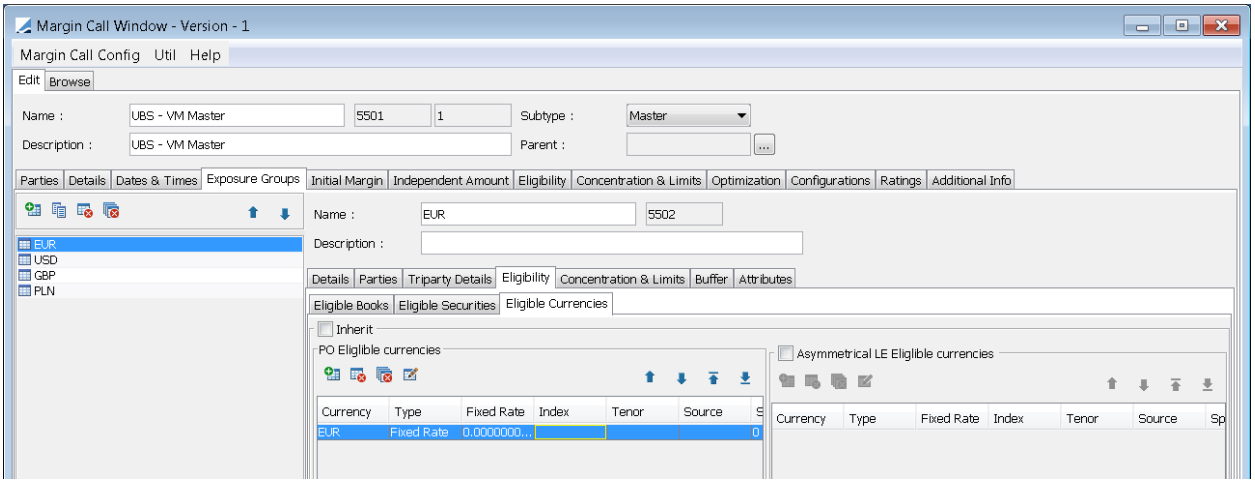
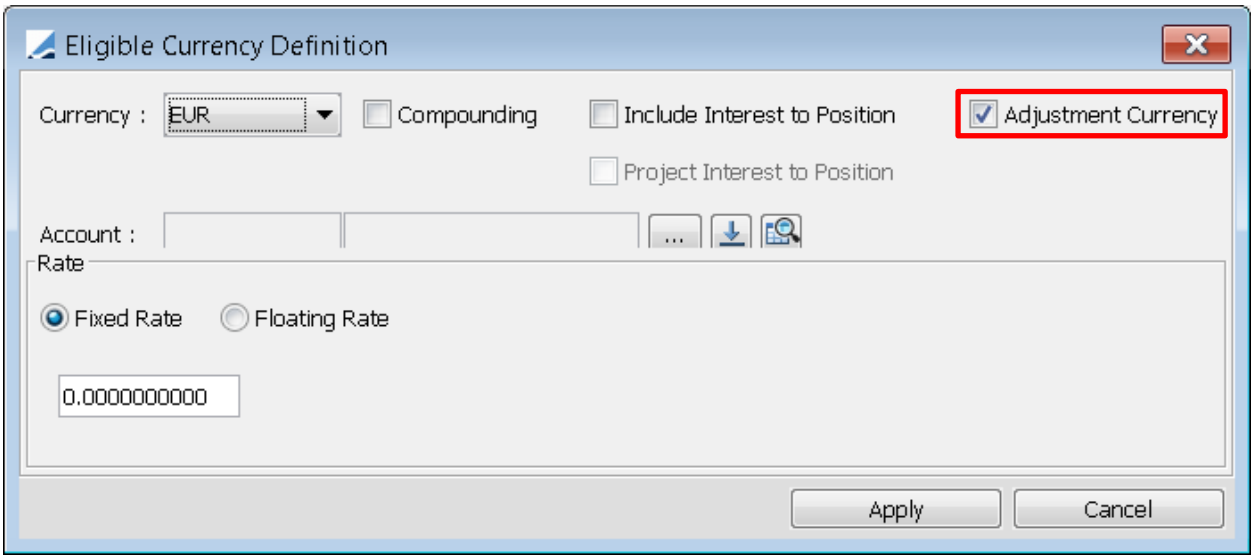
Haircut
Haircut Rule
Haircut Type
Regular
Exclude Trade Haircut
Termination/Settlement Currencies
Rehypothecation Rules
Enable Rehypothecation


Margin Call Window - Version - 1
Margin Call Config
Util
Help
Edit
Browse
Name :
UBS - VM Master
5501
1
Subtype :
Master
Description :
UBS - VM Master
Parent :
Parties
Details
Dates & Times
Exposure Groups
Initial Margin
Independent Amount
Eligibility
Concentration & Limits
Optimization
Configurations
Ratings
Additional Info
EUR
USD
GBP
PLN
Name :
EUR
5502
Description :
Details
Parties
Triparty Details
Eligibility
Concentration & Limits
Buffer
Attributes
Eligible Books
Eligible Securities
Eligible Currencies
Inherit
Report
Data
View
Legal Entity Books
Filter Type
Value



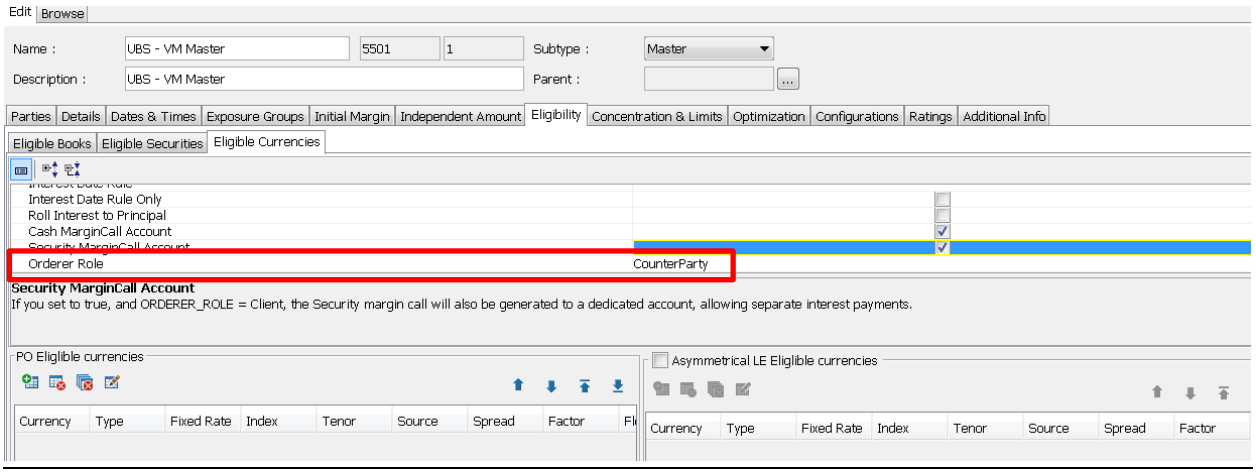


Eligibility Tab – Eligible Books Sub-Tab

Enter incoming/outgoing Cash and Security Books for that PO.

Eligibility Tab – Eligible Currency Sub-Tab

Field Name	Purpose/Impact
Base Currency	Equal to the Base Currency of the Account. This currency is not used when contract is defined with Exposure Group per currency.
Cash MarginCall Account	True.
Security MarginCall Account	True.
Orderer Role	Set this to '**CounterParty**' as this will trigger the generation of a second transfer on the Margin Call trade that will credit the internal clearer account when a client makes a payment.
Eligible Currencies	Leave it empty when using Exposure Group per Currency.



Additional Info Tab

Field Name	Purpose/Impact
MARGIN_TYPE	VM
PRODUCT_TYPE	ETD
CCP_ORIGIN_CODE	HOUSE/CLIENT

6.4 Counterparty Collateral – Initial Margin Contract

Facing the Counterparty, we will use the same bilateral collateral model than facing the client. We will specify the Margin Call contract in the setup of the Counterparty Account.

Parties Tab

Field Name	Purpose/Impact
Processing Org	The PO Legal Entity that is clearing through the Counterparty Account.
Legal Entity	The Clearer (clearinghouse or carry broker)
LE Role	Set this to '**Clearer**'.

Details Tab

Field Name	Purpose/Impact
Products	CollateralExposure.
Books	Should be set to the Book in which the trades are captured. The ETD model does not recommend multiple Books, especially not for a single client, so this should just be a single value.
Currencies	Any.
Start Date	This is used as the Trade Date of the Collateral Exposure trade generated from the contract. Set to a date in the past.
End of Day/Intraday Pricing Environment	Set to the PE used for clearing activity.
Contract Type	IM
Contract Direction	NET-BILATERAL

Dates & Times Tab

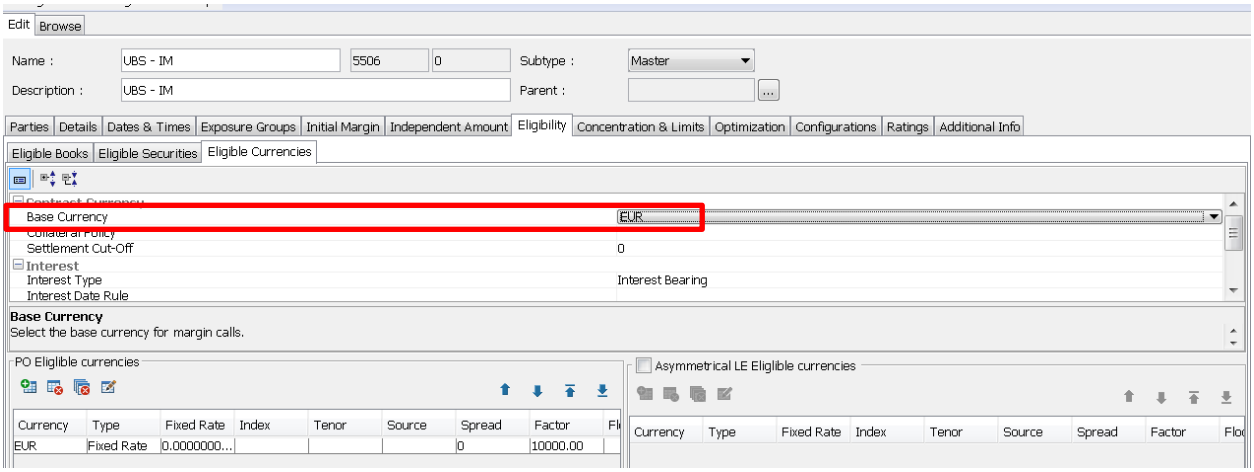
Field Name	Purpose/Impact
Value Date Frequency	COL_MIGR_DAILY_BUS – A date rule which sets the processing date to business dates on the configured calendar.
Valuation Time Offset	COL_MIGR_VAL_REL - A date rule which is relative to the rule above and falls one business day prior. This sets the Collateral processing so that the process

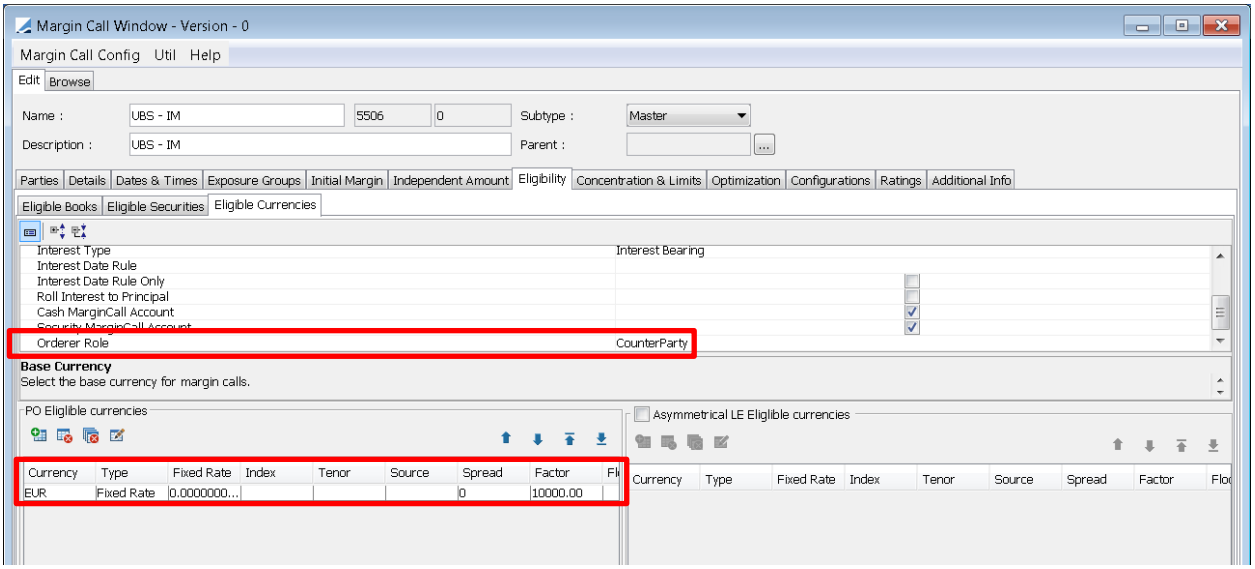
Field Name	Purpose/Impact
	date is always T+1 based on end of day balances on T and generates a Margin Call which is settled on T+1.
Valuation Time	Set to the same time as the Book EOD time.
Valuation Time Zone	Set to the same time zone as the Book.

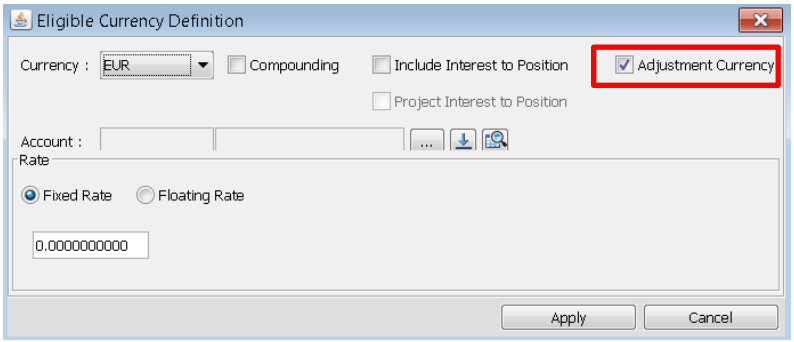
Eligibility Tab - Eligible Currency Sub-Tab

We do not refer to Exposure group and define the IM payment currency as the unique eligible currency in the Eligible currency part of the IM contract. This currency is also defined as Adjustment Currency for that contract.

Field Name	Purpose/Impact
Base Currency	Set the IM Settlement Currency
Orderer Role	Set Role '**CounterParty**' as this will trigger the generation of a second transfer on the Margin Call trade that will credit the internal clearing account when a client makes a payment.
Eligible Currency	Set the IM Settlement Currency and define that currency as Adjustment Currency.

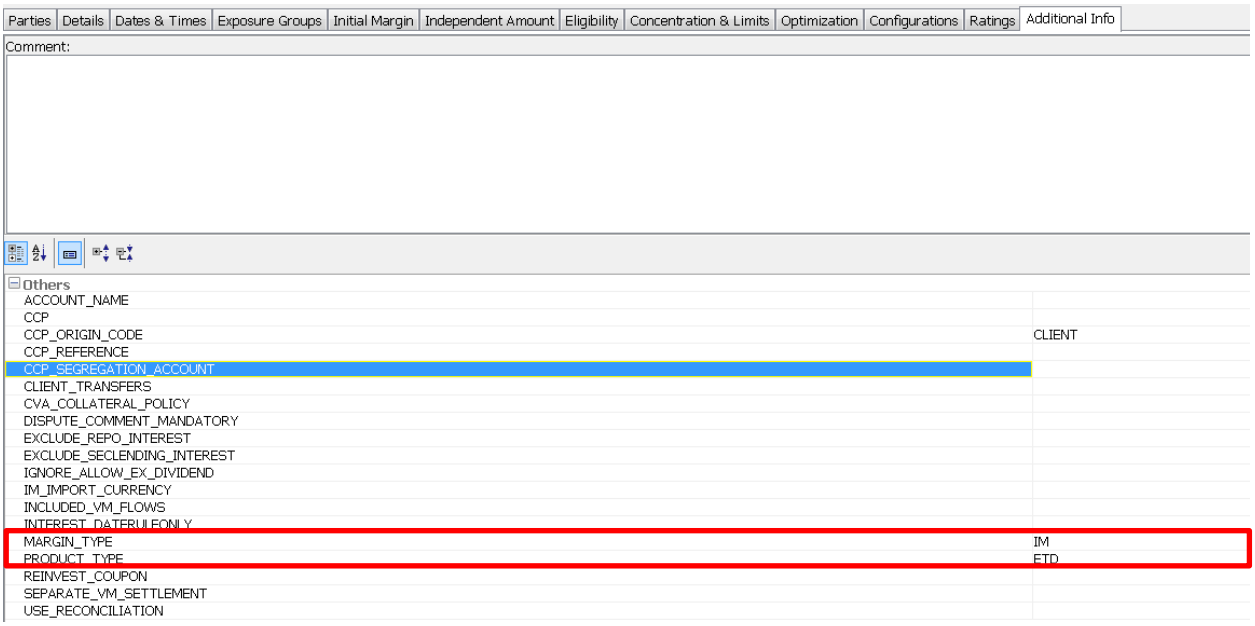






Additional Info Tab

Field Name	Purpose/Impact
MARGIN_TYPE	IM
PRODUCT_TYPE	ETD



You will then have to attach the IM contract to the Clearing tab on the CounterParty Account as a Liability Account (See Client Account section).

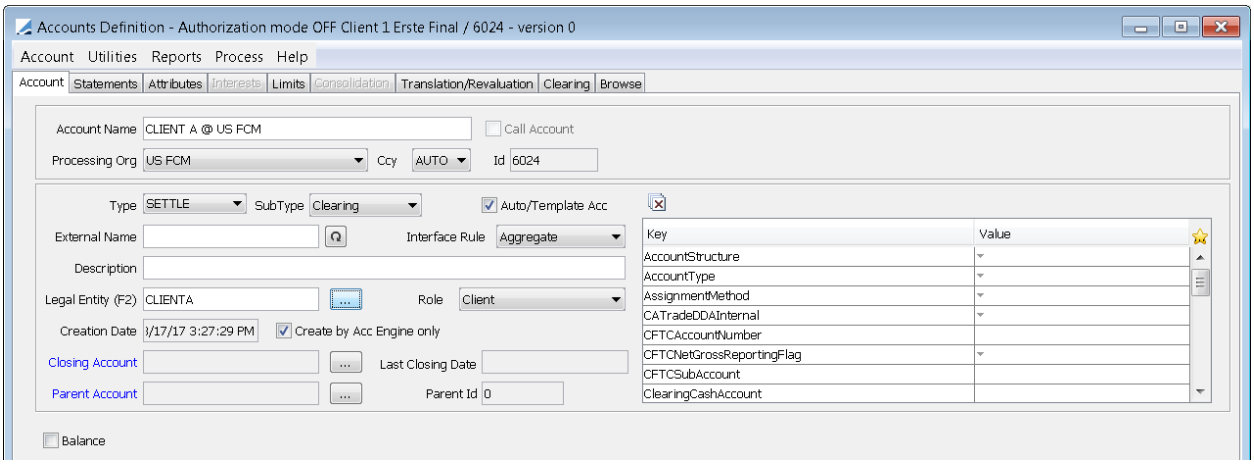
Account Configuration

7.1 Client Account Configuration

7.1.1 Standard VM Client Account

A standard client account is a single account designed to manage all of the activity, positions and balances for a client LE. This is the simplest account, with no family structure involved.

"Account" Tab

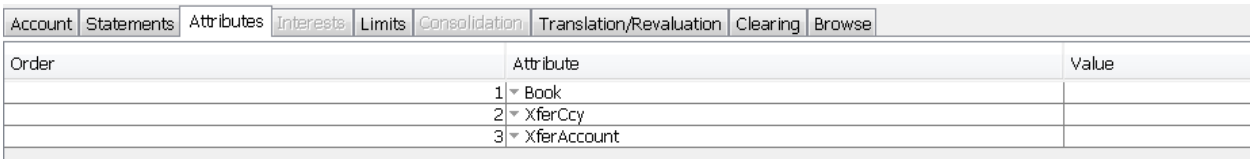


Field Name	Purpose/Impact
Account Name	The unique identifier of the Account in the Books and Records. User Entered using whatever naming convention the user prefers.
Processing Org	The PO who is managing this account.
Ccy	Set to AUTO. Note, "Auto/Template Acc" must be checked for AUTO to appear in the Ccy menu.
Type	Set to SETTLE.
SubType	Set to Clearing for a Client Account. This activates the Clearing tab of the Account.
Auto/Template Acc	Check this field to create automatic accounts in each settlement currency.
External Name	Optional field which can be used to provide a secondary name to the account for reporting and display.

Field Name	Purpose/Impact
Description	Optional field which can be used to provide additional information for reporting and display.
Legal Entity	The Client LE who this account is opened on behalf of.
Role	Set to **Client**.
Create by Acc Engine only	Check this field to suppress the automatic accounts from being searchable.
Status	Displays the status of an account. Processing and reporting can use this field to include or exclude an account from processing events. Only accounts in active status are eligible to be seen in the pricing sheet. Status must be set to Active to be able to select the account for clearing activity.

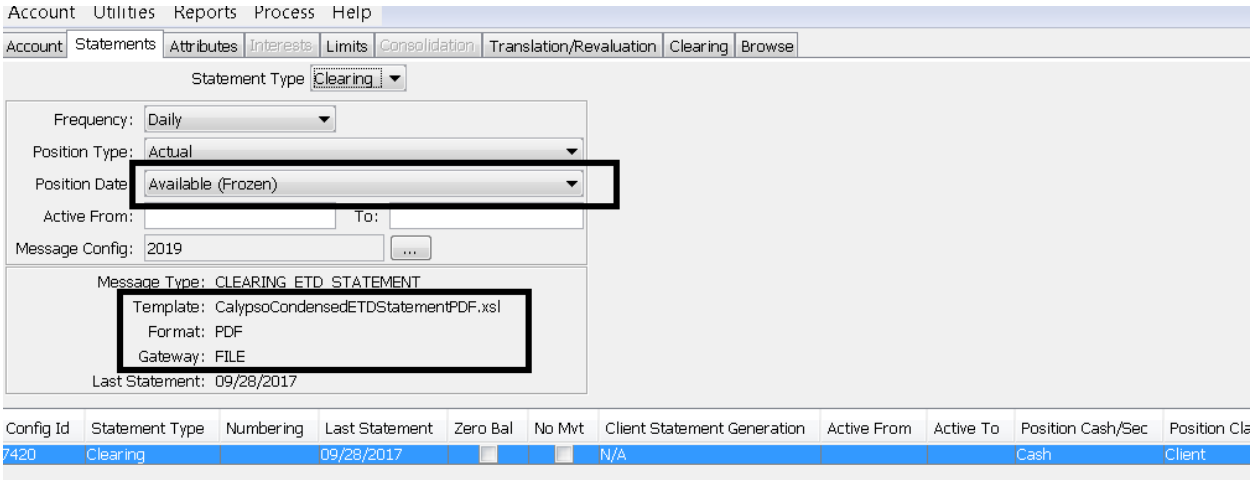
"Attributes" Tab

This is a user configurable tab which sets the naming convention of the automatically created accounts (created since 'Auto/Template Acc' is checked). It is mandatory to have some configuration here. Define your attributes based on the naming convention you want to use when generating your settlement postings.

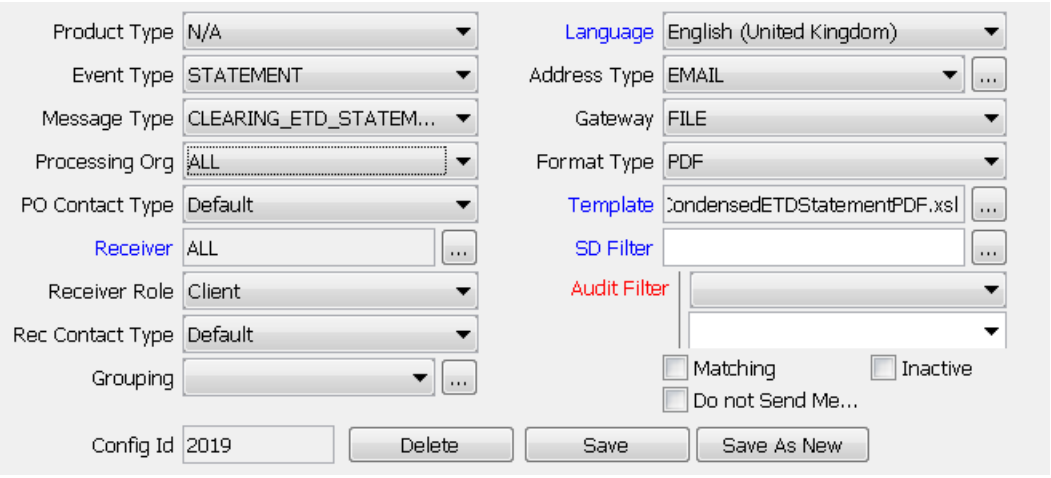


"Statement" Tab

Daily Statement using **Available (Frozen)** position date to include back dated changes management and CLEARING_ETD_STATEMENT message configuration.

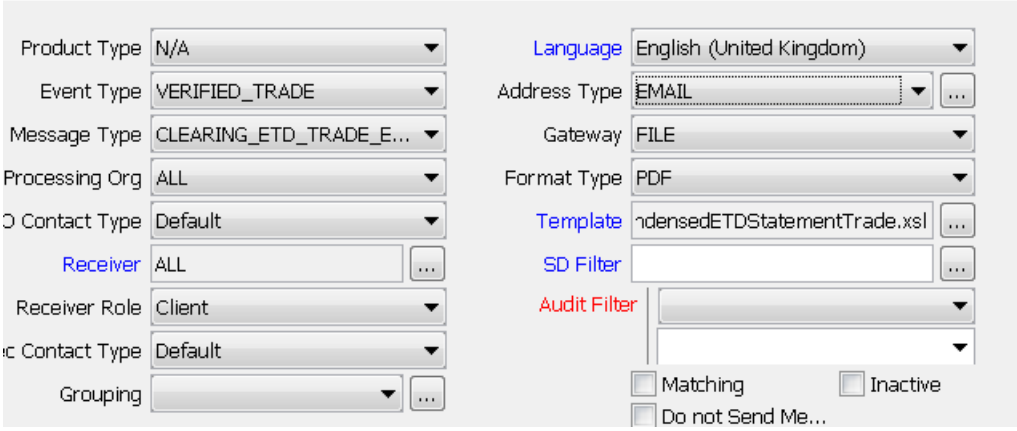


See statement message config used to produce PDF statements below:

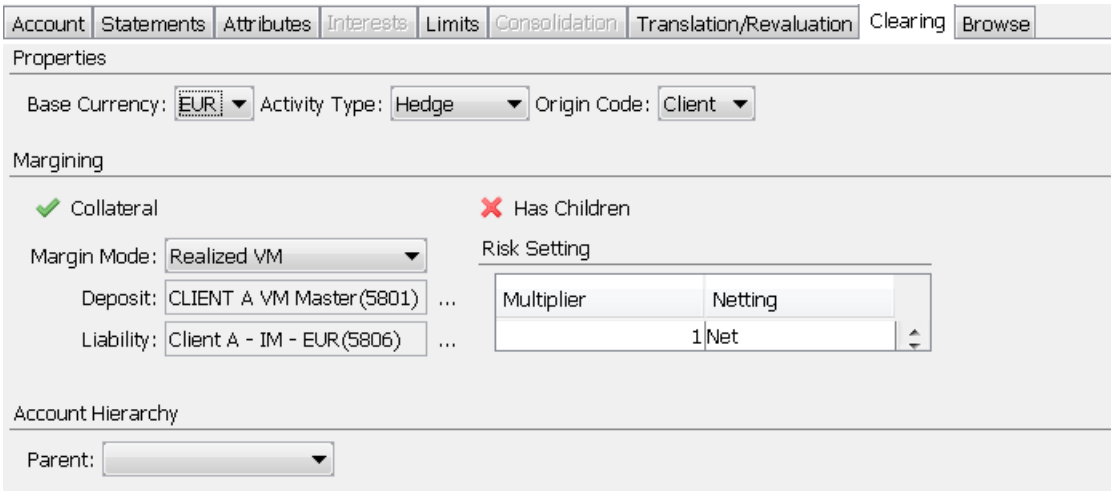


We have also done that work for individual confirmations that you could generate for each transaction.

In that case, the PDF template to use is: CalypsoTradeCondensedETDStatementTradePDF.xsl, triggered by VERIFIED_TRADE and CANCELED_TRADE event for Message Type = CLEARING_ETD_TRADE_EVENT.



"Clearing" Tab



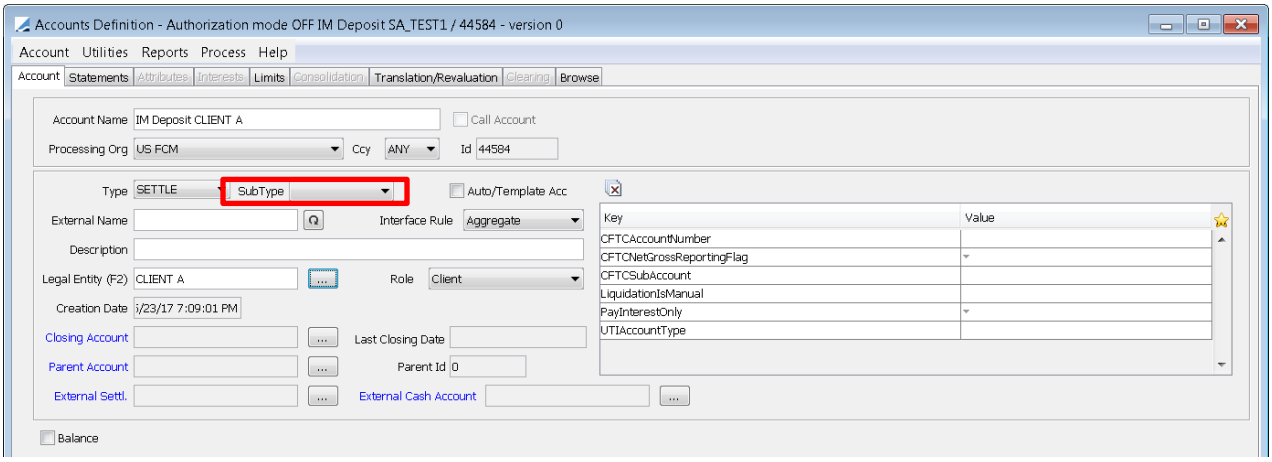
Field Name	Purpose/Impact
Base Currency	Represents the base currency for the account, used to convert balances in the client statement to a single currency.
Activity Type	Select either hedge or speculator. This field can impact the way initial margin is calculated for the account.
Origin Code	For a client account select “Client”, and for house/proprietary accounts select “House”.
Collateral	Checked to true for Standard Client Account since this is the account through which margin payments will be settled.
Child Account Indicator	Checked to false for Standard Client Account. By definition, this account type will not have any children.
Margin Mode	Select between “OTE” (open trade equity) and “Realized VM” modes to drive how unrealized PL is treated in the account, statement and margin call calculation.
Deposit Contract	References the Deposit (‘VM’) Contract configured for this LE to aggregate the assets and balances used in the margin calculation. Attach the Master collateral contract to the account. This contract is used to link the clearing account activity to each exposure group/child contract for the settlement of the variation margin in the original currency.
Liability Contract	References the Liability (‘IM’) Contract configured for this LE to aggregate their margin requirements. Attach the unique IM contract to the account. This contract is used to create the collateral exposure trades for this account.
Risk Setting – Multiplier	User entered value which can be used to mark up the Margin Requirement calculation.

Field Name	Purpose/Impact
	Default value is 1.0 which implies no markup (multiply calculated margin by 1). Value can be greater than or less than 1.
Risk Setting - Netting	Indicates how to calculate risk on the positions in this account: 'Net' will calculate risk on all positions in the account considering any risk offsetting available in the methodology. 'Gross' will calculate risk on each position in the account individually.
Parent	Empty for Standard Client Account
Status	Status must be set to Active to be able to select the account for clearing activity.

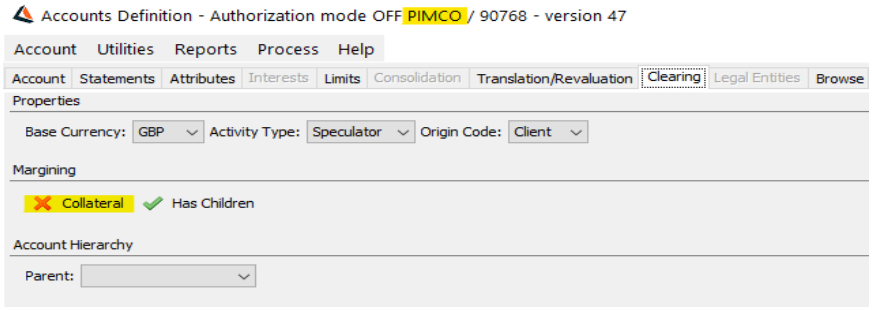
7.1.2 Standard IM Client Account

To avoid impacting the Cash Movement section of the financial summary for the client account and segregate cashflows hitting VM and IM account, you have to define a specific IM Clearing Account for the client. This account is a standard DDA/client SETTLE Account without the Clearing Type. This account will be attached to a specific SDI for Product Type = MarginCall and SD Filter referring to the Initial Margin Contract Id.

There is no Clearing no Statement tab to specify for that IM account – just defined to segregate the transfers of the Initial Margin.



Refer to Section on Settlement Instruction for SDI setup for VM and IM Client Accounts.



Note: Parent Account is used to capture only Child's transaction activities, and each Child account manage the collateral.

For such use case, the collateral can be unticked to onboard Parent Account.

7.1.3 Parent VM Client Account

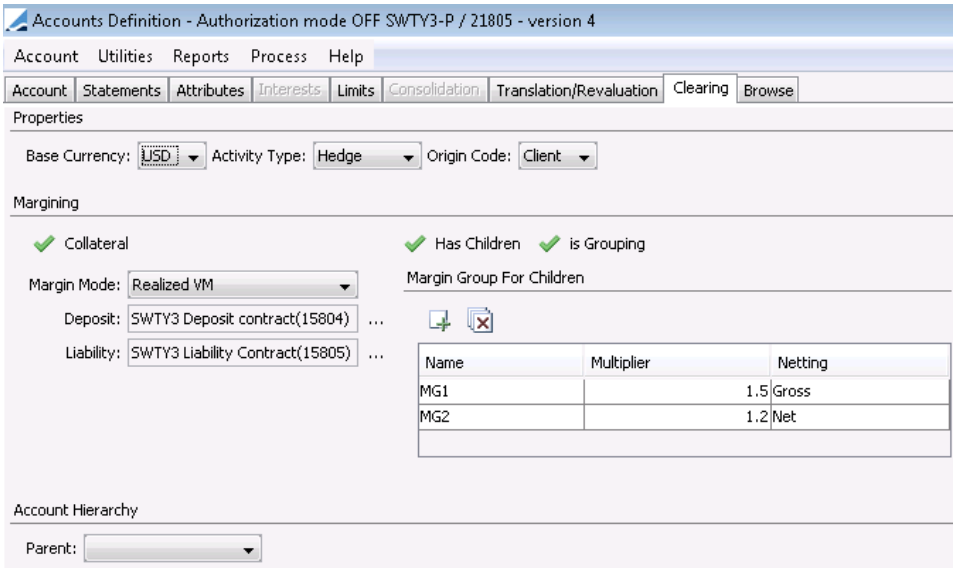
"Account" Tab

The fields on the Account tab for a Parent Account follow the same rules as a Standard Account.

"Attributes" Tab

The fields on the Attributes tab for a Parent Account follow the same rules as a Standard Account.

"Clearing" Tab



Field Name	Purpose/Impact
Base Currency	Represents the base currency for the account, used to convert balances in the client statement to a single currency.
Activity Type	Select either hedge or speculator. This field can impact the way initial margin is calculated for the account.
Origin Code	For a client account select "Client", and for house/proprietary accounts select "House".
Collateral	Checked to true for Parent Account since this is the account through which margin payments will be settled.

Field Name	Purpose/Impact
Child Account Indicator	Checked to true for Parent Account. By definition, this account type will have one or more associated child accounts.
Child Account Grouping Indicator	If set to false, the child accounts underneath this parent will all behave independent of each other in terms of margin calculation. If set to true, this field allows the PO to create a child account grouping structure which could allow margin to be calculated across one or more child accounts. When set to true, the Risk Setting panel is exposed for the user to configure the appropriate grouping.
Margin Mode	Select between "OTE" (open trade equity) and "Realized VM" modes to drive how unrealized PL is treated in the account, statement and margin call calculation.
Deposit Contract	References the Deposit Contract configured for this LE to aggregate the assets and balances used in the margin calculation across all child accounts.
Liability Contract	References the Liability Contract configured for this LE to aggregate their margin requirements across all margin groups.
Risk Setting - Name	When child account grouping is activated, this field represents the name of a Margin Group into which a child account can be placed. For a single parent account with multiple margin groups, all margin group names must be unique.
Risk Setting – Multiplier	User entered value which can be used to mark up the Margin Requirement calculation for each defined Margin Group. Default value is 1.0 which implies no markup (multiply calculated margin by 1). Value can be greater than or less than 1.
Risk Setting - Netting	Indicates how to calculate risk on the positions in each Margin Group: 'Net' will calculate risk on all positions across all child account belonging to the Margin Group, considering any risk offsetting available in the methodology. 'Gross' will calculate risk on each position in the accounts belonging to the Margin Group individually.
Parent	Empty for Parent Account.
Status	Status must be set to Active to be able to select the account for clearing activity.

7.1.4 Child VM Client Account

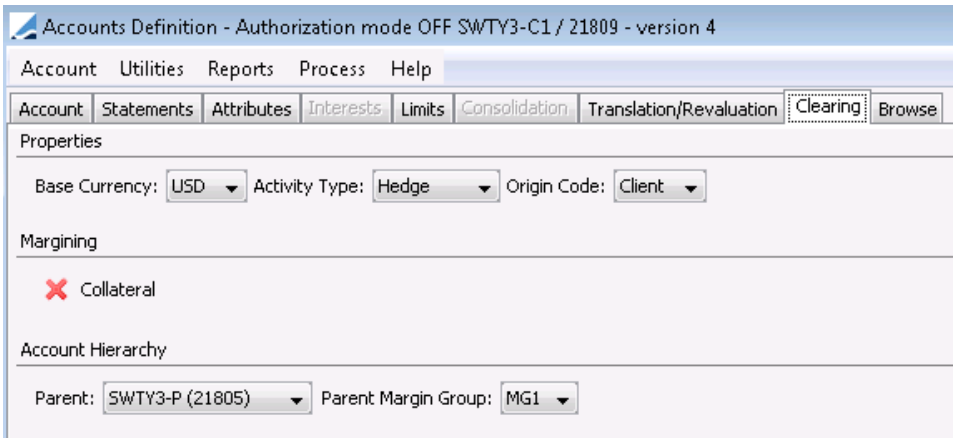
"Account" Tab

The fields on the Account tab for a Parent Account follow the same rules as a Standard Account.

"Attributes" Tab

The fields on the Attributes tab for a Parent Account follow the same rules as a Standard Account.

"Clearing" Tab



Field Name	Purpose/Impact
Base Currency	Represents the base currency for the account, used to convert balances in the client statement to a single currency.
Activity Type	Select either hedge or speculator. This field can impact the way initial margin is calculated for the account.
Origin Code	For a client account select "Client", and for house/proprietary accounts select "House".
Collateral	Checked to false for a Child Account, since only positions will be managed at this level.
Parent	Mandatory field which references the Parent Account to which the account is associated. Restricted to Parents Accounts with the same LE and PO.
Parent Margin Group	References the Margin Group to which the account belongs. Restricted to Margin Groups defined on the selected Parent Account. This field is mandatory only if the Parent Account 'Child Grouping' setting is set to true.

Field Name	Purpose/Impact
Status	Status must be set to Active to be able to select the account for clearing activity.

7.1.5 Parent IM Client Account

Usually, when using the Parent and Child account structure, the IM is paid from the parent level.

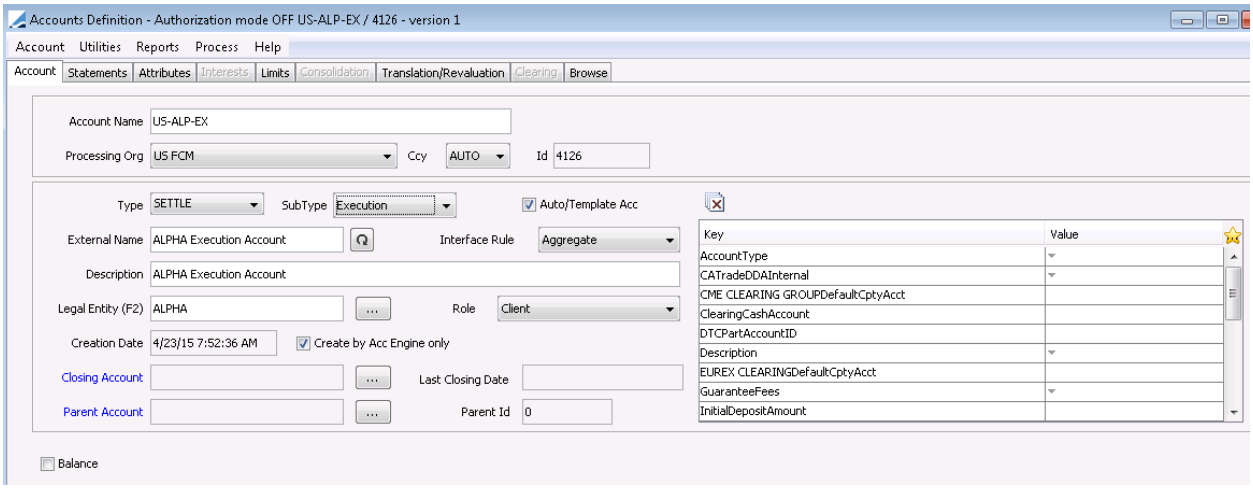
In that case, a specific Parent LE IM Account can be specified to isolate that flow from the VM flows.

This account will be defined with parent as a Client owner of the standard 'DDA' Account.

7.2 Client Execution Account

This account manages trades which the PO executes then gives up to another clearing broker. By selecting a subtype of 'Execution' the Clearing tab is not activated so there is no configuration allowed/required on that tab.

"Account" Tab



Field Name	Purpose/Impact
Account Name	The unique identifier of the Account in the Books and Records. User Entered using whatever naming convention the user prefers.
Processing Org	The PO who is managing this account.
Ccy	Set to AUTO. Note, "Auto/Template Acc" must be checked for AUTO to appear in the Ccy menu.
Type	Set to SETTLE.

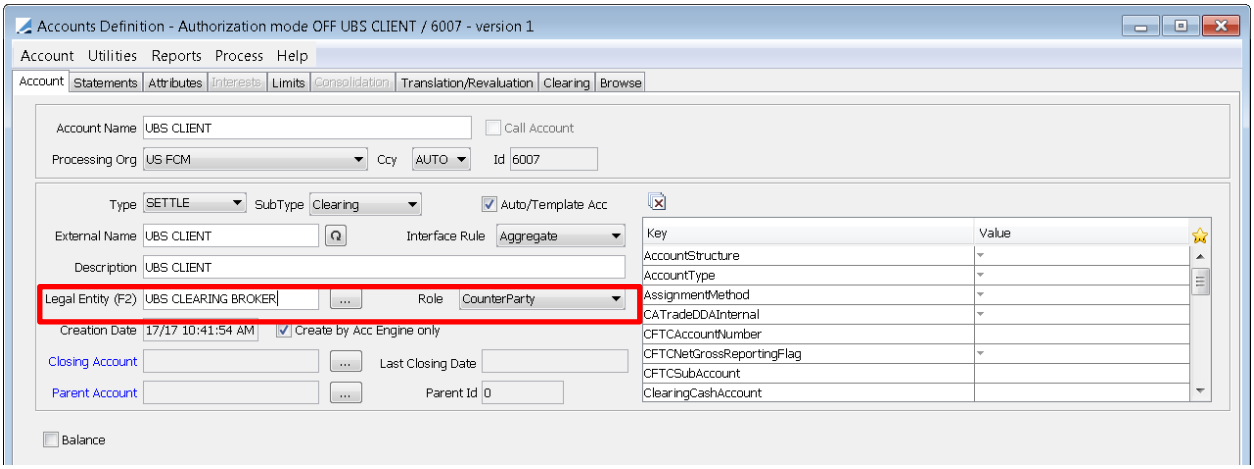
Field Name	Purpose/Impact
SubType	Set to Execution. This will not activate the Clearing tab of the Account, and this account will not participate in EOD processing.
Auto/Template Acc	Check this field to create automatic accounts in each settlement currency.
External Name	Optional field which can be used to provide a secondary name to the account for reporting and display.
Description	Optional field which can be used to provide additional information for reporting and display.
Legal Entity	The Client LE who this account is opened on behalf of.
Role	Set to Client
Create by Acc Engine only	Check this field to suppress the automatic accounts from being searchable.
Status	Displays the status of an account. Processing and reporting can use this field to include or exclude an account from processing events. Status must be set to Active to be able to select the account for clearing activity.

7.3 Counterparty Account Configuration

Counterparty accounts represent the accounts managed by the central counterparty into which the clearing member is sending their clients' trades. These entities can be actual clearinghouses or may be other clearing brokers acting as 3rd party clearers. The configuration of the accounts is identical in either case.

7.3.1 Standard Counterparty Account

"Account" Tab Fields

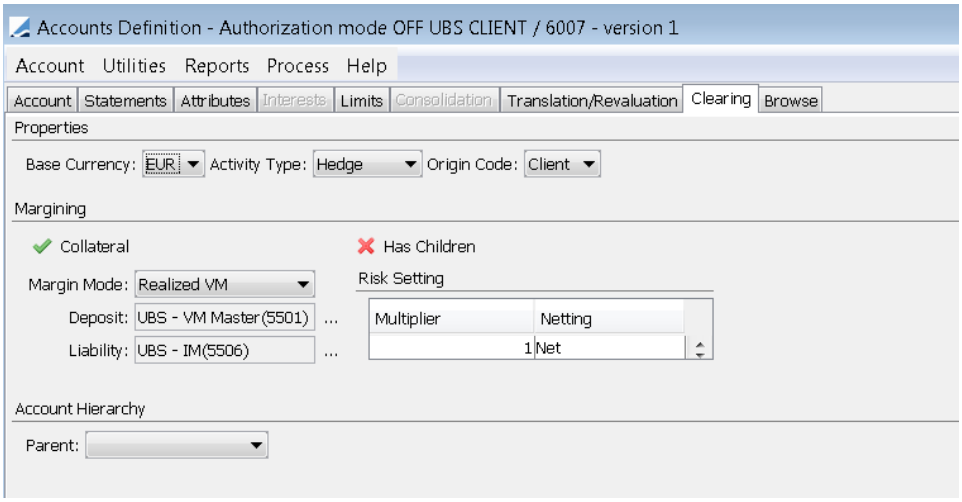


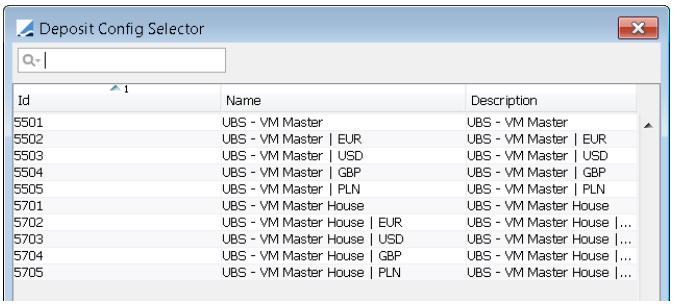
Field Name	Purpose/Impact
Account Name	The unique identifier of the Account in the Books and Records, typically set to match the name of the account at the CCP.
Processing Org	The PO to whom this account is created at the CCP or Clearing Broker
Ccy	Set to AUTO. Note, "Auto/Template Acc" must be checked for AUTO to appear in the Ccy menu.
Type	Set to SETTLE.
SubType	Set to Clearing for a Counterparty Account. This activates the Clearing tab of the Account.
Auto/Template Acc	Check this field to create automatic accounts in each settlement currency.
External Name	Optional field which can be used to provide a secondary name to the account for reporting and display.
Description	Optional field which can be used to provide additional information for reporting and display.
Legal Entity	The Counterparty LE who this account is opened on behalf of.
Role	Set to **CounterParty**.
Create by Acc Engine only	Check this field to suppress the automatic accounts from being searchable.
Status	Displays the status of an account. Processing and reporting can use this field to include or exclude an account from processing events. Status must be set to Active

"Attributes" Tab

The fields on the Attributes tab for a CounterParty Account follow the same rules as a Client Account.

"Clearing" Tab





Field Name	Purpose/Impact
Base Currency	Represents the base currency for the account.
Activity Type	Always set this to Hedge for CounterParty Accounts.
Origin Code	For a counterparty account containing client positions select “Client”, and for one containing house/proprietary positions select “House”.
Collateral	Checked to true for Standard Counterparty Account since this is the account through which margin payments will be settled.
Child Account Indicator	Checked to false for Standard Counterparty Account. By definition, this account type will not have any children.
Margin Mode	Should always be set to “Realized VM” for counterparty accounts.
Deposit Contract	References the Deposit (‘VM’) Contract configured for this LE to aggregate the assets and balances used in the margin calculation. Attach the Master collateral contract to the account. This contract is used to link the clearing account activity to each exposure group/child contract for the settlement of the variation margin in the original currency.

Field Name	Purpose/Impact
Liability Contract	References the Liability ('IM') Contract configured for this LE to aggregate their margin requirements. Attach the unique IM contract to the account. This contract is used to create the collateral exposure trades for this account.
Risk Setting – Multiplier	Always set to 1 for Counterparty Accounts
Risk Setting - Netting	Indicates how to calculate risk on the positions in this account: 'Net' will calculate risk on all positions in the account considering any risk offsetting available in the methodology. 'Gross' will calculate risk on each position in the account individually. 'Disclosed' will calculate risk based on the client account position groupings. This setting allows the CCP to calculate risk on omnibus accounts with the understanding that some of the positions belong to the same end client and should get the benefit of risk offsetting.
Parent	Empty for Standard Counterparty Account.
Status	Displays the status of an account. Status must be set to Active to be able to select the account for clearing activity.

7.3.2 Parent Counterparty Account

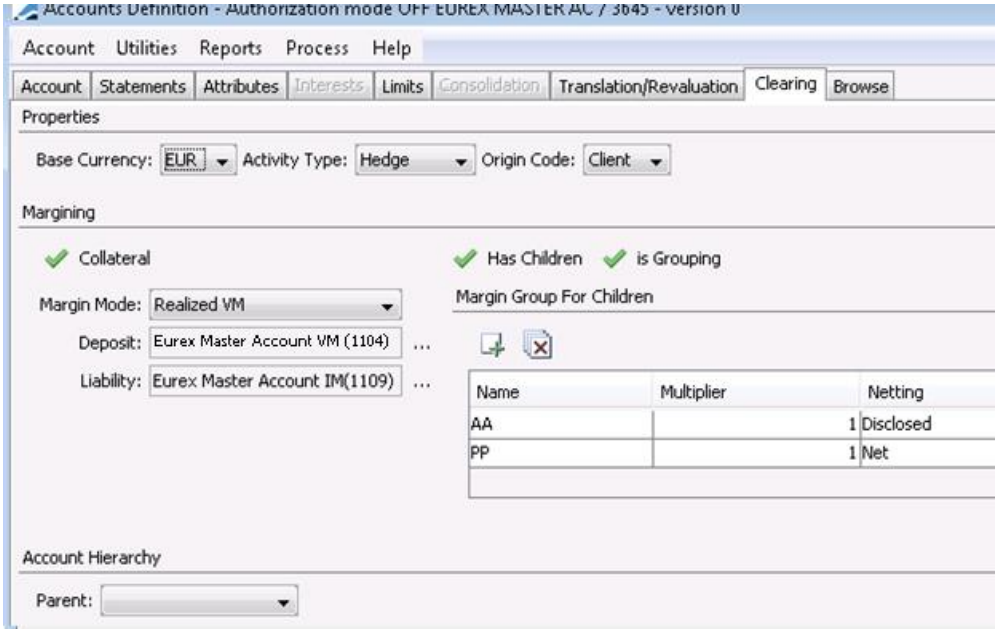
"Account" Tab

The fields on the Account tab for a Parent Account follow the same rules as a Standard Account

"Attributes" Tab

The fields on the Attributes tab for a Parent Account follow the same rules as a Standard Account

"Clearing" Tab



Field Name	Purpose/Impact
Base Currency	Represents the base currency for the account.
Activity Type	Always set this to Hedge for CounterParty Accounts.
Origin Code	For a counterparty account containing client positions select “Client”, and for one containing house/proprietary positions select “House”.
Collateral	Checked to true for Parent Account since this is the account through which margin payments will be settled.
Child Account Indicator	Checked to true for Parent Account. By definition, this account type will have one or more associated child accounts.
Child Account Grouping Indicator	If set to false, the child accounts underneath this parent will all behave independent of each other in terms of margin calculation. If set to true, this field allows the PO to create a child account grouping structure which could allow margin to be calculated across one or more child accounts. When set to true, the Risk Setting panel is exposed for the user to configure the appropriate grouping.
Margin Mode	Should always be set to “Realized VM” for counterparty accounts because they do not differentiate between realized and unrealized PL.
Deposit Contract	References the Deposit (‘VM’) Contract configured for this LE to aggregate the assets and balances used in the margin calculation. Attach the Master collateral contract to the account. This contract is used to link the clearing

Field Name	Purpose/Impact
	account activity to each exposure group/child contract for the settlement of the variation margin in the original currency.
Liability Contract	References the Liability ('IM') Contract configured for this LE to aggregate their margin requirements. Attach the unique IM contract to the account. This contract is used to create the collateral exposure trades for this account.
Risk Setting - Name	When child account grouping is activated, this field represents the name of a Margin Group into which a child account can be placed. For a single parent account with multiple margin groups, all margin group names must be unique.
Risk Setting – Multiplier	Always set to 1 for Counterparty Accounts.
Risk Setting - Netting	Indicates how to calculate risk on the positions in this account. 'Net' will calculate risk on all positions in the account considering any risk offsetting available in the methodology. 'Gross' will calculate risk on each position in the account individually. 'Disclosed' will calculate risk based on the client account position groupings. This setting allows the CCP to calculate risk on omnibus accounts with the understanding that some of the positions belong to the same end client and should get the benefit of risk offsetting.
Parent	Empty for Parent Account.
Status	Displays the status of an account. Status must be set to Active to be able to select the account for clearing activity.

7.3.3 Child Counterparty Account

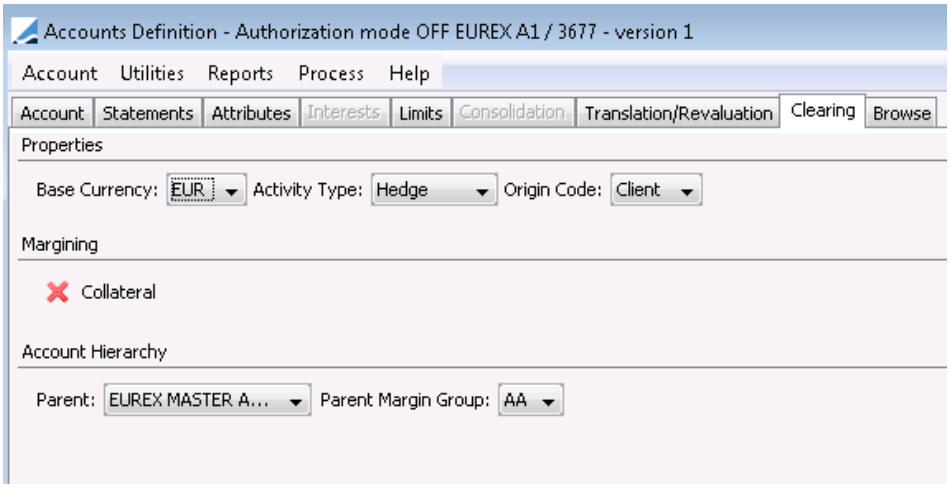
"Account" Tab

The fields on the Account tab for a Child Account follow the same rules as a Standard Account.

"Attributes" Tab

The fields on the Attributes tab for a Child Account follow the same rules as a Standard Account.

"Clearing" Tab



Field Name	Purpose/Impact
Base Currency	Represents the base currency for the account.
Activity Type	Always set this to Hedge for CounterParty Accounts.
Origin Code	For a counterparty account containing client positions select “Client”, and for one containing house/proprietary positions select “House”.
Collateral	Checked to false for a Child Account, since only positions will be managed at this level.
Parent	Mandatory field which references the Parent Account to which the account is associated. Restricted to Parents Accounts with the same LE and PO.
Parent Margin Group	References the Margin Group to which the account belongs. Restricted to Margin Groups defined on the selected Parent Account. This field is mandatory only if the Parent Account ‘Child Grouping’ setting is set to true.

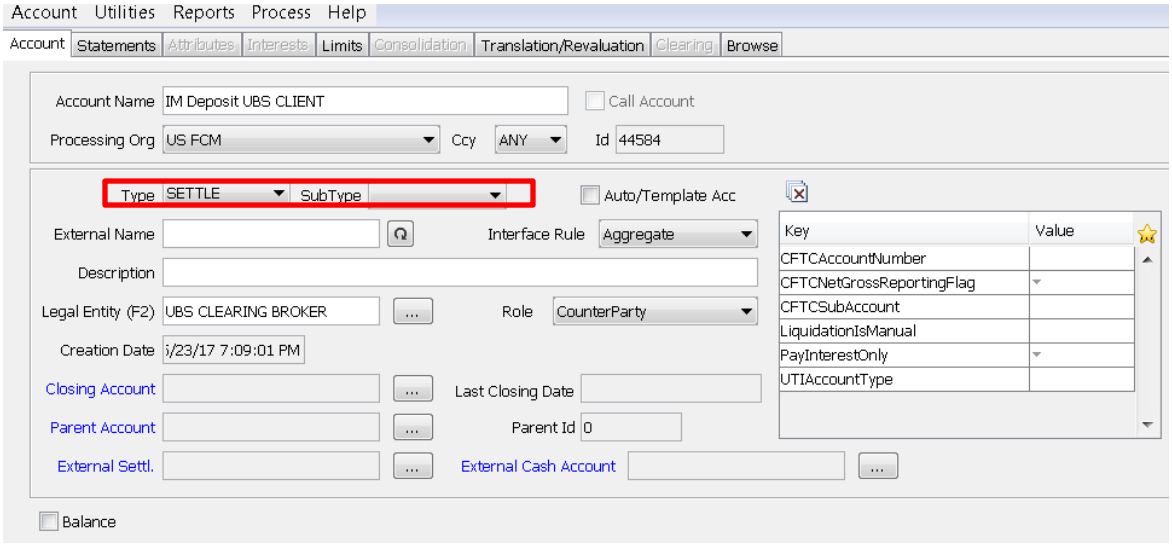
7.3.4 IM Counterparty Account

In some cases, you may want to isolate the IM flow from the rest of the activity of the Counterparty Account – mainly for reconciliation and interest-bearing process on the Deposit part.

In this case, the user will have to define – for standard counterparty accounts – a DDA account for that CCP or Broker with Role = Counterparty; for parent and child structure, a DDA account for the Parent LE with Role = Counterparty.

An example is provided below for a standard broker account.

Refer to section on SDI to attach that account to the Counterparty SDI. Please note this is optional – in the case of Counterparty Account as we do not produce any statement, you may also consolidate all flows into a unique account where VM and IM are integrated.



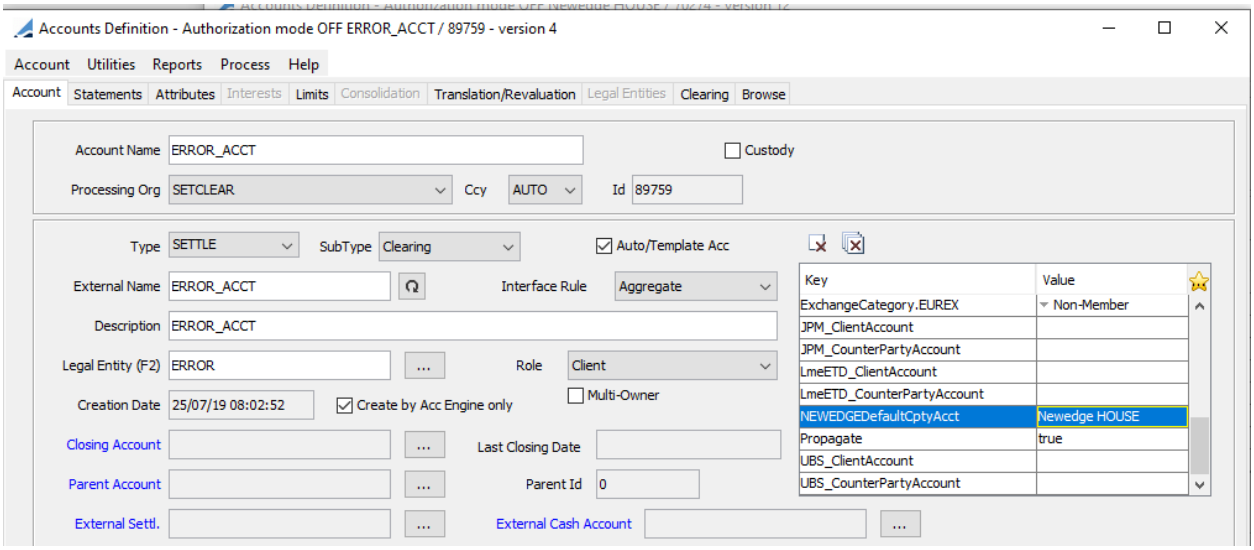
7.4 Default Client and CounterParty Account Setup for Interfaces

The below configuration helps to receive the other Interfaces trade when Counterparty and client account routed to default client and counterparty account when it is not mentioned on the listed derivatives trade file trade/message file coming from upstream.

Configuration	Attribute Type	Attribute Value	CCP+DefaultCptyAcct
PO Attributes	ClientErrorAccount	ERROR_ACCT	In Error Account Definition, add the Accountproperty = Counterparty/CCP LE short name +DefaultCptyAcct

Client Error Account Definition:

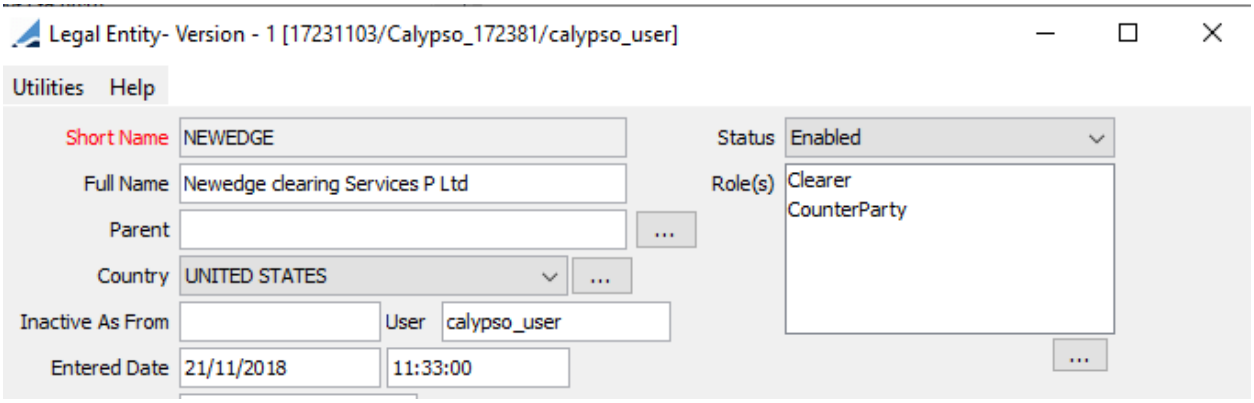
This error account is generally used when there is no client account information in Trade/message file. This is a general use case for end user where they don't use a client account from broker/FCM etc.



On the above error account which is linked in the PO attributes ClientErrorAccount need to define with Account property with prefix of Counterparty/CCP Legal Entity short name+"DefaultCptyAcct" and the value should be Counterparty/CCP Account Definition Account Name.

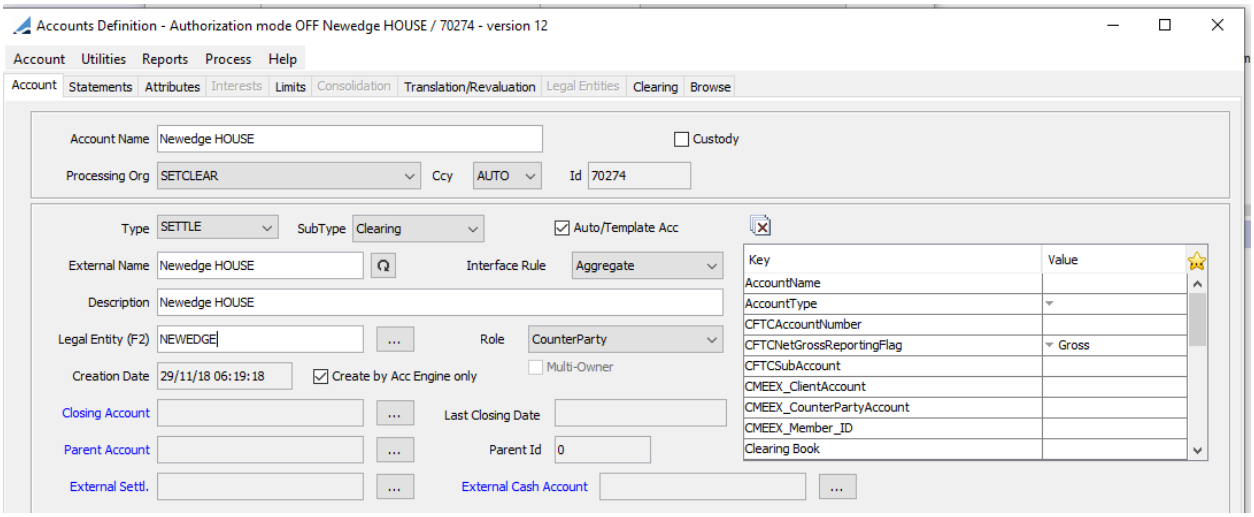
Example:

Counterparty Legalentity



Counterparty short name is "NEWEDGE"

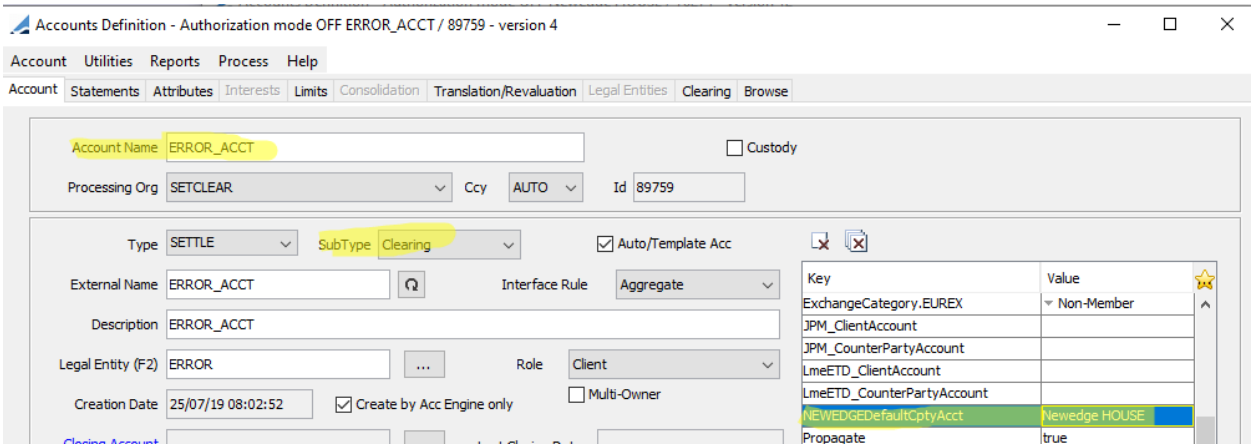
Counterparty Account definition



In the above screen, the Counterparty Account definition of which Account name is “Newedge HOUSE”.

This account is used to for clearing purpose and this account is defined with LE broker/FCM as PO is an end user.

Error Account Definition Mapping details:



NEWEDGE is CounterParty LE Short name in this case which needs to be configured as “**NEWEDGE**DefaultCptyAcct” as a AccountProperty in Client Error Account definition.

Step 1: System identifies the PO by “Trading Book” mapping from the value coming from upstream interfaces.

Step2: from the PO Legal Entity system identifies the default client Account from PO LE attribute called “ClientErrorAccount” for example, in this case the client account is defined as a “ErrorAccount”.

Step3: in this “ErrorAccount” Definition, user need to provide the counterparty account name which can be mapped through AccountProperty “***CounterParty/CCP legal entity short name***+DefaultCptyAcct”.

This counterparty account is a clearing account associated with a counterparty which is mapped through LE attribute by Interfaces.

Settlement Instructions Configuration

Settlement Instructions are required to route both internal and external transfers.

Diagram 1 – SDI between the Client Account and PO for Internal Settlement (clearing activity from transactions, fees, clearing transfers) and margin calls (internal and external SDI).

Please note Internal SDI for Product Type = Margin Call for the Client Role will need to use SD Filter with reference of VM contracts. We will need an SDI Role Client for Margin Call with SD Filter = VM contracts and one SDI Role Client for Margin Call with SD Filter = IM Contract.

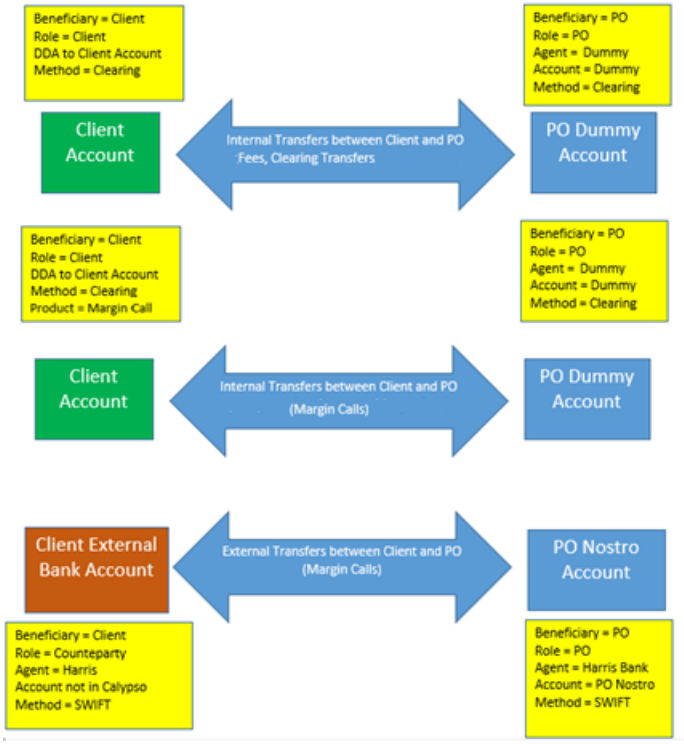
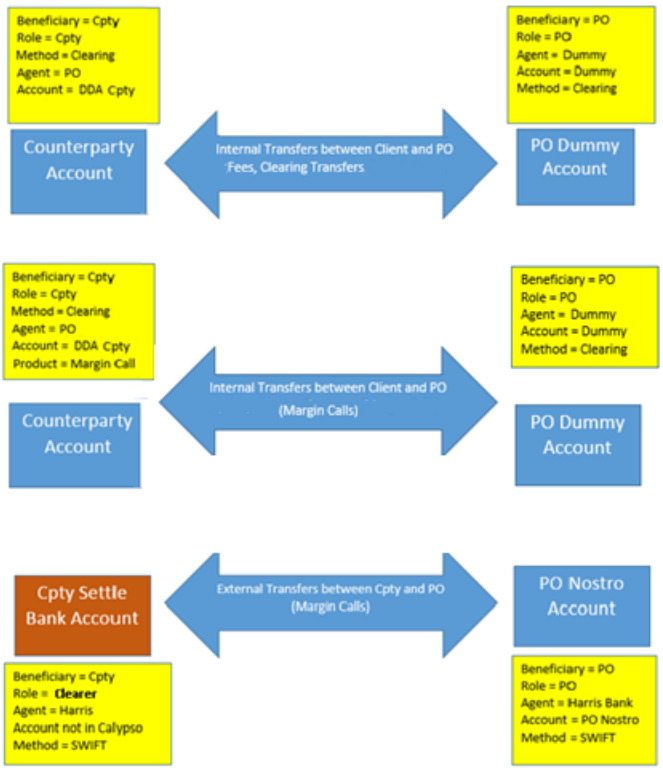


Diagram 2 – SDI between the CounterParty (CCP or Clearer) and PO for Internal Settlement (clearing activity from transactions, fees, clearing transfers) and external settlements (margin calls).

In the case where you want to segregate flows between VM and IM for the CCP or Broker side, you will have to define 2 Internal SDIs for Product Type = Margin Call Role = CounterParty. One will refer to SD Filter with reference of VM contracts and the other one will refer to IM Contract. If you globalize all flows for the Counterparty, you may decide to define only one Margin Call Internal SDI with SD Filter = VM + IM contracts.



8.1 Client SDIs

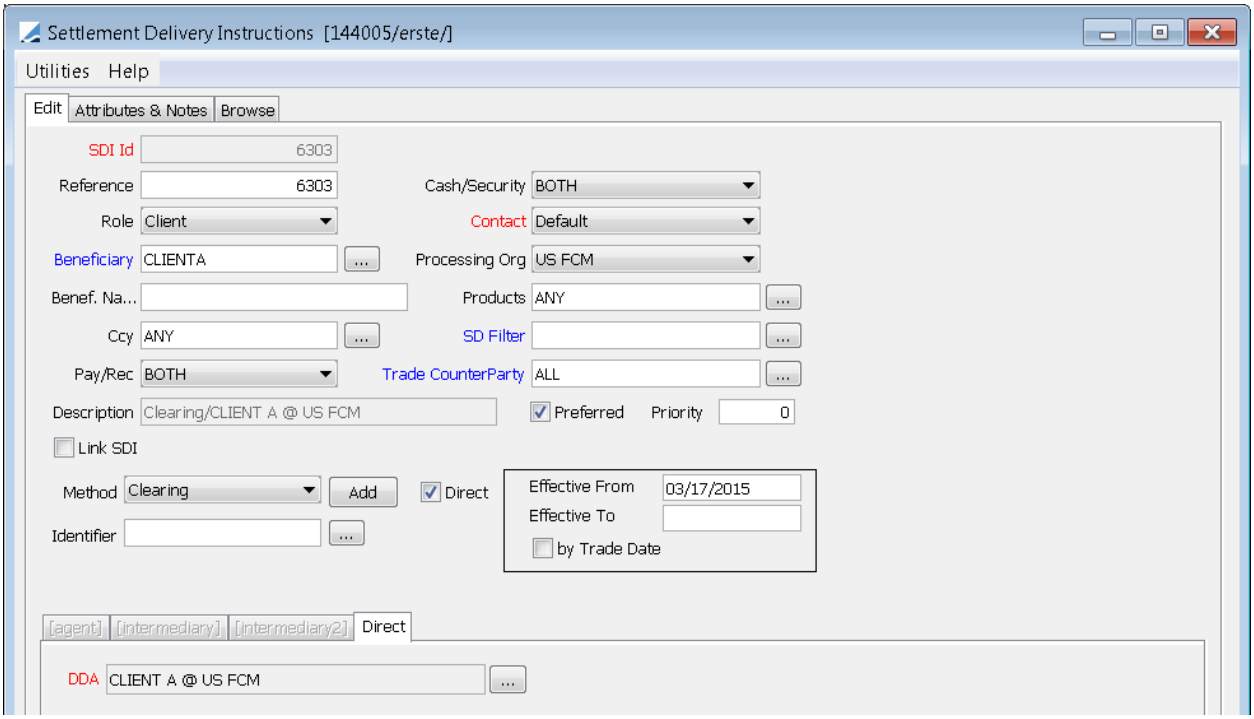
Client SDI for VM Internal Account Balances – Std Flows from Clearing Activity

Settlement Instructions should be configured to settle internal flows to the Client Collateral Account when the LE role is "Client". We use the Method 'CLEARING' to match these SDIs to the PO SDI with the same Method. VM Flows have to be segregated from the IM flow to exclude IM settlement from the Cash Movement buckets/section of the financial summary. To do so, you will have to define specific SDI for Margin Call products for VM contracts on one side and for IM contract on the other side.

Generic Client SDI for all clearing activity occurring during the day (fees & comms, premium, realized_pl, exercise fee, opt_cash_adj, sov, lov, npvfut, npvopt, otefut, oteopt and their reversal).

This SDI can be used for VM margin call settlement if the client has only one clearing account, else you will have to define specific Internal SDI used for VM margin call settlement.

Details are provided below.



Field Name	Purpose/Impact
Reference	System populated with SDI Id.
Cash/Security	Set to BOTH.
Role	Role must be Client for Client Account SDI.
Contact	Default.
Beneficiary	The LE Short Name of the Client.
Processing Org	The LE Short Name of the PO managing this account.
Benef. Name	Optional field.
Products	Set to ANY.
Ccy	Set to ANY.
SD Filter	Can be used to filter specific transfers, but main SDI will leave this field blank for simple account configuration. Note you need to define a specific CLEARING SDI for Role = Client and SD Filter using VM MarginCalls Ids for Product Type = Margin Call when the client has more than one clearing account to allow appropriate SDI selection for the Margin Call trade.

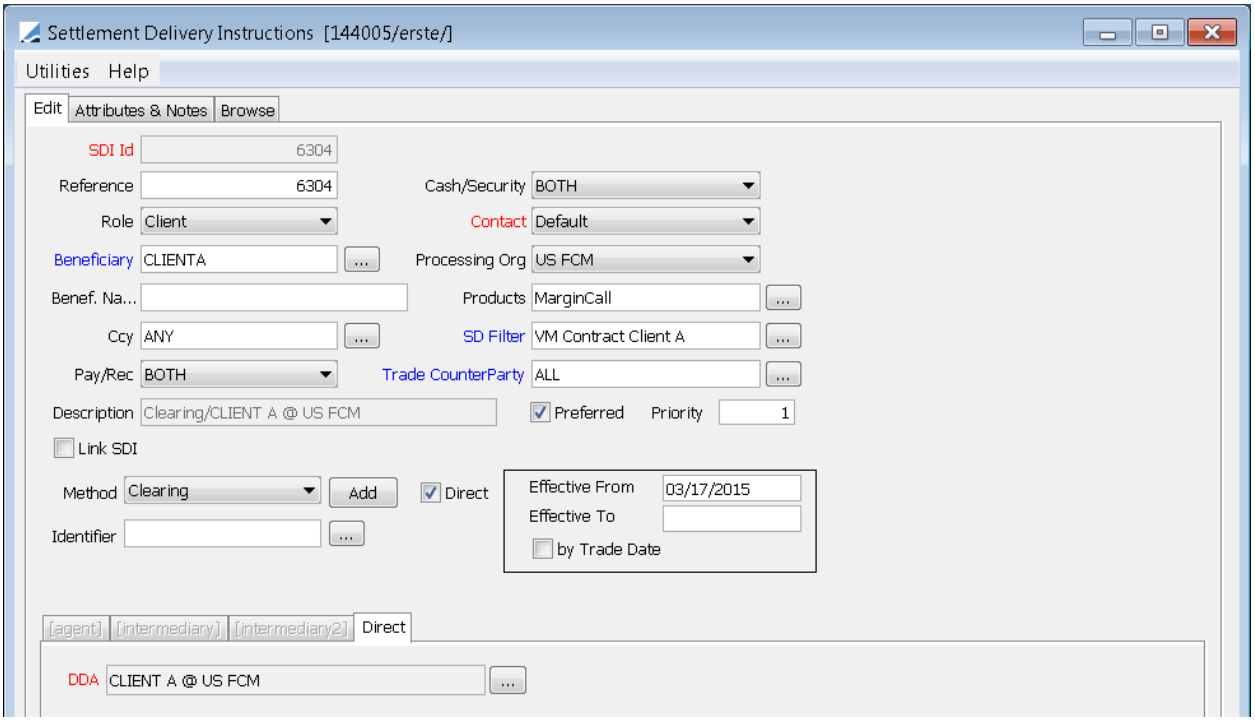
Field Name	Purpose/Impact
Pay/Rec	Set to BOTH.
Trade CounterParty	Set to ALL.
Preferred	Check this Box so that this is the first SDI attempted to be used.
Priority	Set to 0 so that this is the first SDI attempted to be used.
Method	Set to CLEARING. This Method must match the same method on the matching PO SDI for internal flows.
Direct	Check this Box.
DDA	Enter the Client Standard or Parent Account. We will also refer to this account as the "Collateral Account" since it has the Collateral flag set to true.

For client internal transfers, the SDI selection is driven by the trade attribute Client Account set at the transaction level except for Margin Call which follows the standard SDI selection (this attribute is not propagated on Margin Call trade).

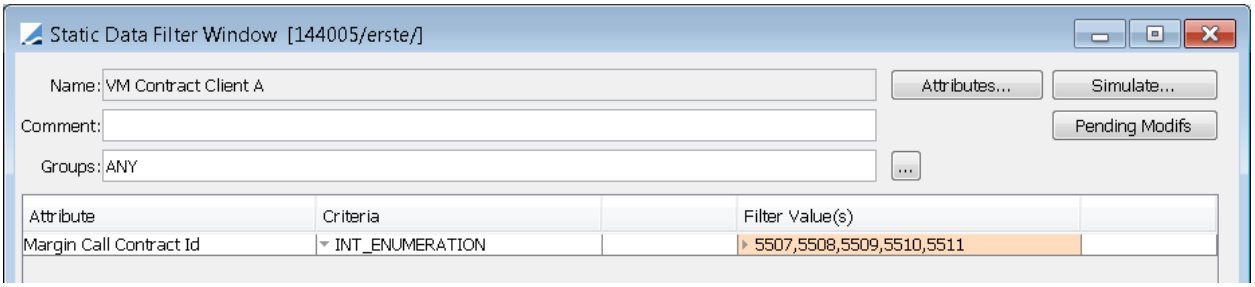
When the client has more than one clearing account you will have to define, in addition to the standard Client SDI presented above, specific Client SDIs for the Role = Client and Product = Margin Call with SD Filter referring to the VM Margin Calls Contract Ids = Client Master and Children Contract Id. This will force the system to select the appropriate SDI for the Margin Call trade for the Role = Client. An example is presented below.

No need to define this extra-SDI if the client has only one clearing account.

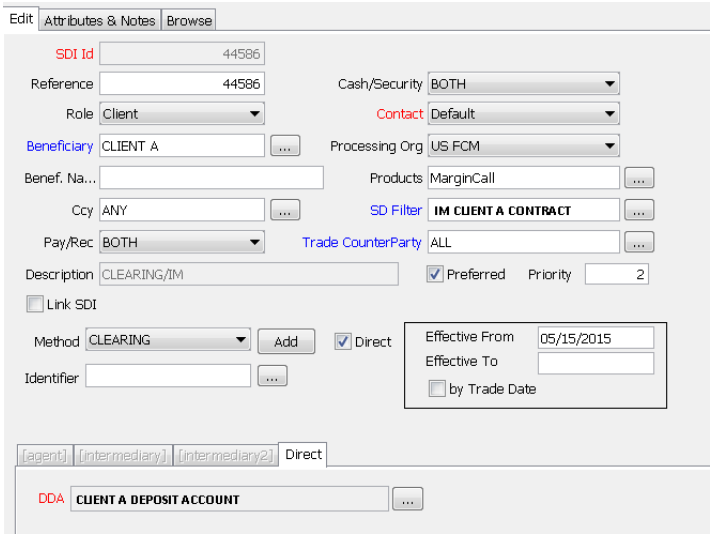
Client SDI for VM Internal Account Balances – Specific SDI for Margin Call VM when Client has more than one VM clearing account



SD Filter must list all margin call contracts for the Margin Call Trade, *i.e. Master and Children or Exposure Groups*



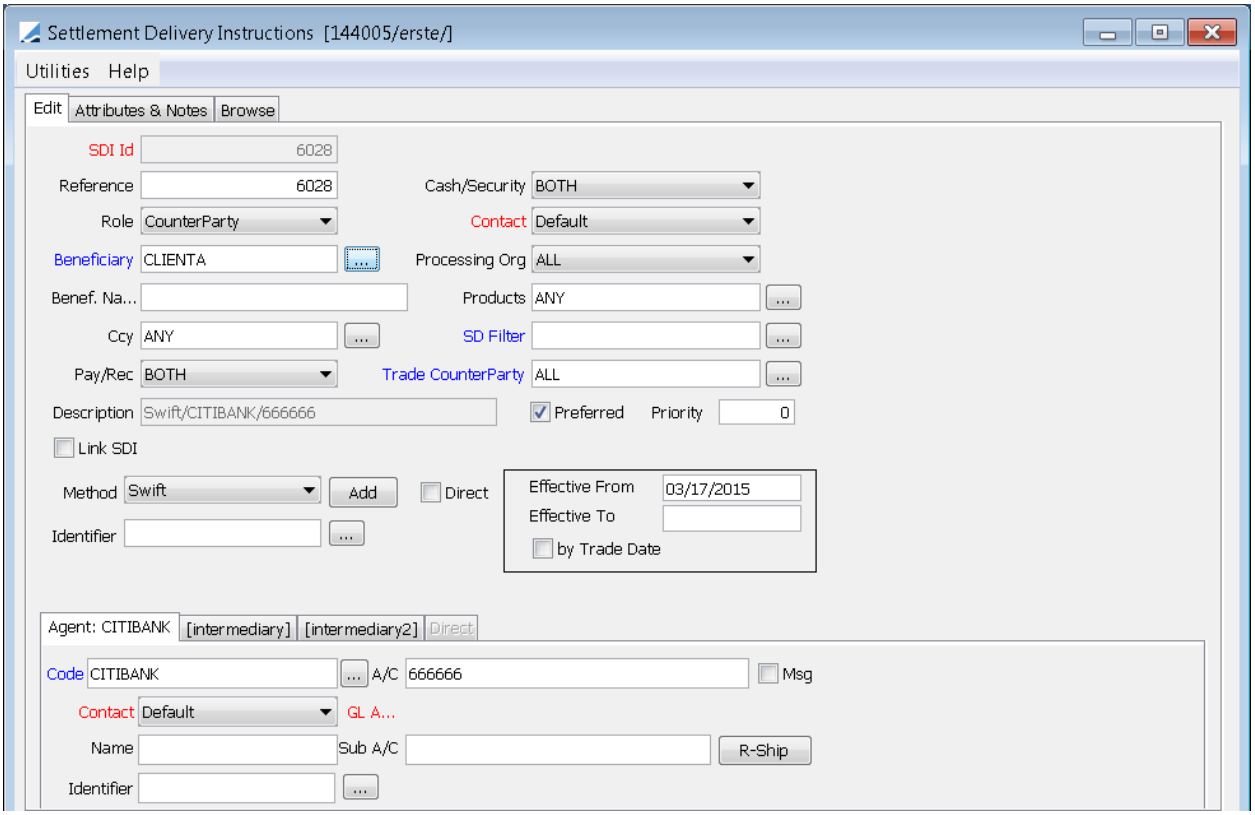
Client SDI for IM Internal Account Balances



SD Filter IM CLIENT A CONTRACT is using the Margin Call Contract Id of the IM contract of CLIENT A to pick that specific IM Account for margin settlements related to IM Deposit only.

External Client SDI

These are the settlement instructions for the actual settled payments between the client and FCM. This SDI is needed to reflect the cash management impact of the margin call (and potentially other cash adjustment flows) process between the FCM and its clients.



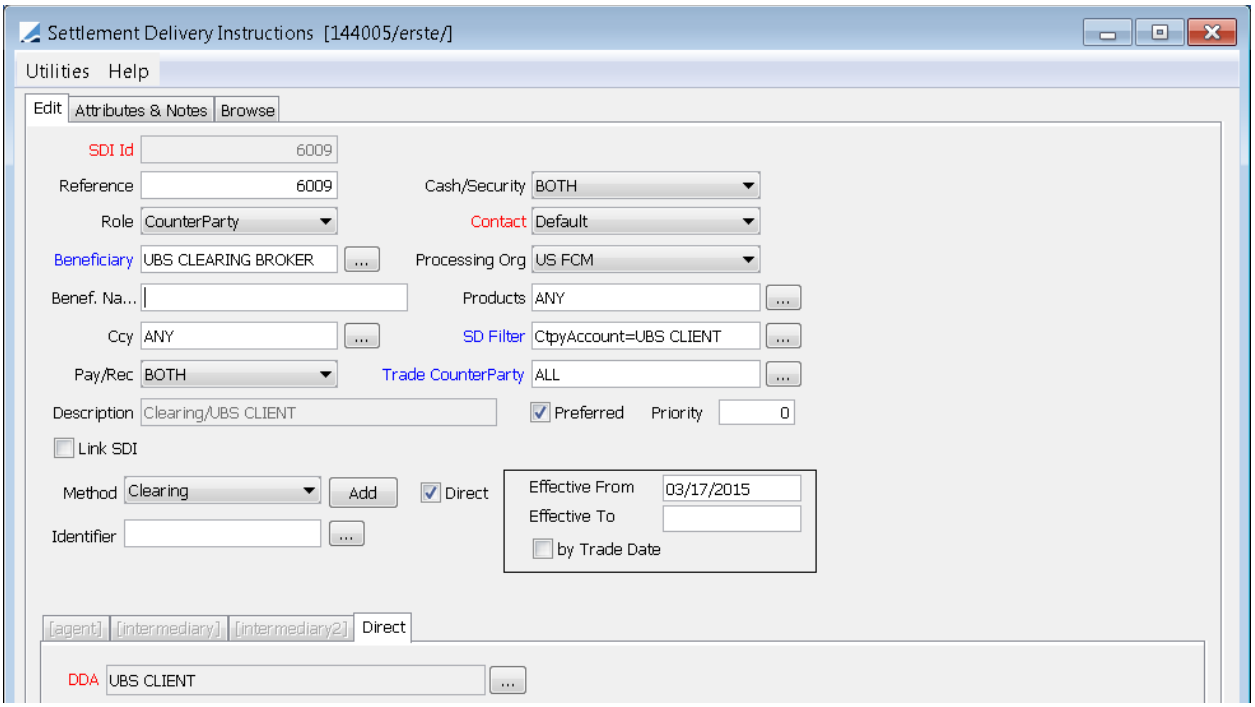
Field Name	Purpose/Impact
Reference	System populated with SDI Id.
Cash/Security	Set to BOTH.
Role	Role must be CounterParty for external settlements. This SDI will only be used when the Client is treated as a CounterParty on a transfer.
Contact	Default.
Beneficiary	The LE Short Name of the Client.
Processing Org	The LE Short Name of the PO managing this account or ALL. External SDI is usually not linked to a specific PO.
Benef. Name	Optional field.
Products	Set to ANY.
Ccy	Set to ANY.
SD Filter	Can be used to filter specific transfers, but main SDI will leave this field blank for simple account configuration.
Pay/Rec	Set to BOTH.
Trade CounterParty	Set to ALL.
Preferred	Check this Box so that this is the first SDI attempted to be used.
Priority	Set to 0 so that this is the first SDI attempted to be used.
Method	Set to SWIFT. This Method could be set to any value, as long as it matches the same method on the matching PO SDI for external settlements.
Direct	Leave this unchecked since this SDI will be used for external settlements.
Code	The Agent used by the Client.
A/C	Free text description of Client's Account.
Contact	Set to the contact type that will be used to confirm settlement with Client.

8.2 Counterparty SDIs

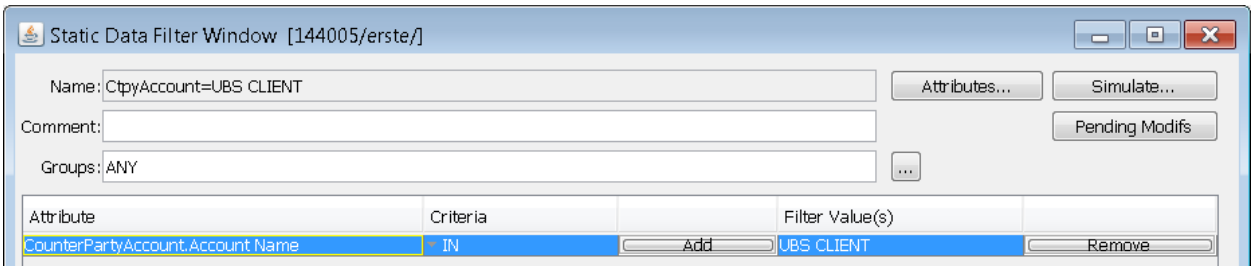
Counterparty Internal Settlement Instructions – Clearing Activity only (not used for Margin Call – VM or IM)

Counterparty SDI's will route transfers to the "mirror view" of the clearing account of the PO. This will be achieved by defining an 'internal' or clearing SDI for the Role Counterparty with the PO/FCM and attach the Account with Role = CounterParty to that CounterParty SDI. An example is presented below.

The SDI selection for the Counterparty is standard. This means that as soon as you have several Clearing Accounts for a CCP or Broker you will have to enrich the CounterParty Clearing SDI with a SD Filter referring to the trade attribute CounterPartyAccount.



SD Filter must refer to the Trade Attribute CounterpartyAccount



Field Name	Purpose/Impact
Reference	System populated with SDI Id.
Cash/Security	Set to BOTH.

Field Name	Purpose/Impact
Role	Role must be **CounterParty**.
Contact	Default.
Beneficiary	The LE Short Name of the CounterParty.
Processing Org	The LE Short Name of the PO managing this account.
Benef. Name	Optional field.
Products	Set to ANY.
Ccy	Set to ANY.
SD Filter	When the Counterparty has only one account, you can leave this field blank. When the Counterparty has more than one clearing account, you will have to define a SD Filter referring to the trade attribute CounterPartyAccount in order to select that appropriate Internal/Clearing SDI. This SDI will apply for all trade types except Margin Call where the SDI selection will not use these trade attributes. Thus, as soon as the CounterParty has more than one clearing account, you will also need to define a specific CLEARING SDI for Role = CounterParty and SD Filter using Margin Call Contract Id for Product Type = Margin Call. This will allow selecting the appropriate SDI selection for the Margin Call trade. Example are provided below.
Pay/Rec	Set to BOTH.
Trade CounterParty	Set to ALL.
Preferred	Check this Box so that this is the first SDI attempted to be used.
Priority	Set to 0 so that this is the first SDI attempted to be used.
Method	Set to CLEARING. This Method must match the same method on the matching PO SDI for internal flows.
Direct	Check this Box.
DDA	Enter the CounterParty account.
Contact	Set to the contact type that will be used to confirm settlement with Client.

Counterparty Internal Settlement Instructions – Margin Call Settlement

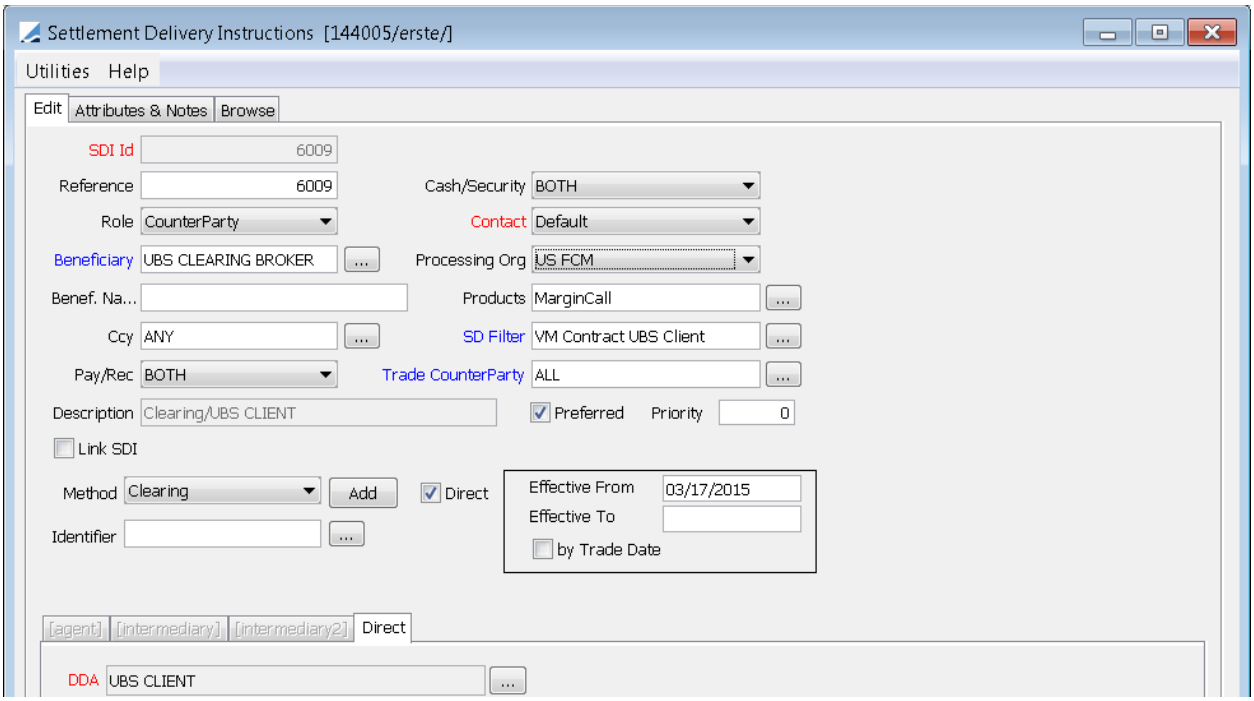
For counterparty "internal" transfers, the SDI selection remains standard but must be driven for most flows by the trade attribute CounterPartyAccount set at the transaction level (using SD Filter to refer to that attribute).

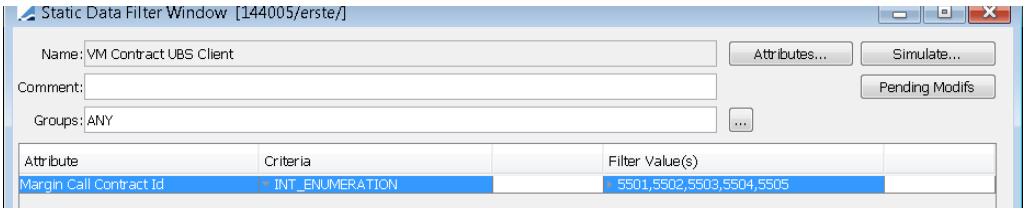
As we do not propagate the CounterPartyAccount on margin call trade, we also need to define specific SDI for Margin Call referring to the proper contract id.

This is a specific Counterparty SDIs for the Role CounterParty and Product = Margin Call with SD Filter referring to the Margin Call Contract Id = List of Master and Children contracts. This will force the system to select the appropriate SDI for the Margin Call trade for the Role = CounterParty. An example is presented below.

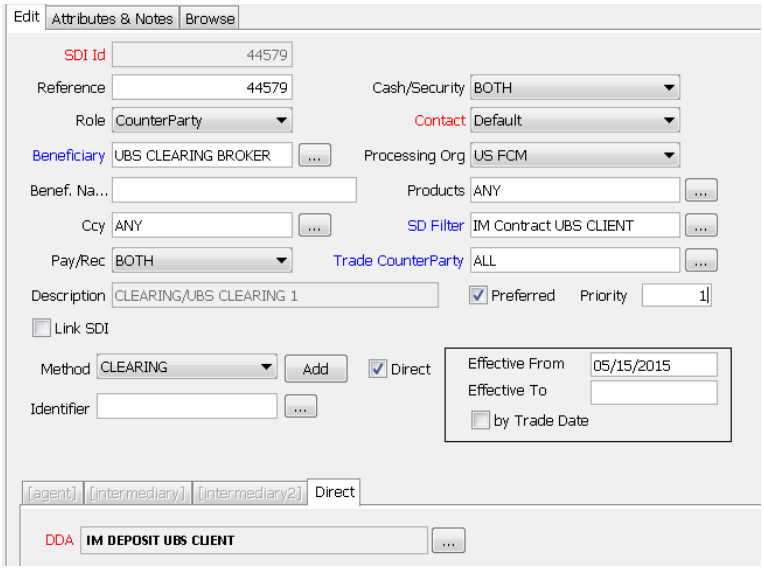
Please note that if you want to segregate the IM portion of the margin for the Counterparty side, you will have to define one SDI for VM Account listing as SD Filter the VM Margin Contract Ids and another one for IM Account listing as SD Filter the IM Margin Contract Id. We present below the case where we segregate VM and IM to mimic the client case and clearly identify the margin type.

VM Internal CounterParty SDI





IM Internal CounterParty SDI

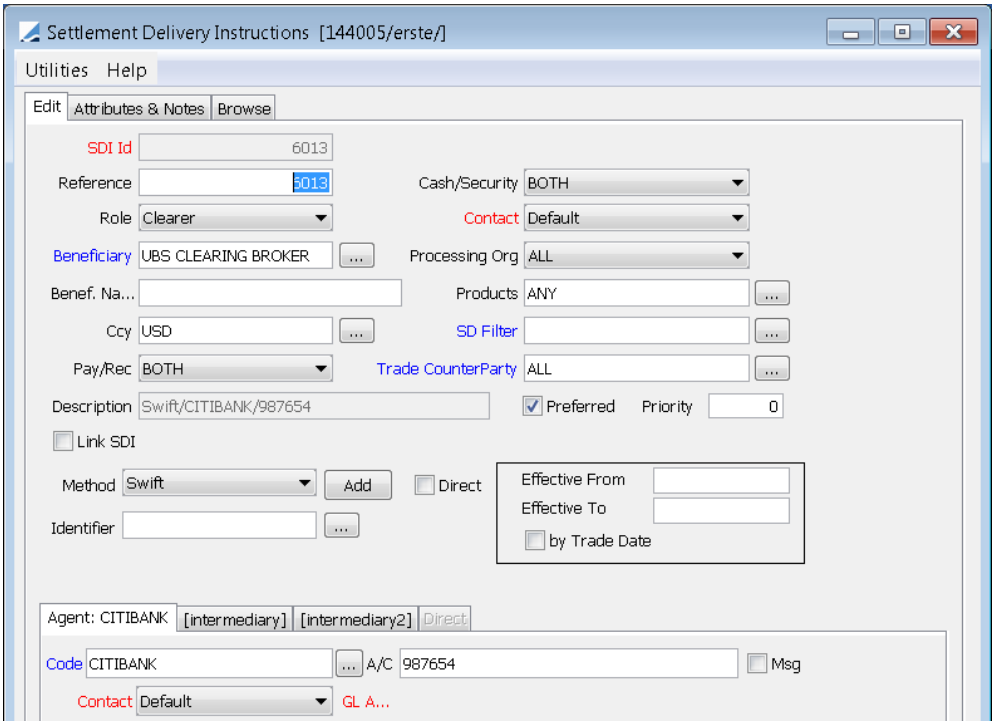


DDA refers to the Counterparty IM Account and SD Filter = IM Contract UBS CLIENT refers to the IM Margin Call contract between the FCM and the Clearing Broker or the CCP.

Counterparty External Settlement Instructions

These SDI are used to generate the external transfers for the settlements to the CCP or Clearer.

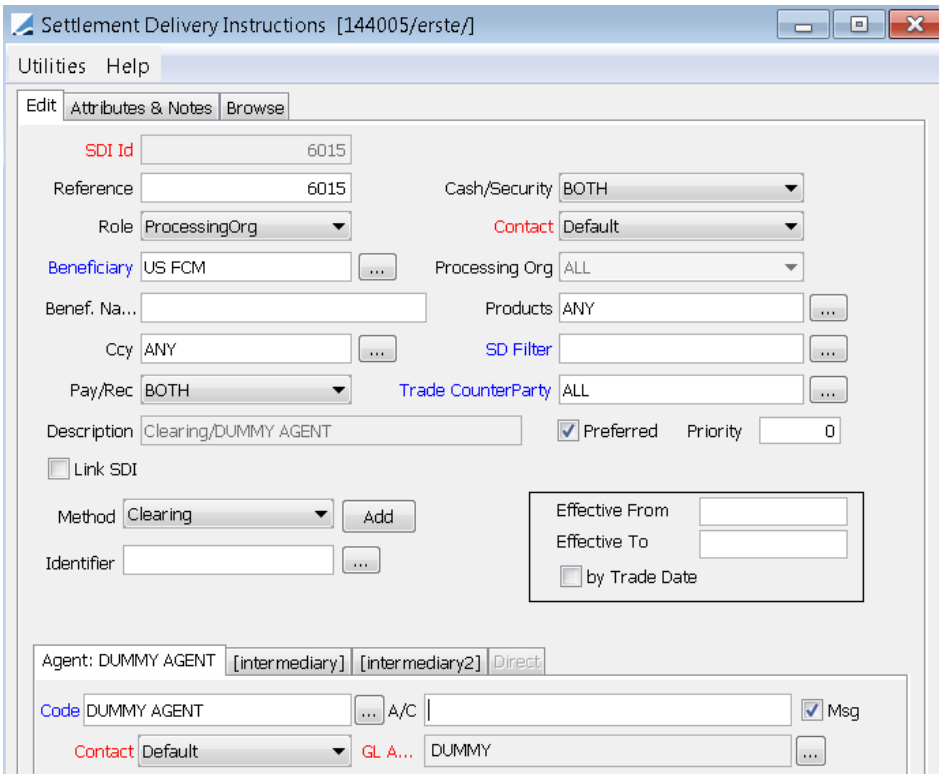
Note the Role must be set to **Clearer** to link to the Orderer Role of our Margin Call contract.



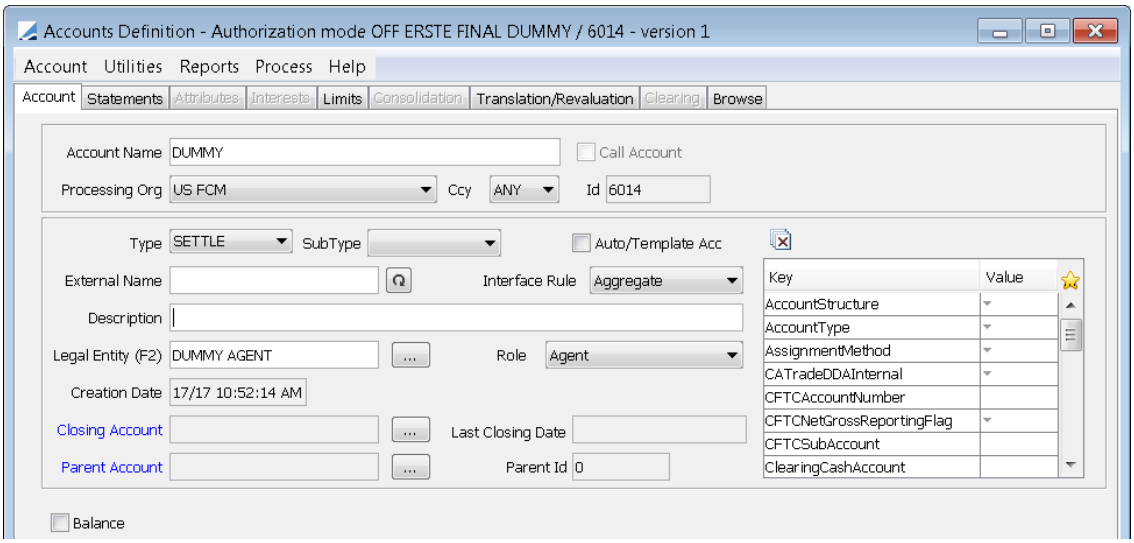
8.3 Processing Org SDIs

PO Internal Settlement Instructions

The PO internal SDI is a technical SDI used to match on one side the Client transfer that will be created with GL Account = Client Account and, on the other side, the CounterParty transfer that will be created with GL Account = CounterParty Account. The same unique PO SDI with Method = Clearing will be used to match both sides and create the expected internal transfers.

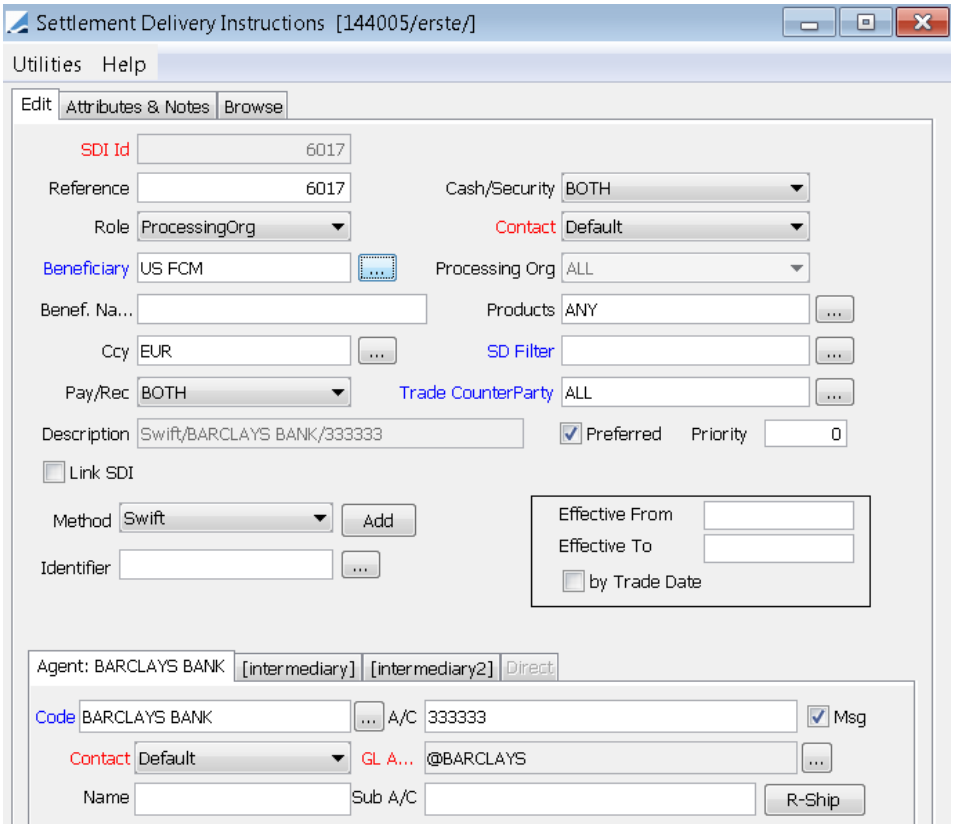


Note the GL Account set on the Clearing Processing Org. SDI must be created as a SETTLE Account with Ccy = ANY and Subtype = blank. See below:



PO External Settlement Instructions

For external settlement to CCP or Clearer, we need to define standard Processing Org. SDI with the cash account credited/debited on the PO side. This allows managing the cash impact of all external movements. An example is presented below.



Parent / Child Account Structures

The following Parent/Child account structures are supported:

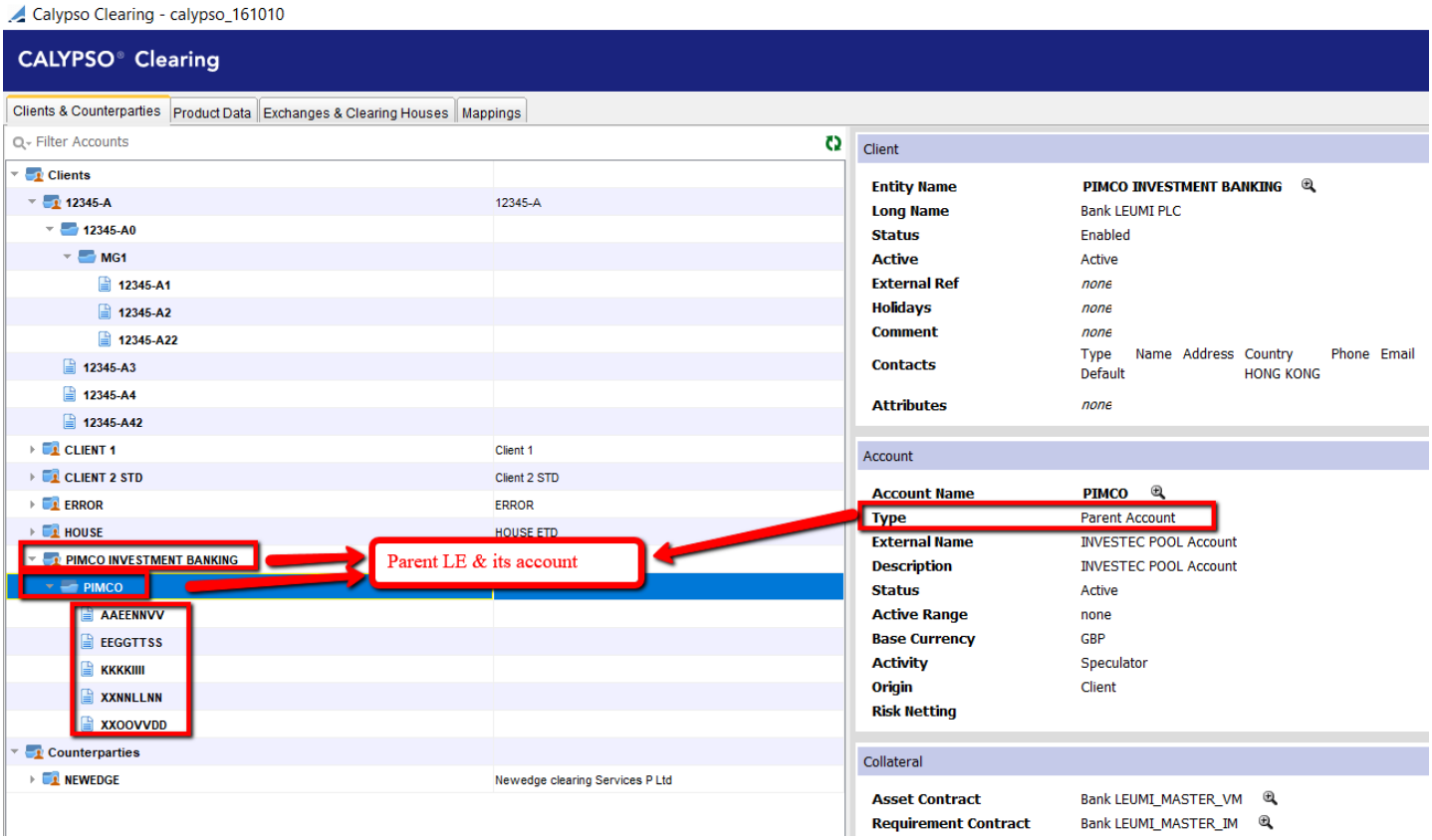
- Parent/Child Setup with Multiple Legal Entities
- Parent/Child setup with Single Legal Entity

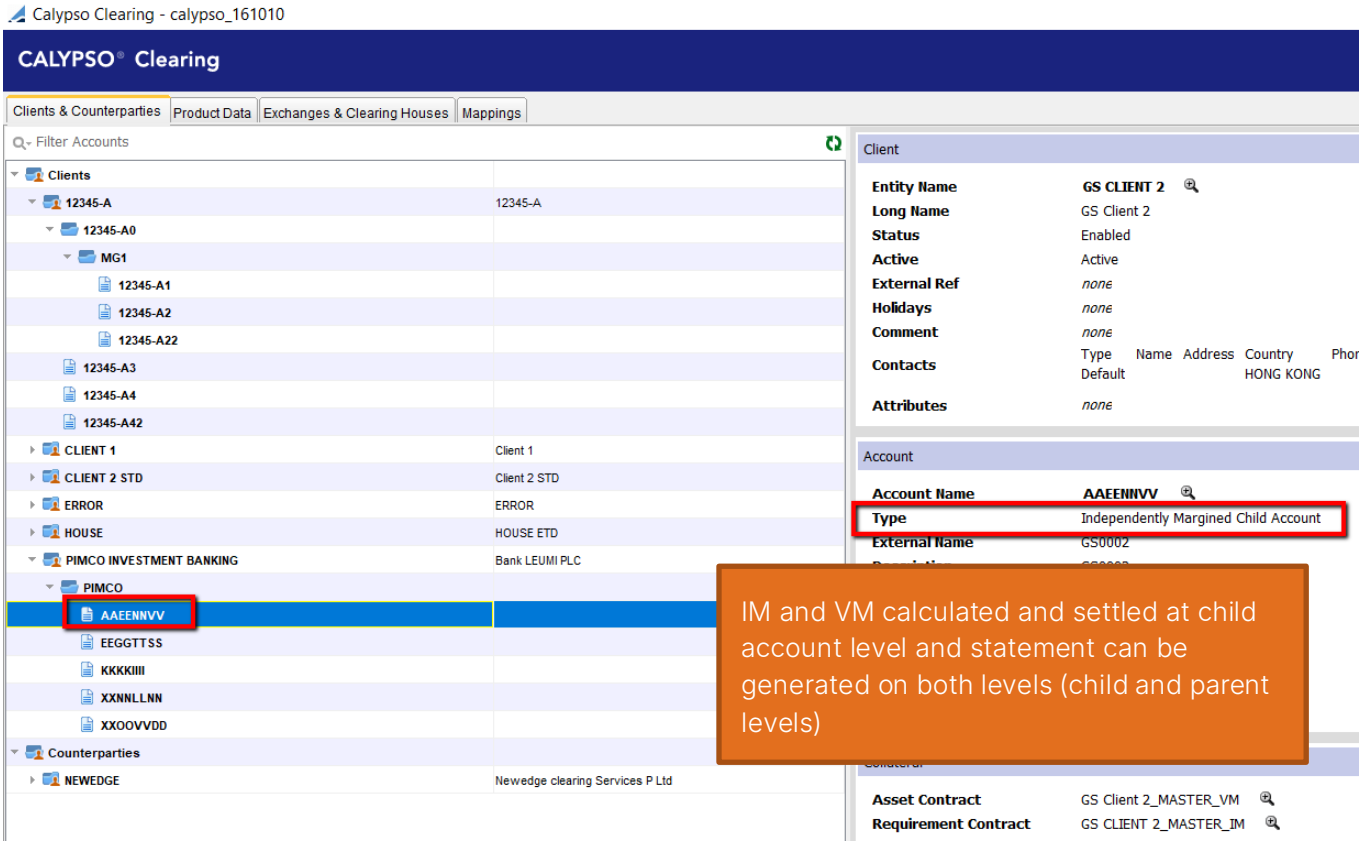
Both Parent/Child structures allow you to bucket the multiple child accounts activities details in one consolidated statement at parent account level with child account details for each trades and positions, and to generate individual statements for each child account.

In tabular format, you can see the financial summary at parent level and child level.

[Note: When using a Parent/Child structure, it is not supported to book any trade at parent level]

Parent/Child Setup with Multiple Legal entities



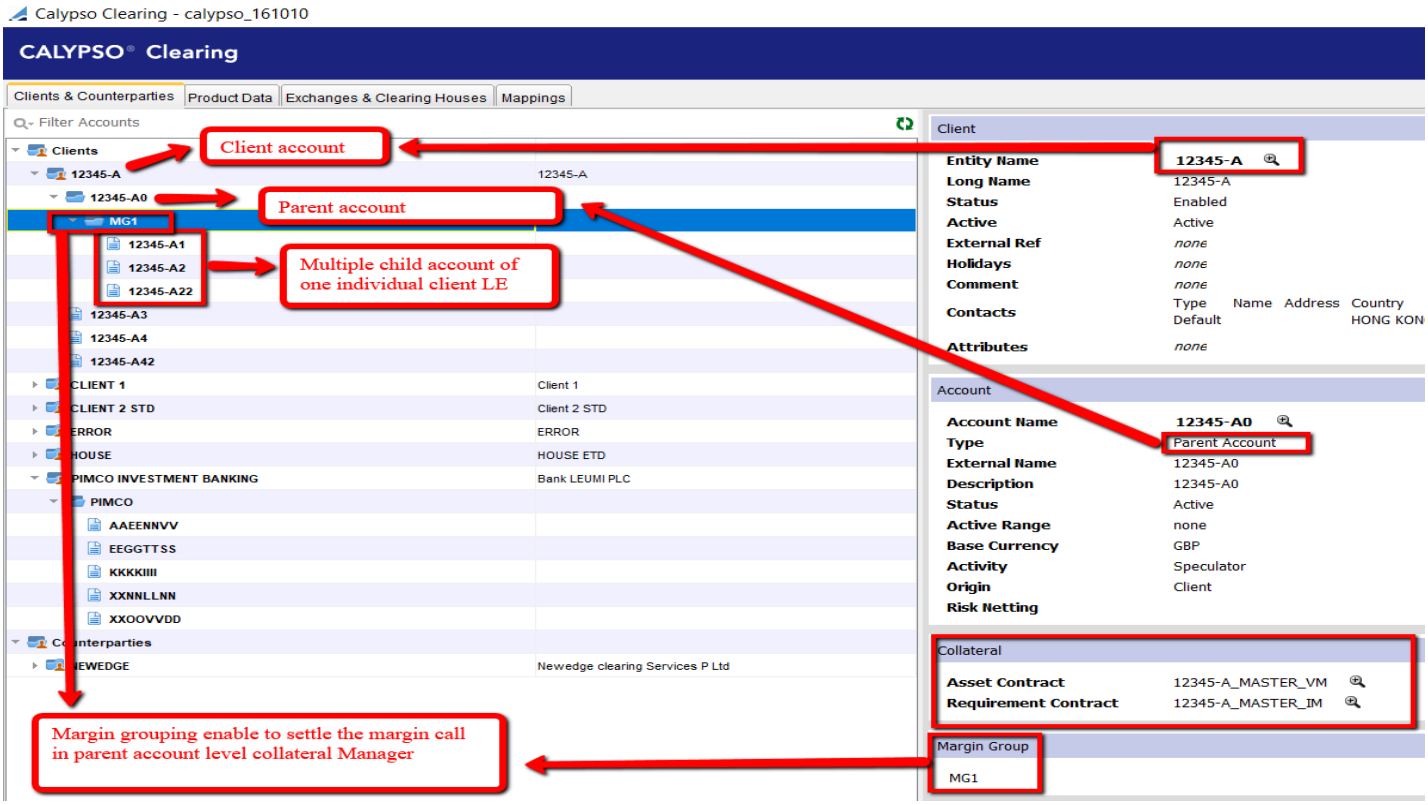


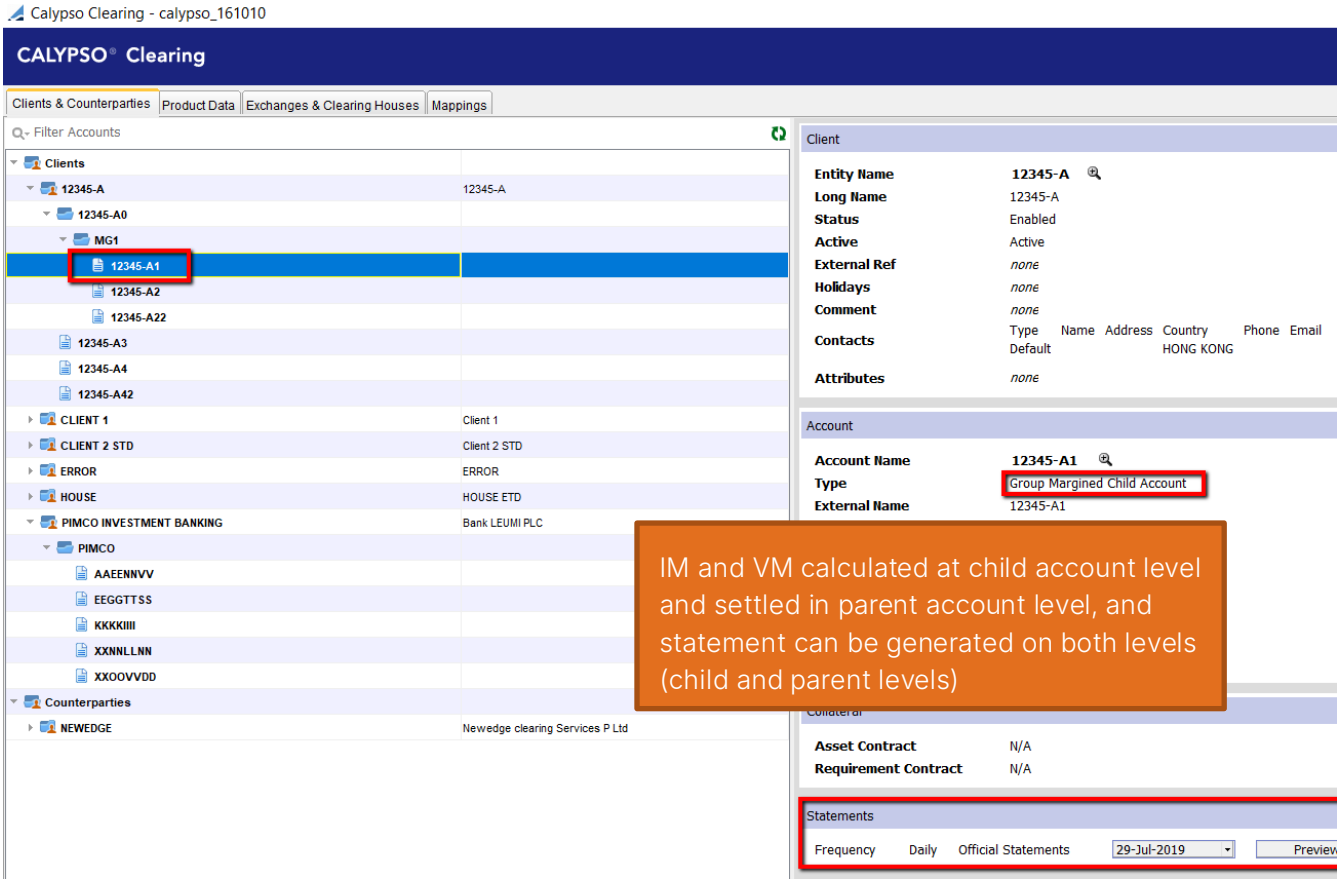
In the above account structure, each child accounts such as (AAEENNVV, EEGGTTSS, KKKKIIII, XXNNLLNN and XXOOVVDD) are independently margined and settled separately. However, user can settle each IM and VM account together through Collateral auto-sweeping setup or by netting method.

This type of setup enables "Client Statement" and "Tabular Statement" to facilitate the features to ease FCM's who manages multiple client accounts (i.e. Investment banking services provider) and capture the account activity details together.

The Parent statement will show all the client account activities in consolidated manner with summarized Financial summary with parent account base currency and child account statements will provide account activity of its own account.

Parent/Child Setup with Single Legal Entity


Calypso Clearing - calypso_161010
CALYPSO® Clearing
Clients & Counterparties
Product Data
Exchanges & Clearing Houses
Mappings
Filter Accounts
Clients
12345-A
12345-A0
MG1
12345-A1
12345-A2
12345-A22
12345-A3
12345-A4
12345-A42
CLIENT 1
CLIENT 2 STD
ERROR
HOUSE
PIMCO INVESTMENT BANKING
PIMCO
AAEENNVV
EEGGTTSS
KKKKIIII
XXNNLLNN
XXOOVVDD
Counterparties
NEWEDGE
Client 1
Client 2 STD
ERROR
HOUSE ETD
Bank LEUMI PLC
Newedge clearing Services P Ltd
Client account
Parent account
Multiple child account of one individual client LE
Margin grouping enable to settle the margin call in parent account level collateral Manager
Client
Entity Name 12345-A
Long Name 12345-A
Status Enabled
Active Active
External Ref none
Holidays none
Comment none
Contacts Type Name Address Country
Default HONG KON
Attributes none
Account
Account Name 12345-A0
Type Parent Account
External Name 12345-A0
Description 12345-A0
Status Active
Active Range none
Base Currency GBP
Activity Speculator
Origin Client
Risk Netting
Collateral
Asset Contract 12345-A_MASTER_VM
Requirement Contract 12345-A_MASTER_IM
Margin Group
MG1



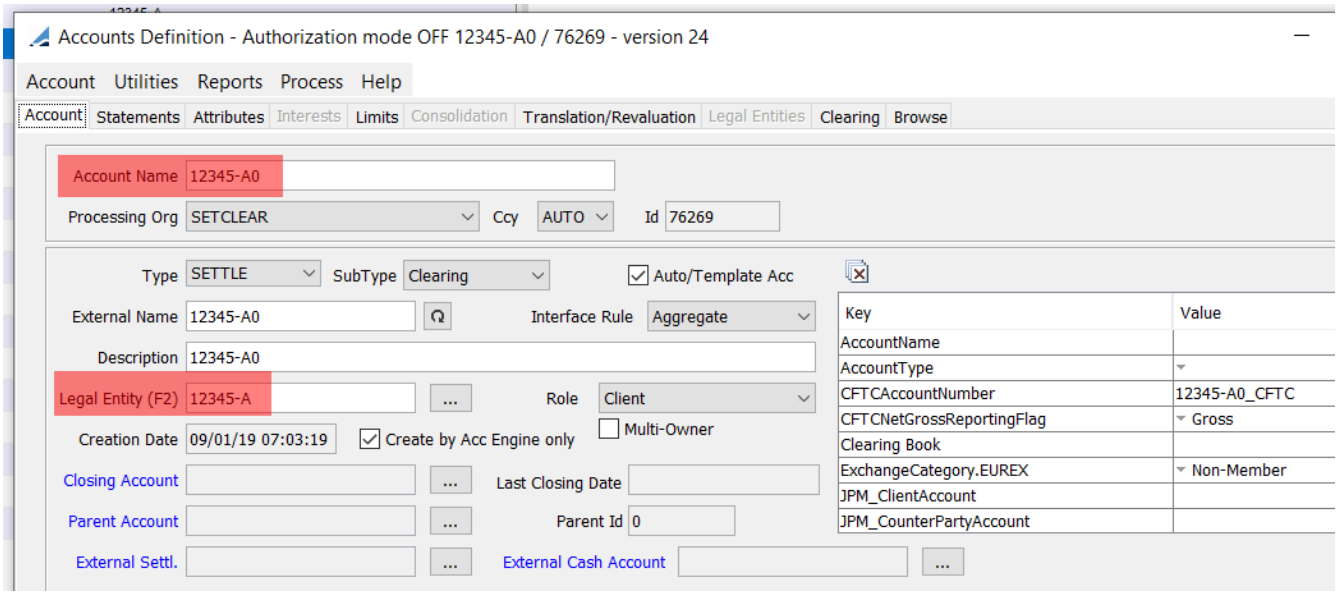
In above illustration, the child account type – "Group Margined child account" indicates that the child account is handled in collateral manager at parent level to generate margin call and settle.

This type of setup enables "Client Statement" and "Tabular Statement" to facilitate the features to ease the FCM's who has one Client LE with Multiple Client Child account (one client has multiple accounts).

9.1 Clearing Account Configurations

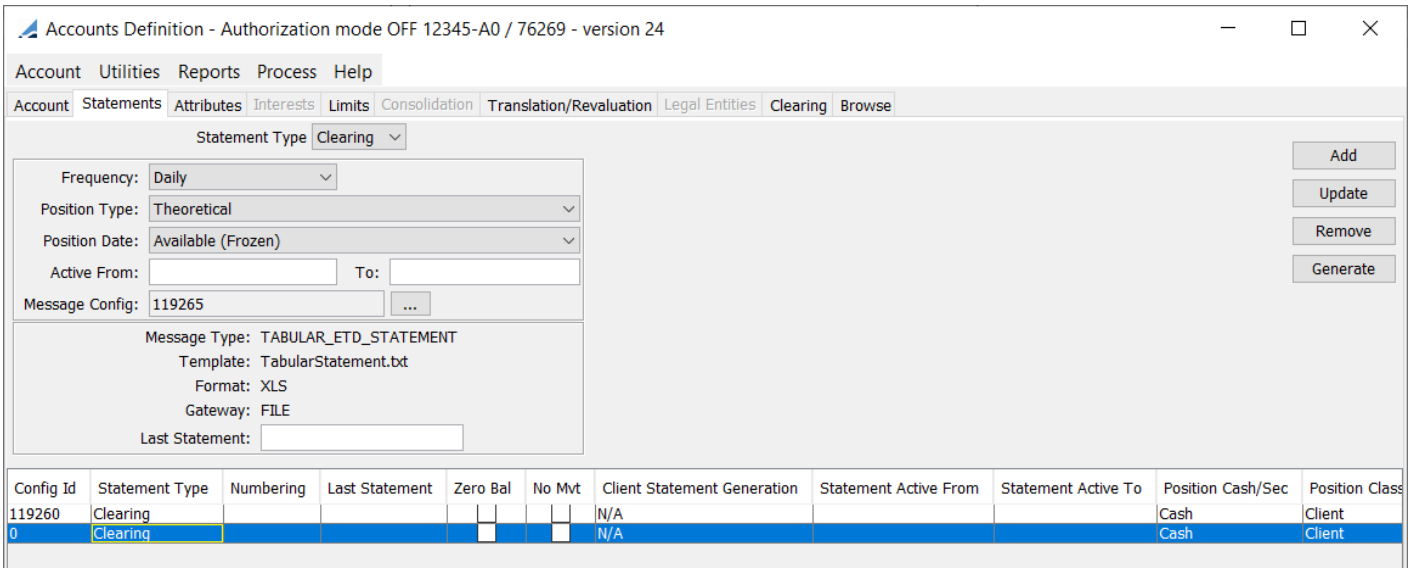
9.1.1 Parent/Child Setup with Single Legal Entity

Parent Account Setup

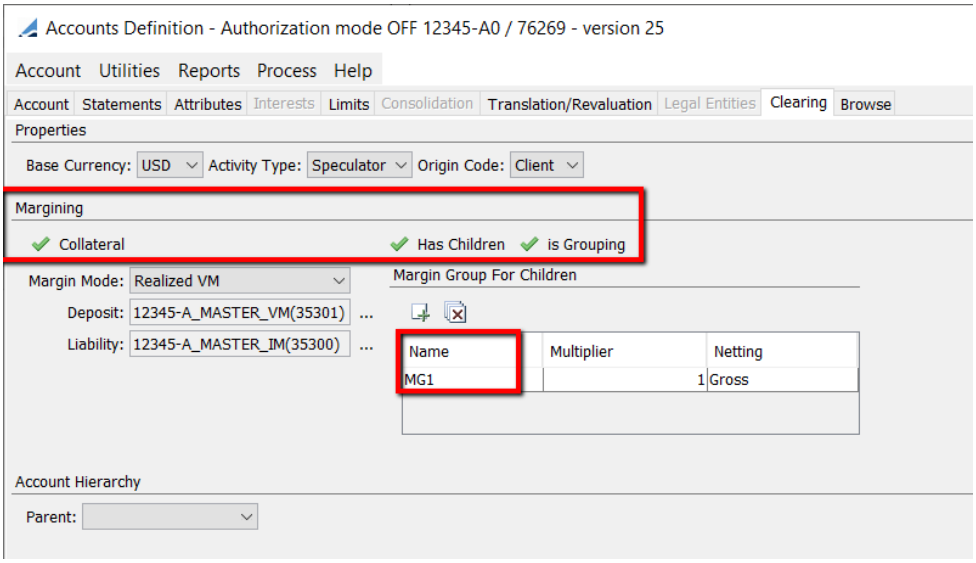


For an Illustration, here parent account name is setup as 12345-AO and Legal Entity (F2) is setup as 12345-A.

In this structure, Legal Entity (2) will be same for parent account and below child accounts.



This is the Parent account Statements setup snapshot. In this, user need to add Message config as shown. The same statements tab setup applies for child account.

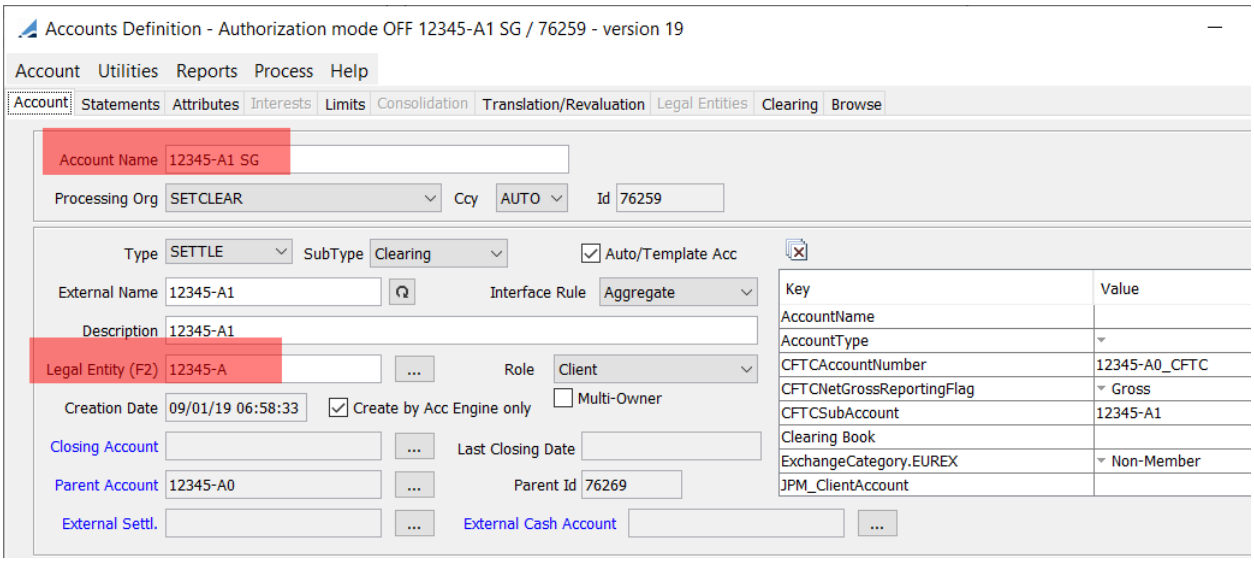


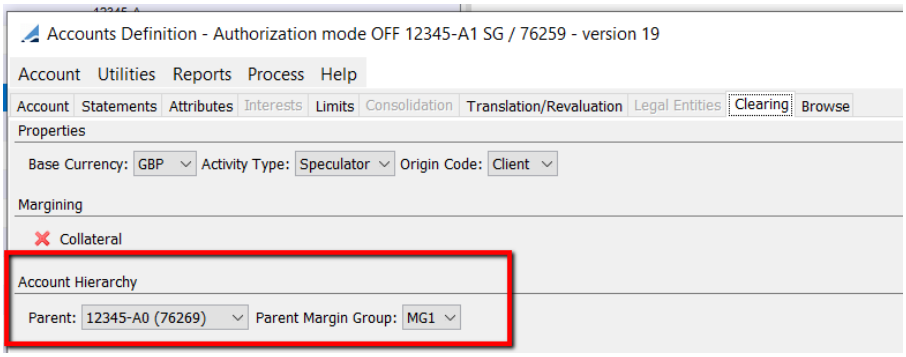
In Parent account setup on clearing tab, tick collateral, Has Children and Is Grouping.

Define 'Margin Group For Children' name. e.g:MG1

Child Account Setup

In this account structure, the child and parent account Legal Entity (F2) are the same.

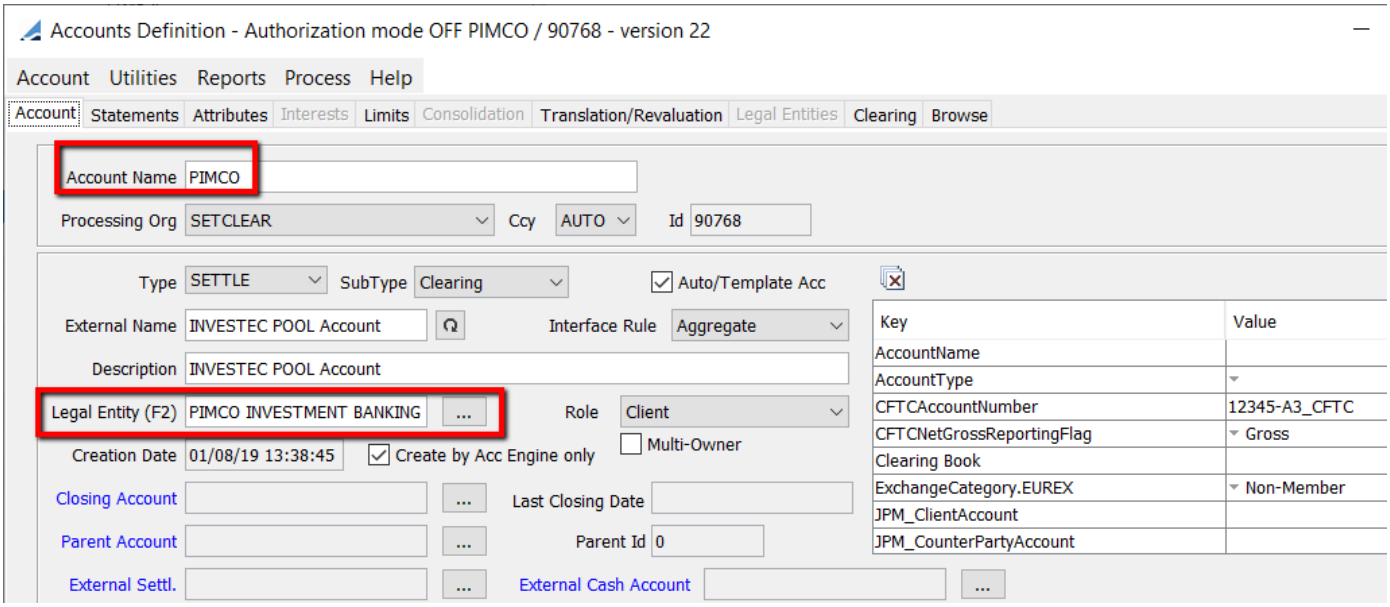


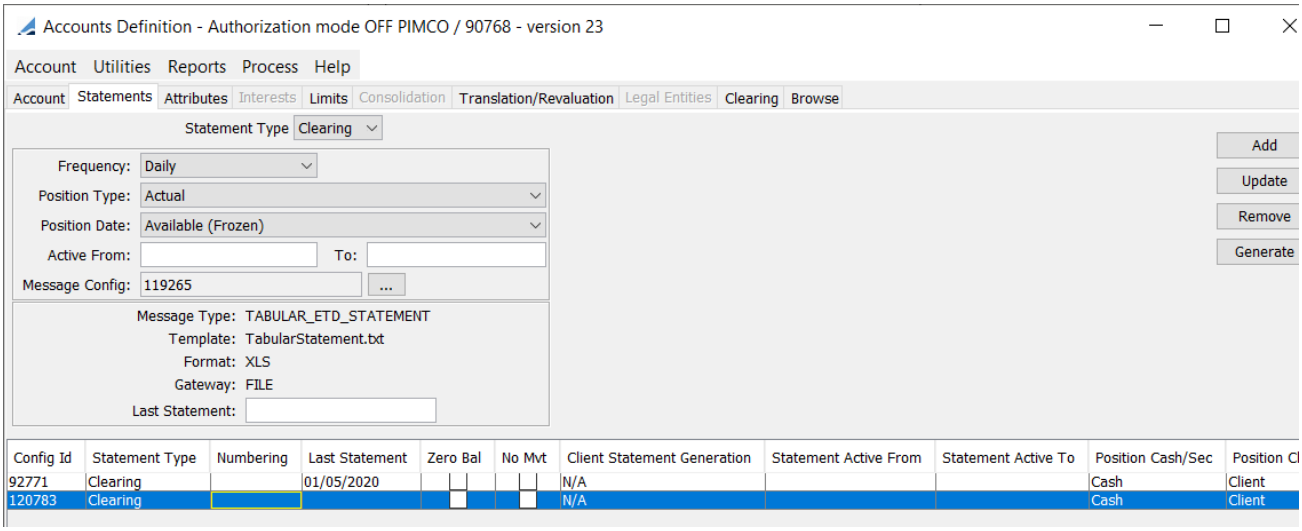


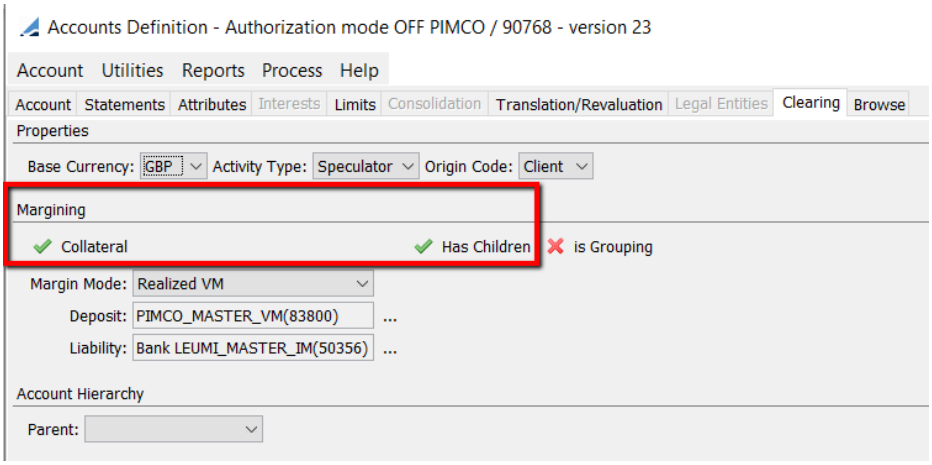
Child account will be setup same as standard account, only difference is on clearing tab, select parent account and its group as shown above.

9.1.2 Parent/Child Setup with Multiple Legal Entities

Parent Account Setup

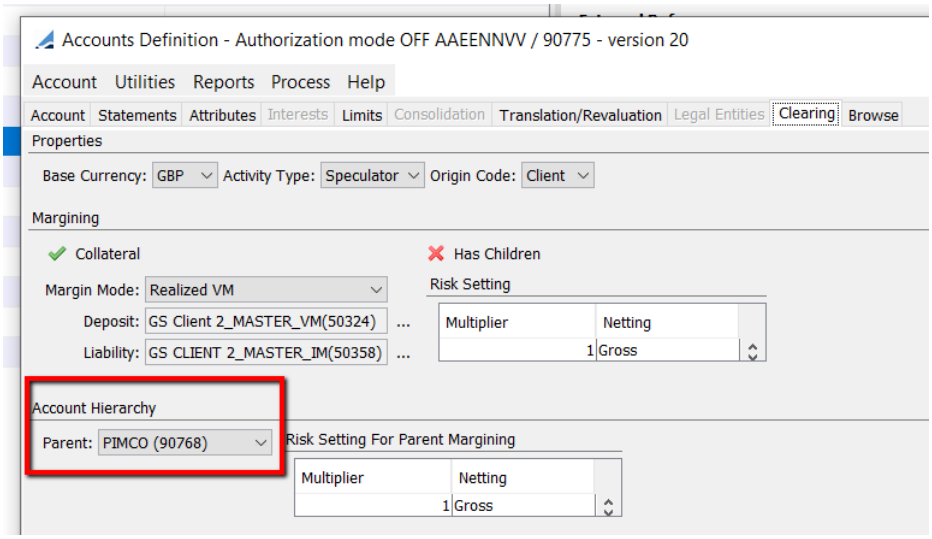






Child Account Setup

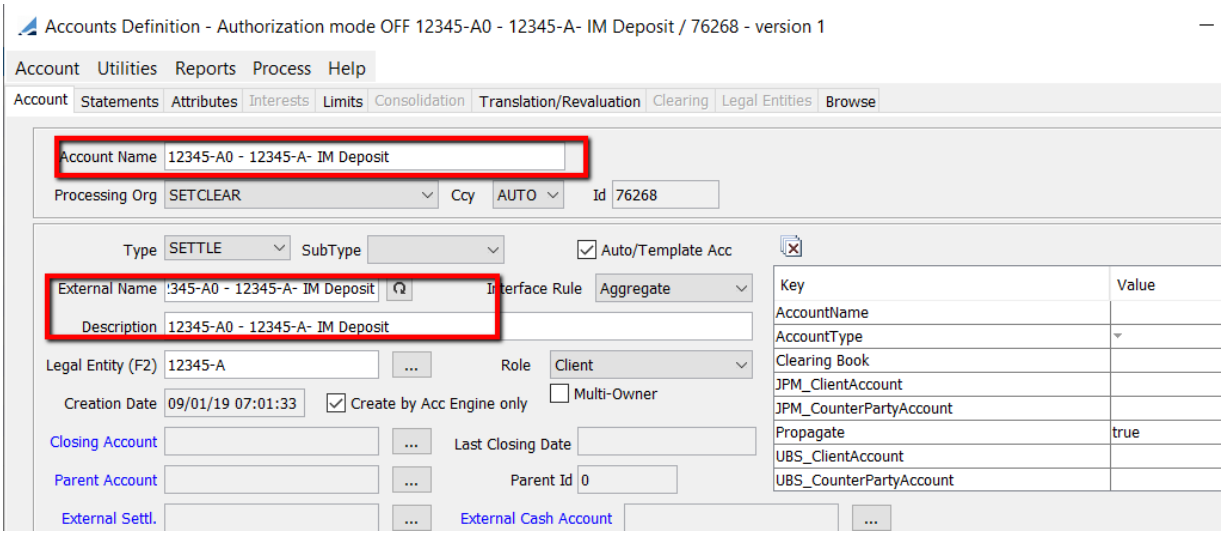
Child account setup is the same as standard account, you only need to add Parent account in Clearing tab as shown below.


Accounts Definition - Authorization mode OFF AAEENNVV / 90775 - version 20
Account Utilities Reports Process Help
Account Statements Attributes Interests Limits Consolidation Translation/Revaluation Legal Entities Clearing Browse
Properties
Base Currency: GBP Activity Type: Speculator Origin Code: Client
Margining
Collateral
Has Children
Margin Mode: Realized VM
Deposit: GS Client 2_MASTER_VM(50324)
Liability: GS CLIENT 2_MASTER_IM(50358)
Risk Setting
Multiplier Netting
1 Gross
Account Hierarchy
Parent: PIMCO (90768)
Risk Setting For Parent Margining
Multiplier Netting
1 Gross

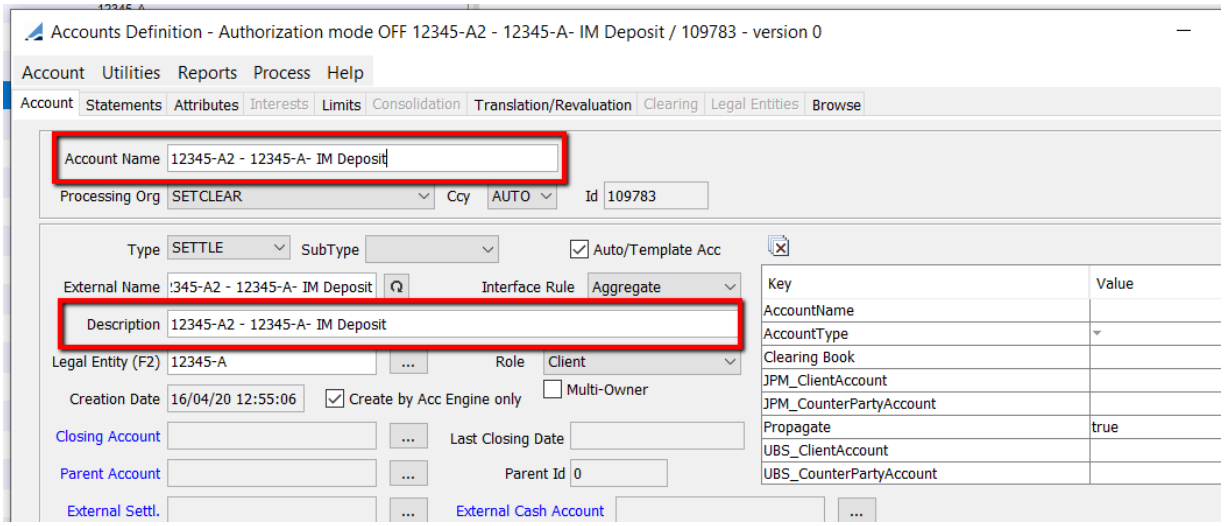
9.2 IM Deposit Accounts

9.2.1 Parent/Child Setup with Single Legal Entity

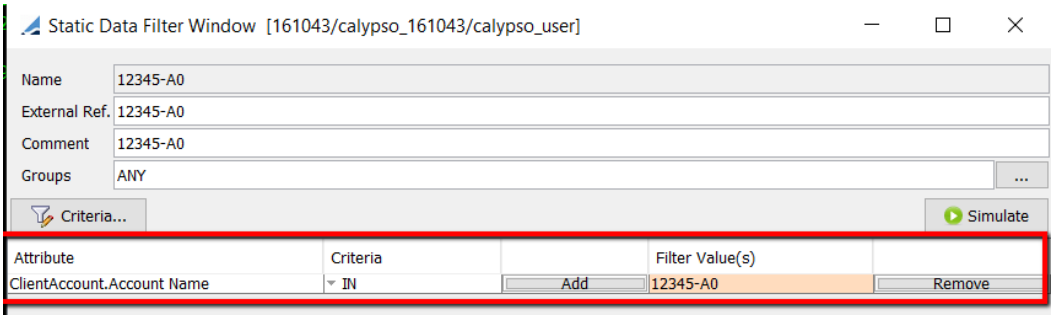
This is the IM deposit account setup for Parent with single LE:



This is the IM deposit account setup for Child with single LE:

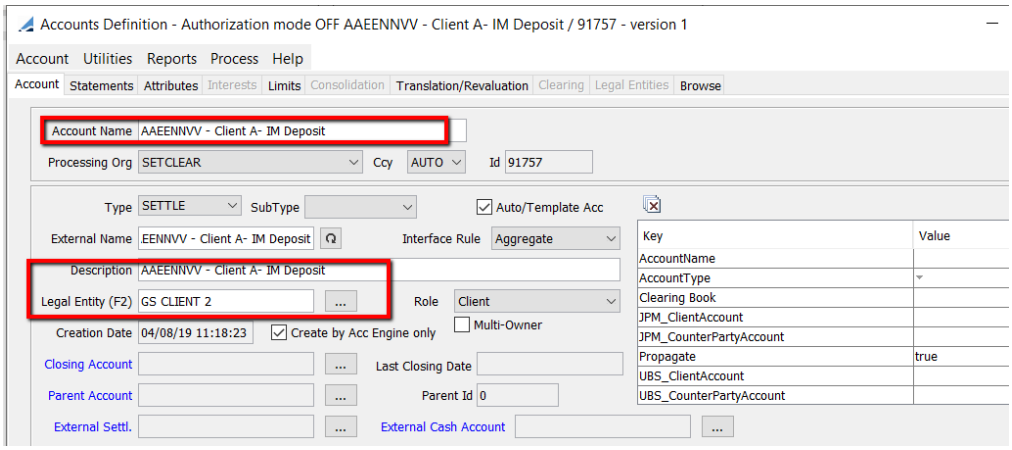


For IM Deposit account, create SD filter with attribute ClientAccount.Account Name:



9.2.2 Parent/Child Setup with Multiple Legal Entities

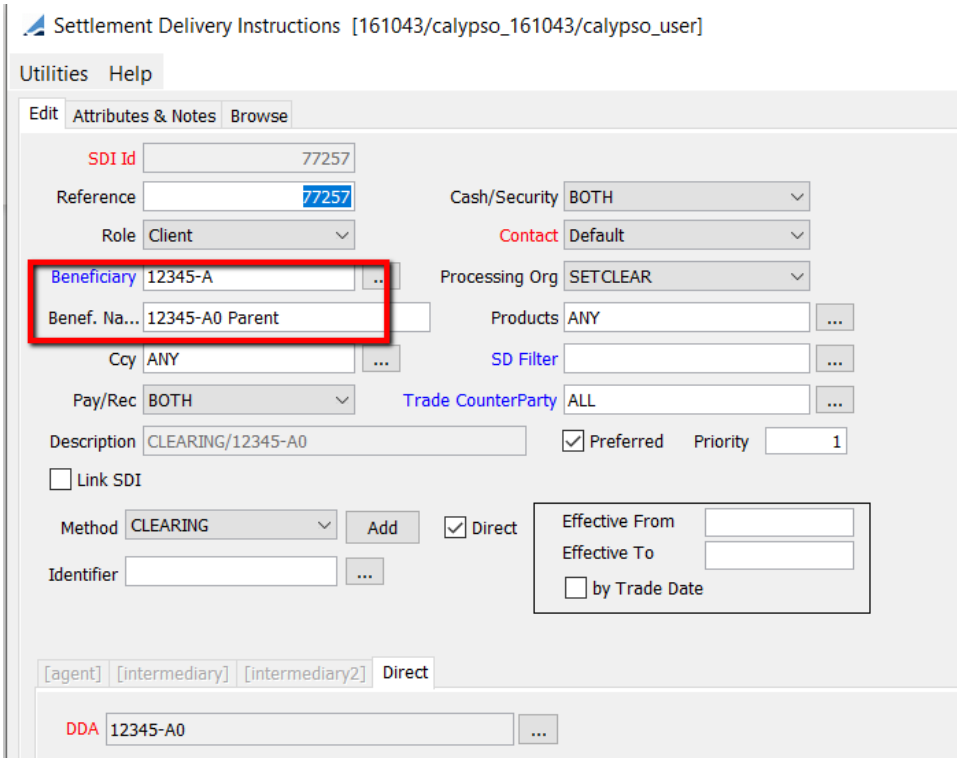
This is the Child account setup with multiple LE:



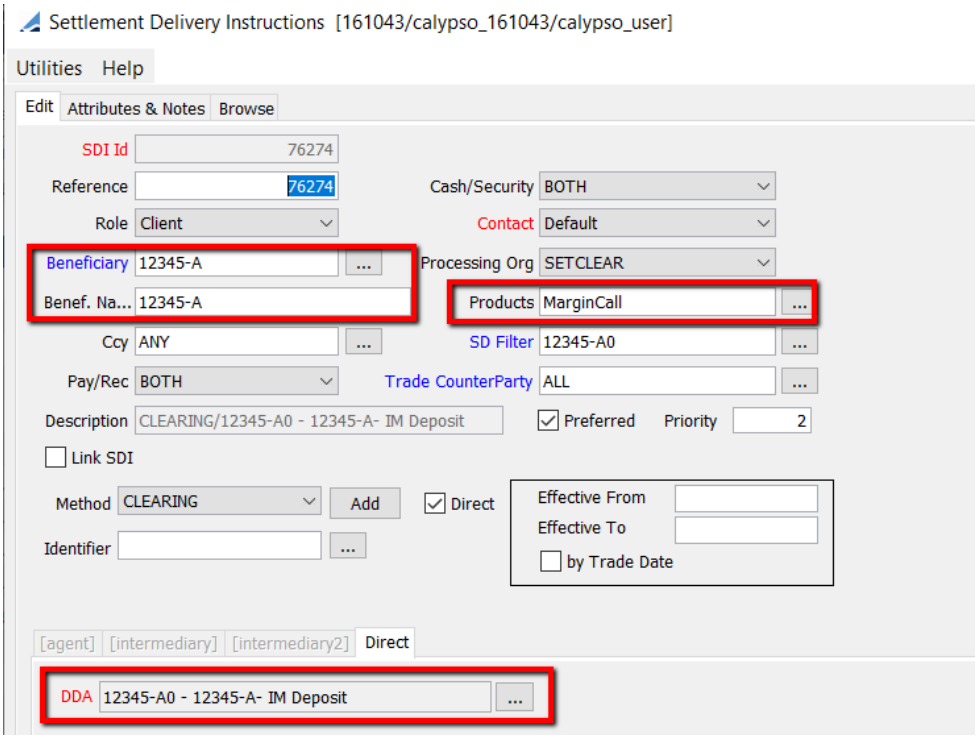
9.3 Settlement Instructions

9.3.1 Parent/Child Setup with Single Legal Entity

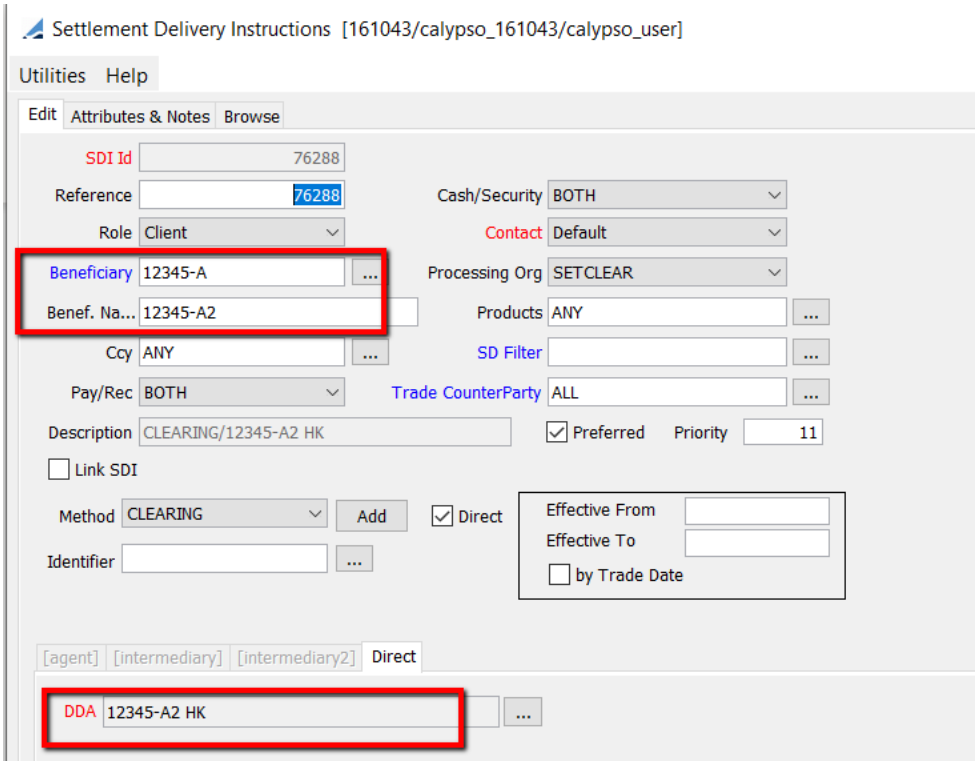
This is the SDI setup for the parent with single LE:



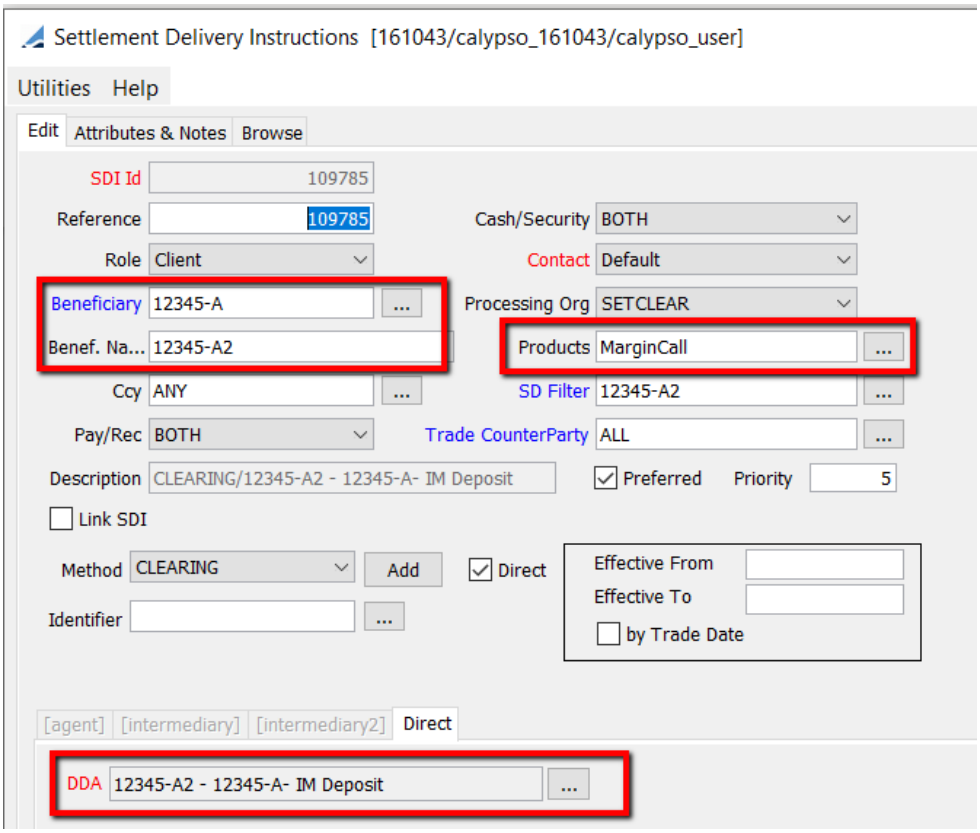
This is the margin call SDI setup for parent with single LE:



This is the SDI setup for the child with single LE:



This is the margin call SDI setup for child with single LE:



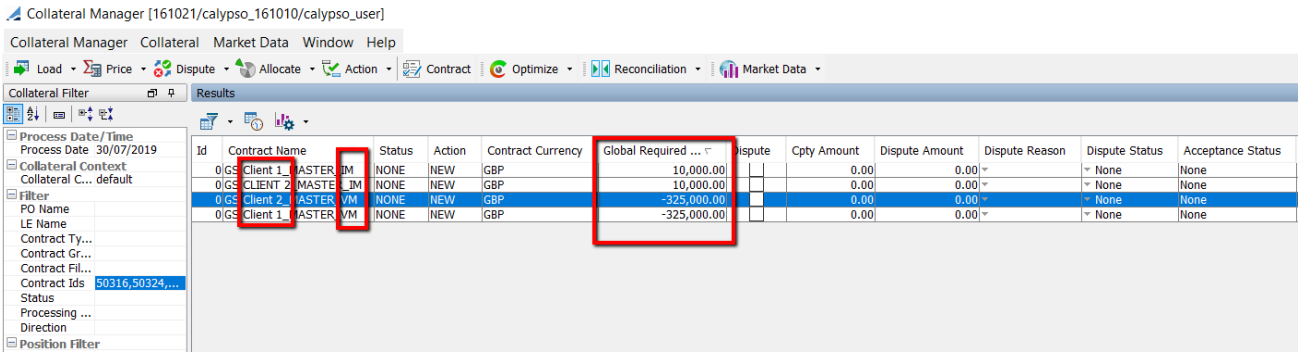
9.3.2 Parent/Child Setup with Multiple Legal Entities

In this structure, SDIs setup is the same as standard account SDIs.

9.4 Collateral Manager

The account definition and collateral manager setup enables the user as how to handle margin movements i.e. generate and settle on individual child account level or one consolidated movement on parent account level.

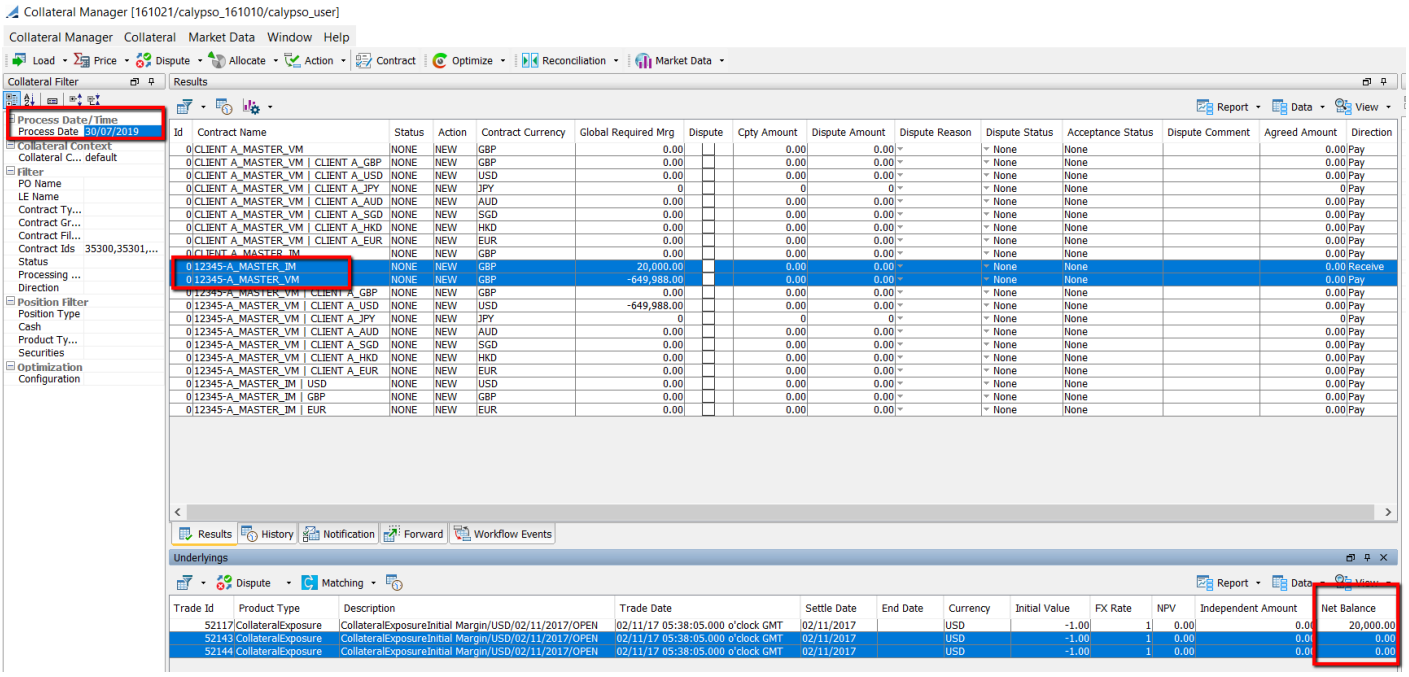
9.4.1 Parent LE & Account with Multiple Child LE's Accounts



This setup enables the collateral manager to generate margin call to each individual child account level.

The default collateral Manager handles IM and VM contract balance separately to generate the margin call to settle, but collateral Sweeping method allow user to auto transfer the VM balance into IM and generate one consolidated margin call from child account into the parent account.

9.4.2 Parent LE and Multiple Child Accounts



When child account type is 'Grouped Margined child account' the collateral manager aggregates all the balances from child account into parent account level and allow user to generate the margin call for the same.

Importing and Capturing Trades

Out-of-the-box, the trades can be imported in real-time from ATEO's LISA or G-API.

The counterparty of the trades is the clearing house or the clearing broker.

The trades navigate the Calypso workflow based on their clearing status, using straight-through processing and exceptions monitoring. Once the trades are cleared, they are liquidated as applicable and update the accounts positions.

▶ Please refer to the Calypso ATEO LISA Integration Guide for complete details.

The trades can also be imported from other sources, or they can be manually entered using the Listed Derivatives Trade windows or using the Pricing Sheet.

10.1 Trade Workflow

Processing Org = ALL

Product Type = G.ETD

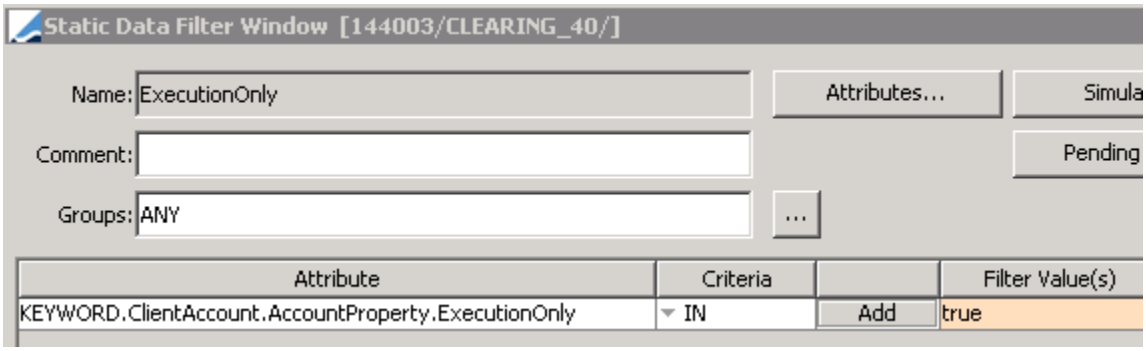
The workflow presented below is an example to outline the control on fees. This is for information only. Additional controls will have to be put in place when using the automatic feed from LISA, G-API or a Broker File. This workflow does not include Undo Action (to undo exercise, etc.) and will need to be enriched.

Orig Status	Action	Resulting Status	STP	Rules	Task	SDF	Pref
EXECUTIONONLY	AMEND	EXECUTIONONLY	false	AutomaticFees CheckSDI	false		true
EXECUTIONONLY	CANCEL	CANCELED	false		false		false
NONE	NEW	PENDING	false		false		false
PENDING	EXECUTE	EXECUTIONONLY	true	CheckSDI Automatic Fees	false	ExecutionOnly	false
PENDING	AUTHORIZE	ZERO_COMM	true	CheckSDI Automatic Fees	false	NotExecutionOnly	false

Orig Status	Action	Resulting Status	STP	Rules	Task	SDF	Pref
PENDING	CANCEL	CANCELED	false		false		false
PENDING	AMEND	PENDING	false		false		false
PENDING	UPDATE	PENDING	true		false		true
ZERO_COMM	EXECUTE	VERIFIED	true	ETDCheckFee	false		true
ZERO_COMM	BYPASS_FEES	VERIFIED	false		false		true
ZERO_COMM	AMEND	PENDING	false		false		true
ZERO_COMM	UPDATE	PENDING	false		false		true
VERIFIED	AMEND	PENDING	false	AutomaticFees	false		true
VERIFIED	CANCEL	CANCELED	false		false		false
VERIFIED	UPDATE	PENDING	false		false		false
CANCELED	UPDATE	CANCELED	false		false		false

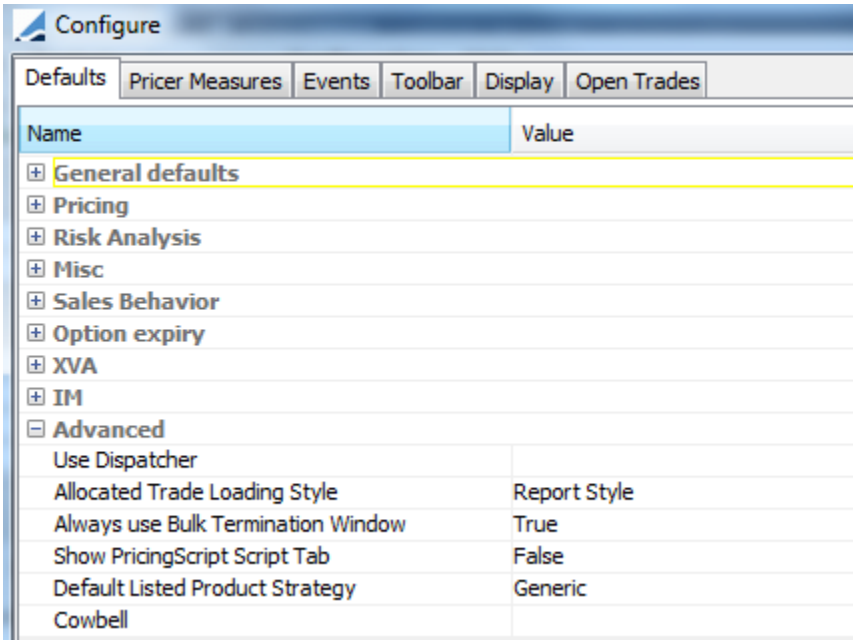
The transition CANCELED - UPDATE - CANCELED allows removing the External Reference from the canceled trades.

Static Data Filter “ExecutionOnly”. Not ExecutionOnly is the opposite filter. Please note your will have to filter the EXECUTIONONLY status from the Liquidation and Transfer Engine using the engine parameters.


Static Data Filter Window [144003/CLEARING_40/]
Name: ExecutionOnly
Attributes...
Simula
Comment:
Pending
Groups: ANY
...
Attribute
Criteria
Filter Value(s)
KEYWORD.ClientAccount.AccountProperty.ExecutionOnly
IN
Add
true

10.2 Sample Trades

In the Pricing Sheet, you need to set the following in the User Preferences:



Default Listed Product Strategy = Generic

To capture trades, you need to use the strategies Future (for Future trades) or Option (for Future Option and ETO trades).

Find Property...	1
Strategy Name	**Future**
Price	**Price**
Save	**Save**
Solve	**Don't Solve**
Trade Id	7704
Trade Date	09/03/2015
Trade Time	9:57:45 AM
Book	US FCM Client Clearing
Status	VERIFIED
Action	AMEND
Client Account	EUROCORP-ACC-ST0001 (38...
Counterparty Account	CME Client Omnibus Account ...
Counterparty	CME CLEARING GROUP
Exchange	CBOT
⊞ Contract	CBOT1
Contract Date	Sep 15
⊞ Settle Type	Physical
Settle Ccy	USD
Expiry Date	09/14/2015
Buy/Sell	Buy
Quantity	1
⊞ Price	200.0000
Price Format	PriceC
⊞ Market Price	0.0000

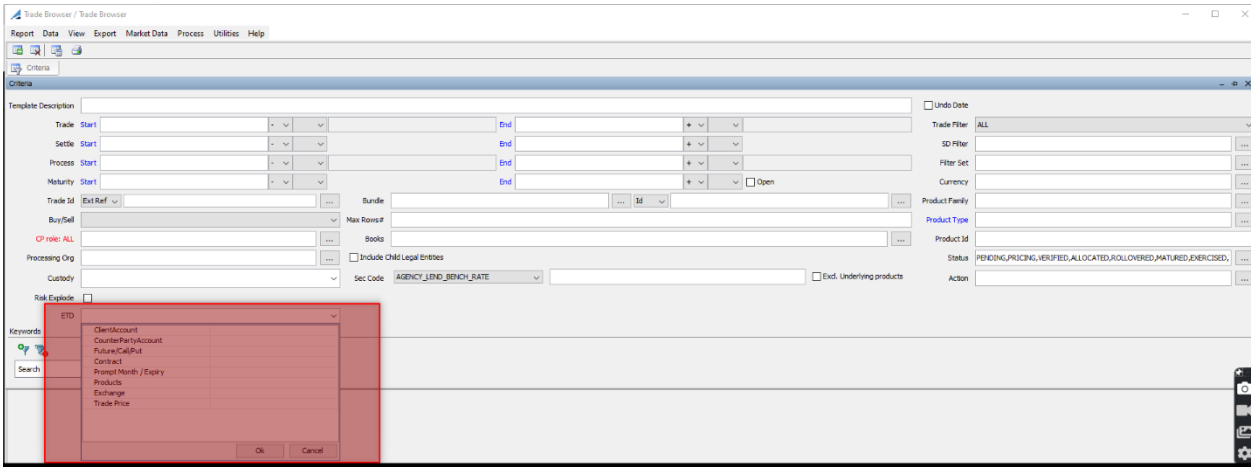
Name	Value
BusinessFlow	FCM
CCP	CME CLEARING GROUP
CCPClearedDatetime	2015-09-03T11:57:45.000-05:00
CCPOriginCode	CLIENT
CCPStatus	Cleared
CCPTradeID	100003
Client	EUROCORP
ClientAccount	EUROCORP-ACC-ST0001 (3804)
ContractSymbol	C
CounterPartyAccount	CME Client Omnibus Account (3743)
ExecutingBroker	US FCM
ExecutionType	Allocation,Execution
ExecutionTypeCode	3
FutOpt	FUT
NegotiatedCurrency	USD
OrderId	9517
OrderQuantity	0
PSStrategyName	Future
RateSide	Choice
RelatedProductType	ETD
SecondaryTradeType	1
SecondaryTradeTypeCode	1
Service	ATEO
ServiceLevel	Full Service
TradeSource	ATEO

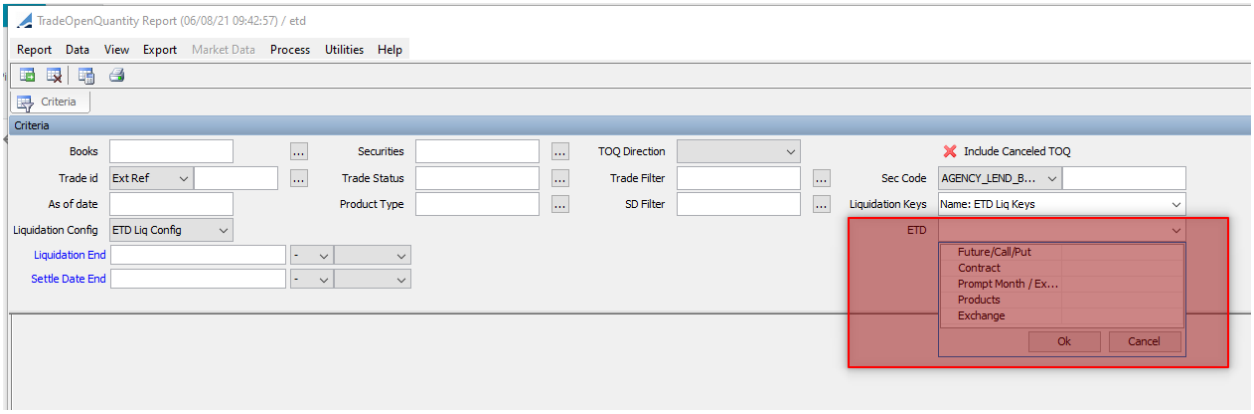
Strategy Name	**Option**
Price	**Price**
Save	**Save**
Solve	**Don't Solve**
Trade Id	7601
Trade Date	09/02/2015
Trade Time	11:35:29 AM
Book	US FCM Client Clearing
Status	VERIFIED
Action	AMEND
Client Account	EUROCORP-ACC-ST0001 (...
Counterparty Account	EUREX A1 (3677)
Counterparty	EUREX CLEARING
Exchange	EUREX
⊞ Contract	EUREX5040
Contract Date	Sep 15
⊞ Settle Type	Physical
Settle Ccy	EUR
Expiry Date	09/18/2015
⊞ Strike	1
Put/Call	Call
Buy/Sell	Buy
Quantity	5

Name	Value
CabinetType	Fixed
CCP	EUREX CLEARING
CCPOriginCode	CLIENT
CCPStatus	Cleared
Client	EUROCORP
ClientAccount	EUROCORP-ACC-ST0001
ContractSymbol	5ABL
CounterPartyAccount	EUREX A1 (3677)
FutOpt	OPT
PSStrategyName	Option
RateSide	Choice
RegCode	04 - Non regulated
RelatedProductType	ETD
ServiceLevel	Full Service
TradeSource	Manually Entered

10.3 Trade Report and Trade Open Quantity Report

You can set environment property ETD_SHOW_FILTER_PANEL = true to display a combo box which contains ETD criteria in the report criteria.

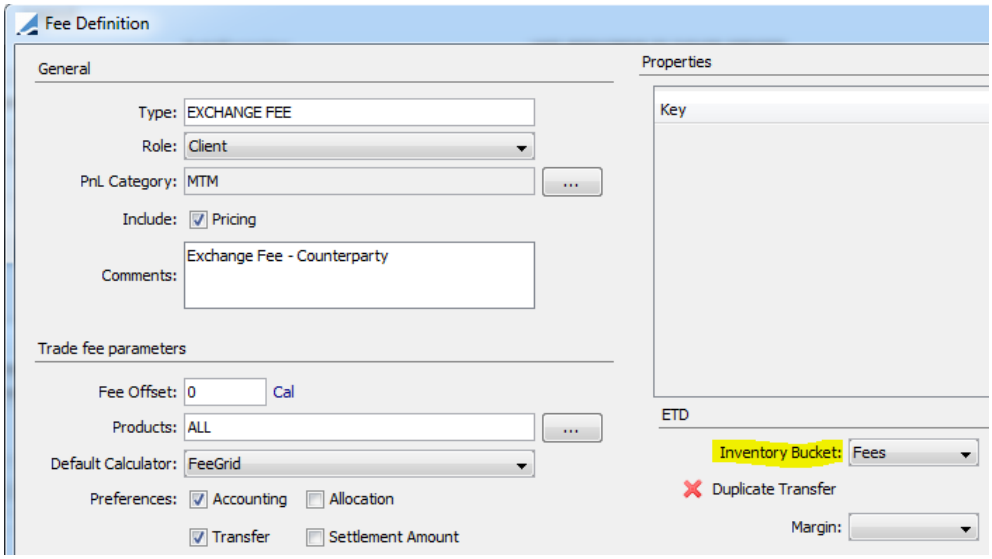




10.4 Inventory Position

The concept of cash inventory "buckets" has been implemented to help classify activity in a given account by its source. This is used in our clearing solution to allow us to separate account balances and movements into business categories. The bucketing logic is triggered based on the transfer type of the transfer hitting the account and is designed to work either as a hardcoded rule or based on the users' determination of the bucket to be used for manually defined fees and commissions.

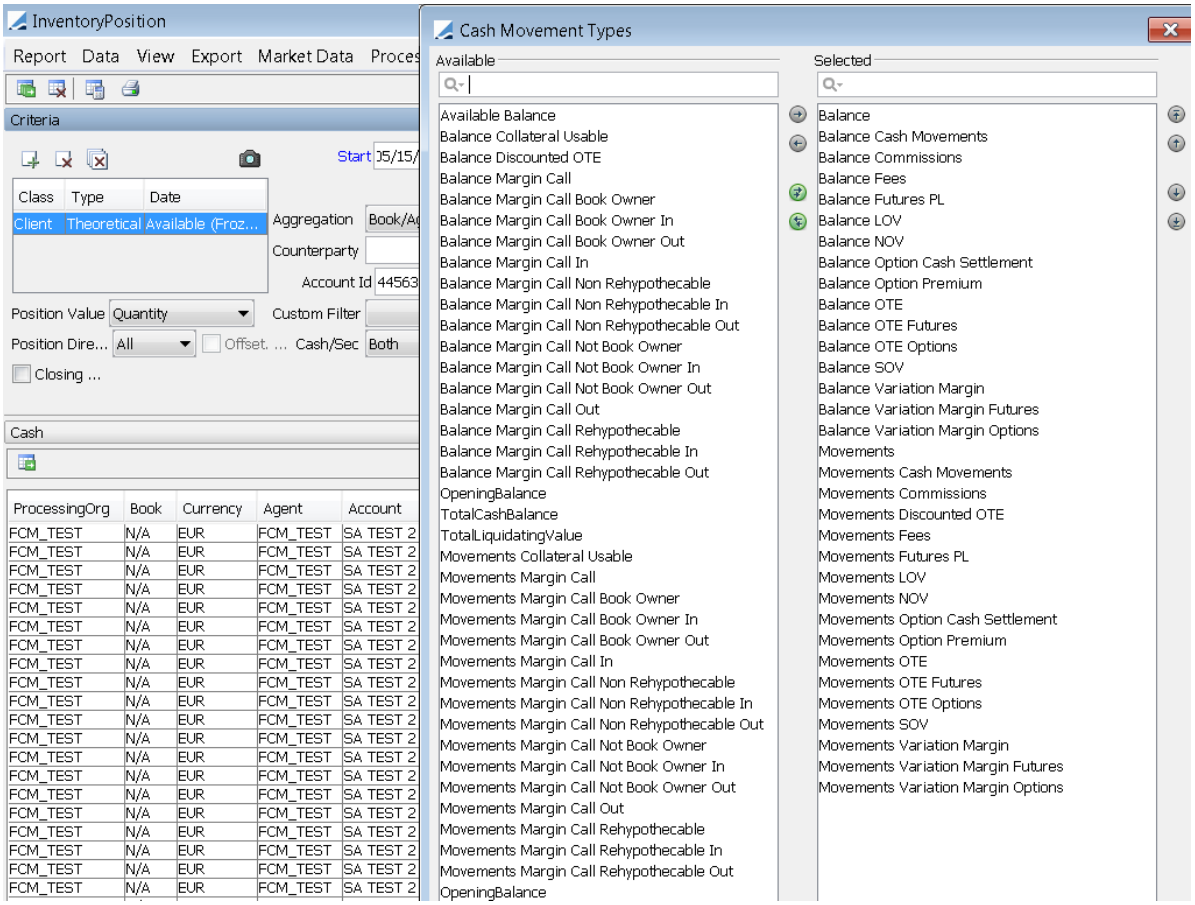
The bucket names, and the rules by which they are impacted, are defined in the table below

Bucket Name	Logic Description
Fees	Any manually defined fee which is designated as belonging to the "Fees" bucket in the Fee Definition. 
Brokerage	Any manually defined fee which is designated as belonging to the "Brokerage" bucket in the Fee Definition.
Commissions	Any manually defined fee which is designated as belonging to the "Commissions" bucket in the Fee Definition
Futures PL	Transfers of type REALIZED_PL
Option Premium	Transfers of type PREMIUM
Option Cash Settlement	Transfers of type EXERCISE_FEE and OPT_CASH_ADJ
Variation Margin Futures	Transfers of type NPVFUT and NPVFUT_REV
Variation Margin Options	Transfers of type NPVOPT and NPVOPT_REV

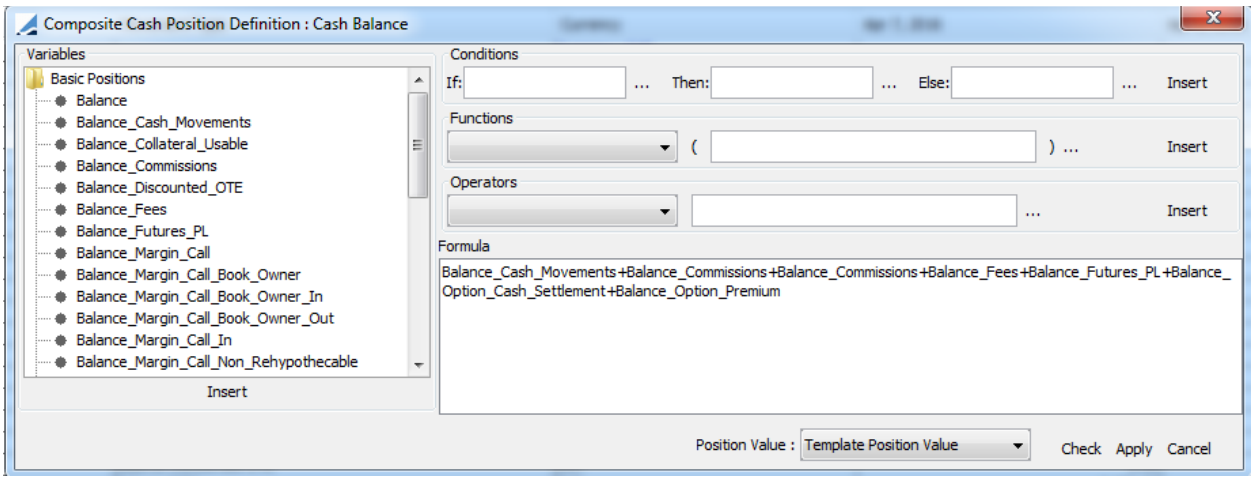
Bucket Name	Logic Description
Variation Margin	Variation Margin Futures + Variation Margin Options
OTE Futures	Transfers of type OTEFUT and OTEFUT_REV
OTE Options	Transfers of type OTEOPT and OTEOPT_REV
OTE	OTE Futures + OTE Options
SOV	Transfers of type SOV and SOV_REV
LOV	Transfers of type LOV and LOV_REV
NOV	SOV + LOV
NFA	Transfers of type NFA (National Futures Association)
Discounted OTE	Transfers of type DISC_FWD_OTE and DISC_FWD_OTE_REV
Cash Movements	Any transfer which doesn't fall into one of the buckets in the list above.

The same buckets are used as the basis of the Financial Summary of the Client Statement, based on a position date of "Available (Frozen)" which uses the later of the Available Date and the Booking Date of the transfer as the date on which it impacts the bucket.

Using the Movement Type field in the criteria panel of the Inventory Position report, you can select any of the buckets as a movement (daily change) and/or balance (cumulative total) to be displayed in the report.



The user can also go to the Process menu of the Cash Inventory Report and create new balance or movement types using formulas based on available buckets. Once the balance or movement is created and the formula defined, it will be available for use in the report.



10.5 Position Transfer Trade Keywords

The following domain needs to be defined to store trade keywords on Position Transfer Open and Close trades.

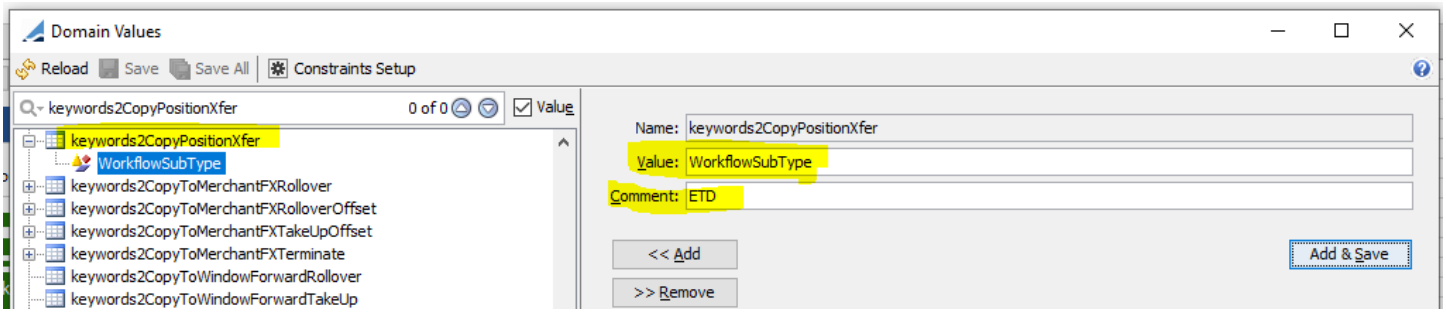
Domain Name = keywords2CopyPositionXfer

Value = <trade keyword>

Comment = <trade keyword value>

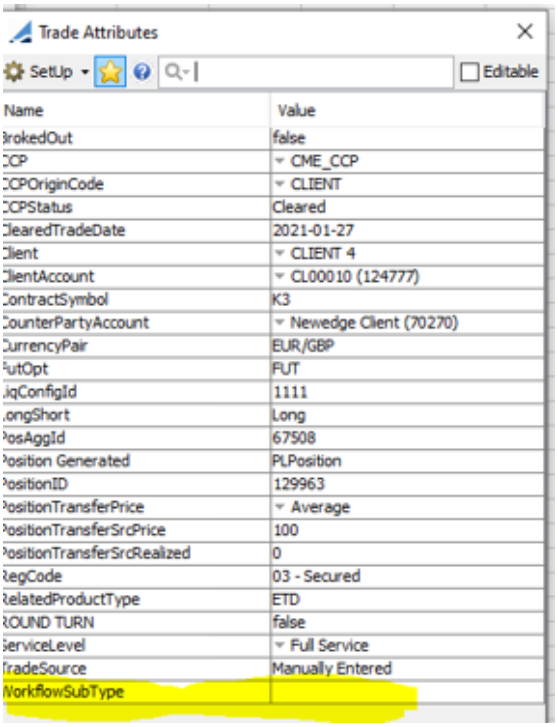
[NOTE: It is not supported to add system keywords to that domain]

Example:



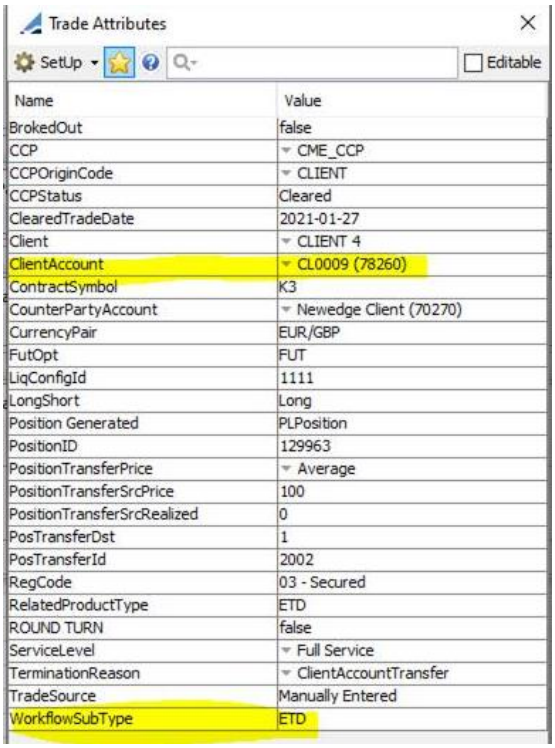
Source trade:

On the source trade, "WorkflowSubType" is blank.



Open and Close Trades

The open and close trades are created with WorkflowSubType = ETD" as defined in domain "keywords2CopyPositionXfer".



10.6 To Display Open (New) / Close Trades (created after position transfer process) in TOQ window for multiple liquidation config:

Notes:

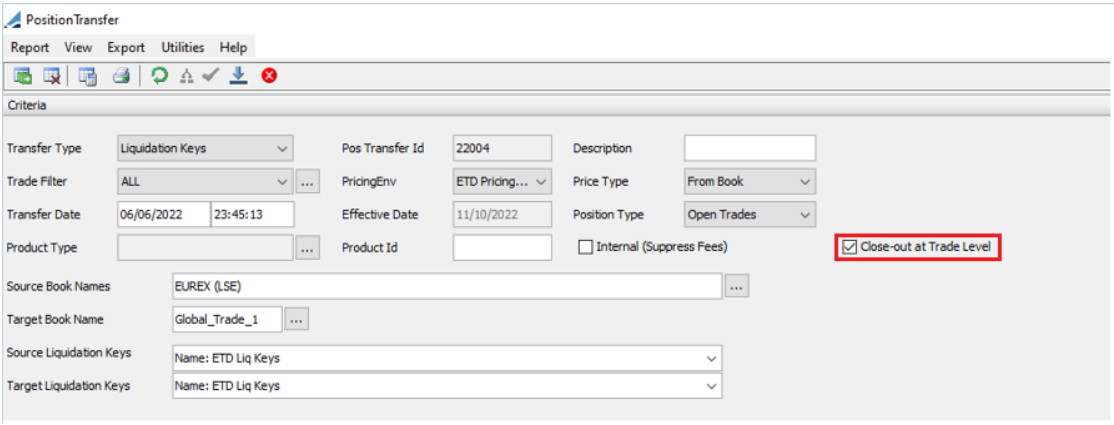
- *This enhancement is only available in V17 and available from Dec'22 release onwards.*
- *If a client has set up multiple Liquidation Config in their environment, then after position transfer, open/ Closed trades will reflect in the TOQ window for all the liquidation configurations.*
- *If client has set up single Liquidation Config in their environment, then after position transfer, open/ Closed trades will reflect in the TOQ window for Single Liquidation Config only.*
- *This enhancement will also allow user to select the default behavior (Single Liq Config - ETD Liq Config) or enhanced behavior (Multiple Liq Config - All Liq Config) to view trades post Position transfer in the TOQ window as per their requirement.*

This enhancement ignores some of the trade attribute validation (such as "LiquidableWith", "LiqConfigId" and "PosAggId") while processing the position transfer for ETD trades. This will allow to update the open/ Closed trades correctly in the TOQ window for all the liquidation configurations instead single liquidation configuration.

There is a new checkbox with the name "Close-out at Trade Level" available on criteria panel of the Position transfer window as shown in the below screenshot.

Note: This check box will appear only if the following field values have been selected:

- Transfer Type = Liquidation Keys
- Position Type = Open Trades



Note: This check box is ticked by default.

If the checkbox is ticked, then after position transfer process open/ close trades will only reflect under "ETD Liq Config" not for the rest of the liquidation config (such as DEFAULT, Internal and External) this is the default behavior.

***Note:** In this behavior after Position Transfer process, Liquidations will be reflected only for "ETD Liq Config" not for other liquidation config.*

If the checkbox is un-ticked, then after position transfer process open/ close trades will reflect under all liquidation config. This is enhanced behavior.

Note: *In this behavior after Position Transfer process, Liquidations will be reflected for all liquidation config.*

The following example will illustrate that,

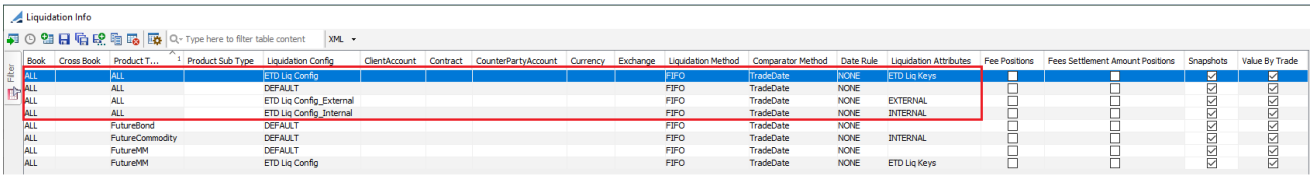
- How open & Close trades will reflect in TOQ window (for multiple Liquidation Config) under default & enhanced behavior.
- The comparison of total unrealized & realized P & L of default & enhanced behavior.

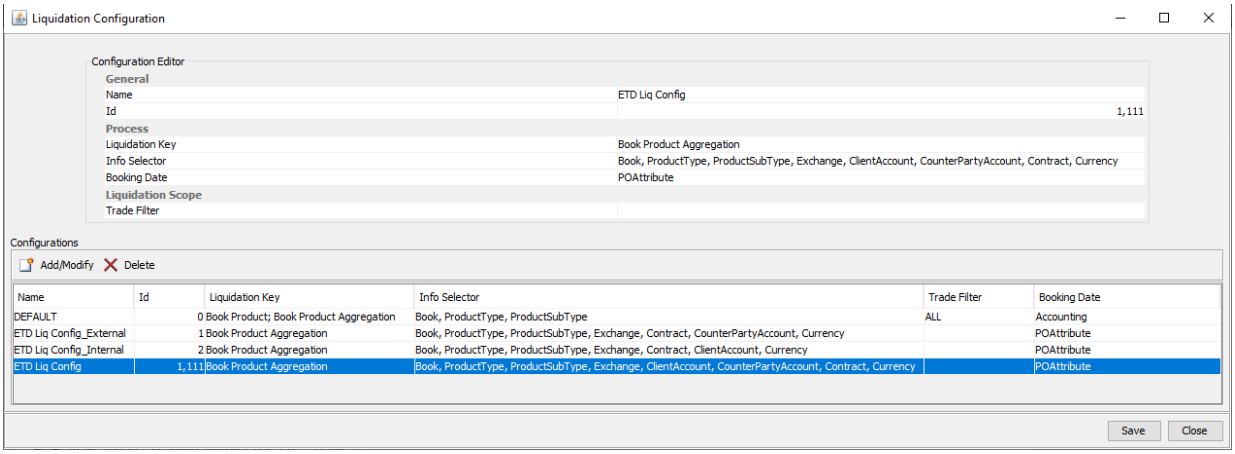
10.6.1 Configuration

Following configuration were used for this example.

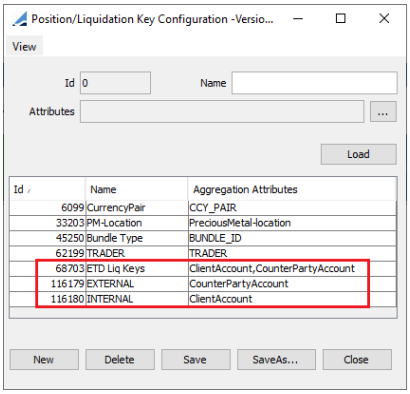
1. Liquidation Info:

Liquidation Config	Liquidation Method	Liquidation Attributes	Aggregation Attributes	Pos Aggregation by
ETD Liq Config	FIFO	ETD Liq Config	ClientAccount, CounterPartyAccount	Book, Product, ClientAccount and CounterPartyAccount
DEFAULT	FIFO		Book, Product	Book and Product
ETD Liq Config_External	FIFO	EXTERNAL	CounterPartyAccount	Book, Product and CounterPartyAccount
ETD Liq Config_Internal	FIFO	INTERNAL	ClientAccount	Book, Product and ClientAccount

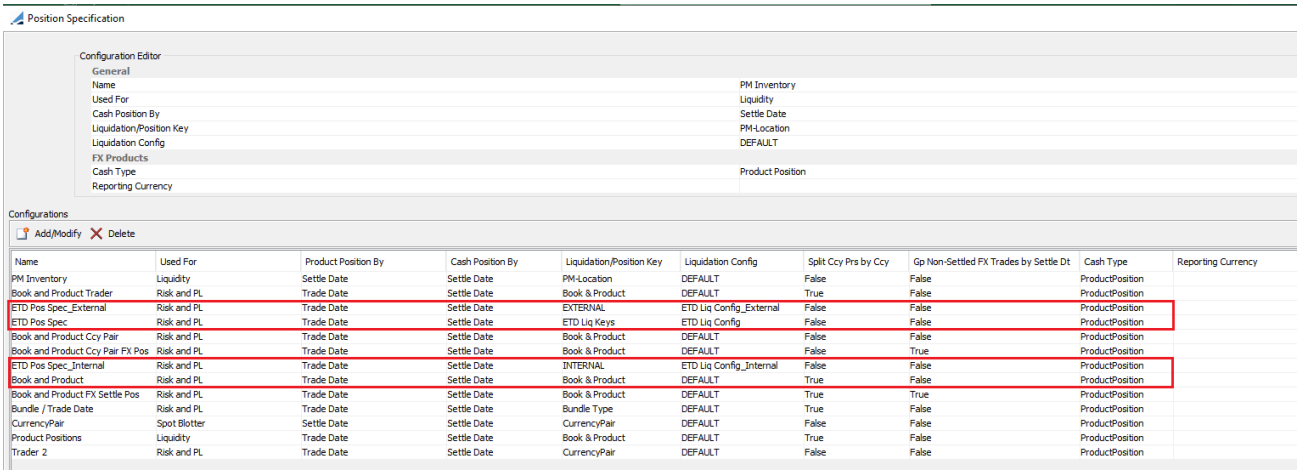




2. Position/Liquidation Key Configuration:

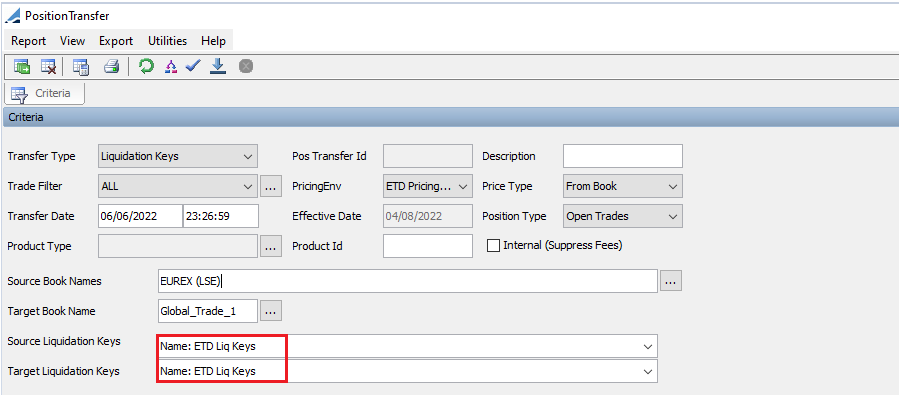


3. Position Specification:



4. Trade Filter:

For ETD trades, User needs to select “ETD Liq Keys” under source & target liquidation keys field on criteria panel (as shown in below screenshot) while processing position transfer so ETD Pos Spec will be applied to all selected trades hence trade filter is not required for selection of trades for close out.



10.6.2 Trade Details

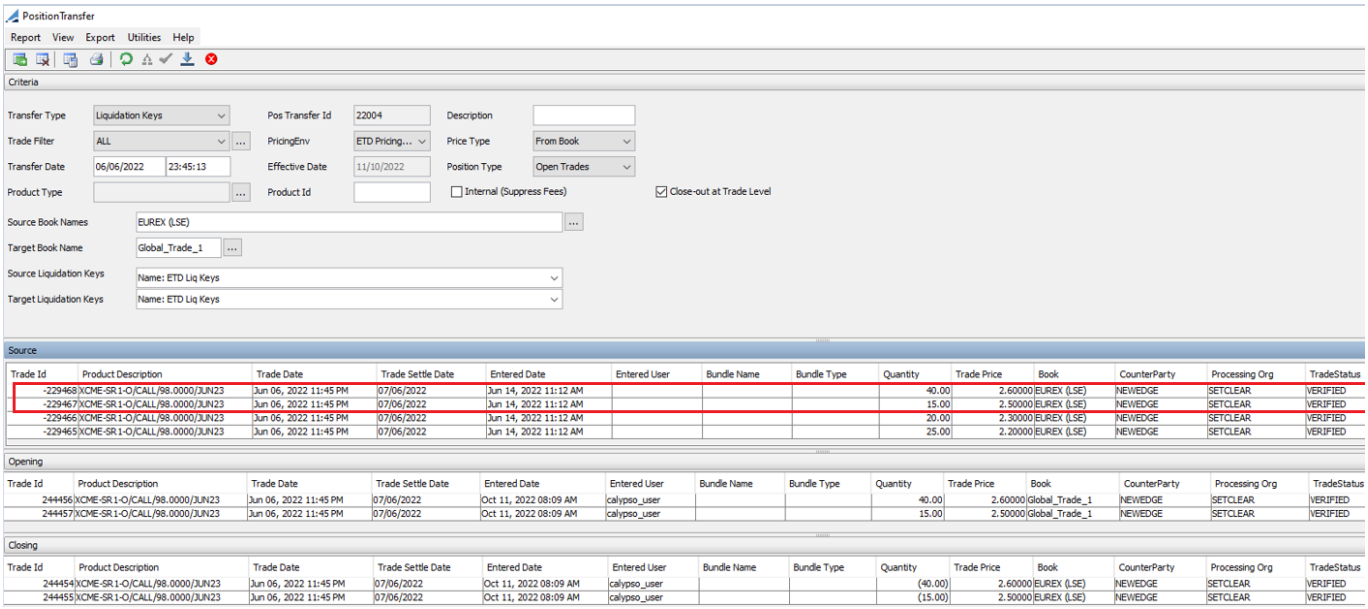
Below trades have been booked of total buy 100 & sell 50 Qty under different client accounts & with the same counterparty account.

Trade Id	Client Account	CounterParty Acc	Book	Product Description	Buy/Sell	Qty	Trade Price
229465	PECIFIC03	Newedge Client	EUREX (LSE)	XCME-SR1-O/CALL/98/JUN23	Buy	25	2.2
229466	PECIFIC03	Newedge Client	EUREX (LSE)	XCME-SR1-O/CALL/98/JUN23	Buy	20	2.3
229467	PECIFIC03	Newedge Client	EUREX (LSE)	XCME-SR1-O/CALL/98/JUN23	Buy	15	2.5
229468	PECIFIC03	Newedge Client	EUREX (LSE)	XCME-SR1-O/CALL/98/JUN23	Buy	40	2.6
229469	ATLANTIC03	Newedge Client	EUREX (LSE)	XCME-SR1-O/CALL/98/JUN23	Sell	-25	2.7
229470	ATLANTIC03	Newedge Client	EUREX (LSE)	XCME-SR1-O/CALL/98/JUN23	Sell	-20	2.8
229471	ATLANTIC03	Newedge Client	EUREX (LSE)	XCME-SR1-O/CALL/98/JUN23	Sell	-5	2.4

10.6.3 Position Transfer Process:

Trades (with trade id 229467 & 229468) have been transferred from the Source book "EUREX (LSE)" to target book "Global_Trade_1" as per shown in below screenshot:

Source Book	Target Book
Eurex (LSE)	Global_Trade_1



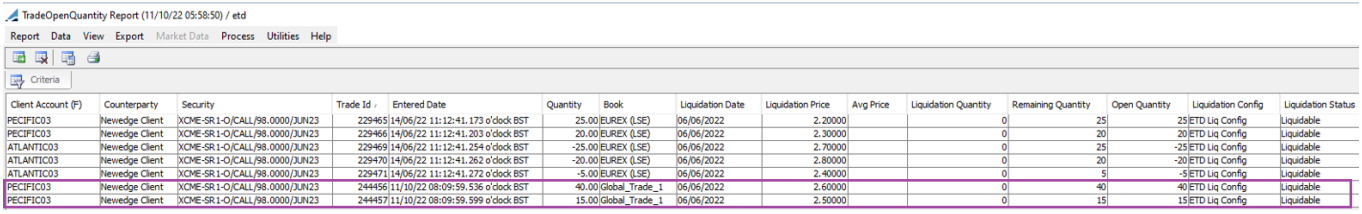
When position transfer process was *completed, then* following trades were created with different liquidation config in TOQ & Position keeper window.

10.6.4 Trade Open Quantity & Position Keeper window:

a. Position Transfer - Close-out at Trade Level – "Ticked" (Default Behavior):

i) Liquidation Config - ETD Liq Config:

Following (highlighted) new trades have been created with the target book "Global_Trade_1".



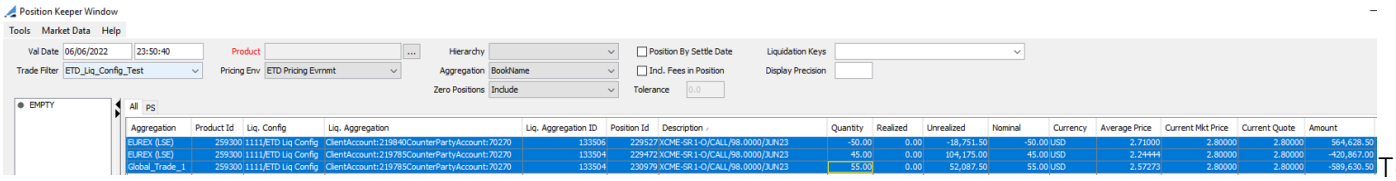
Also following original trades (with trade ID 229467 & 229468) have been closed with source book "EUREX (LSE)". Based on the price difference between first price & second price "Realized" amount is calculated for each trade.

First Trade Id	Second Trade Id	Client Account	Counterparty	Book	First Price	SecondPrice	Liquidation Qty	Realized
229467	244455	PECIFIC03	Newedge Client	EUREX (LSE)	2.5	2.5	15	0
229468	244454	PECIFIC03	Newedge Client	EUREX (LSE)	2.6	2.6	40	0

First Trade Id	Second Trade Id	Client Account	Counterparty	Book	First Price	SecondPrice	Liquidation Qty	Realized
							Total	0

Note: This liquidation happened post position transfer.

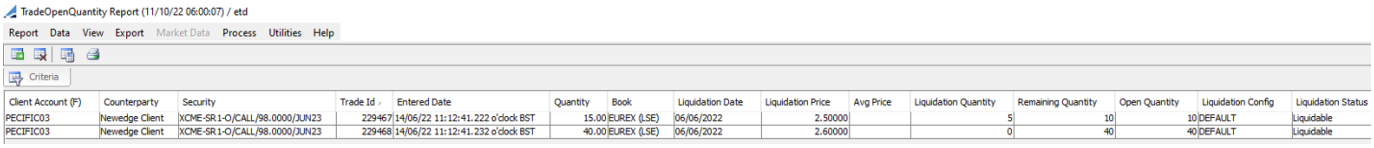
As shown in below screenshot, position keeper window is showing total unrealized amount = 1,37,511.00 & realized amount = 0.



Total **unrealized + realized** = 1,37,511.00

ii. Liquidation Config - Default:

Following original trades remained unchanged with source book "EUREX (LSE)".

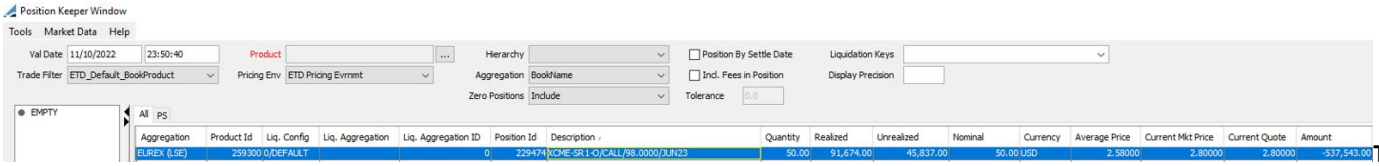


Also following trades were liquidated as per book and product aggregation criteria.

First Trade Id	Second Trade Id	Client Account	Counterparty	Book	First Price	SecondPrice	Liquidation Qty	Realized
229467	229471	-	-	EUREX (LSE)	2.5	2.4	5	-2,083.50
229466	229470	-	-	EUREX (LSE)	2.3	2.8	20	41,670.00
229465	229469	-	-	EUREX (LSE)	2.2	2.7	25	52,087.50
							Total	**91,674.00**

Note: This liquidation is due to buy & Sell and NOT because of position transfer.

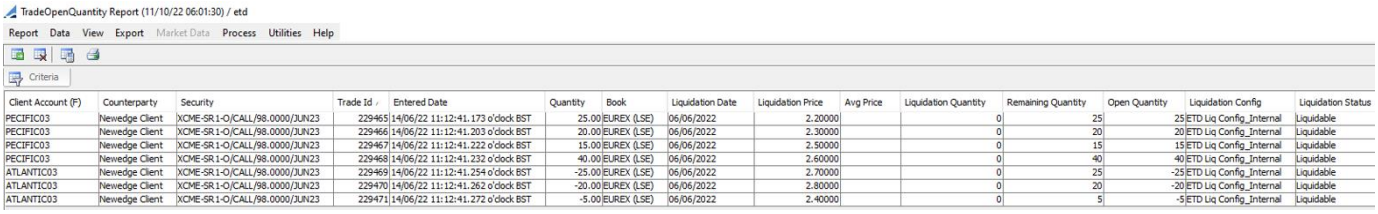
As shown in below screenshot, position keeper window is showing total unrealized amount = 45,837.00 & realized amount = 91,674.00



Total unrealized + realized = 1,37,511.00

iii. Liquidation Config - Internal:

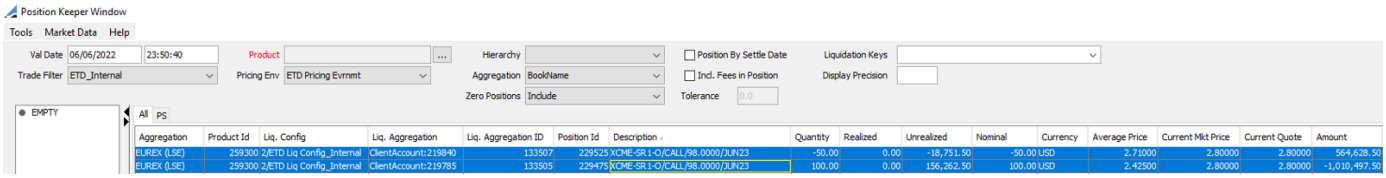
There were no new trades generated & original trades (with trade ID 229467 & 229468) remained unchanged with source book "EUREX (LSE)".



Note: i. NO buy & Sell liquidation happened

ii. Also in default behavior, after position transfer liquidation is NOT happening.

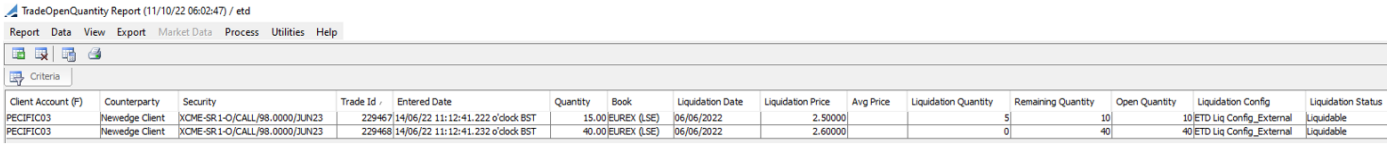
As shown in below screenshot, position keeper window is showing total unrealized amount = 1,37,511.00 & realized amount = 0



Total unrealized + realized = 1,37,511.00

iv. Liquidation Config - External:

Following original trades remained unchanged with source book "EUREX (LSE)".



Also following trades were liquidated as per book, product, and Counterparty Account aggregation criteria.

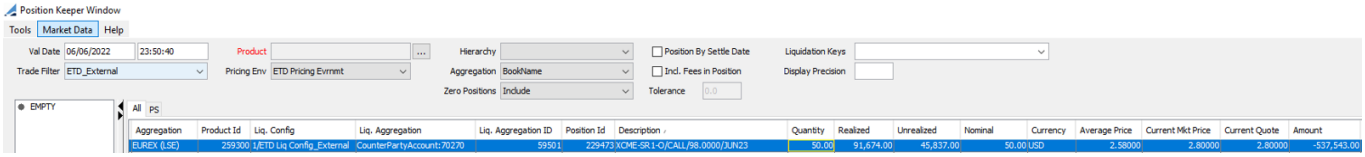
First Trade Id	Second Trade Id	Client Account	Counterparty	Book	First Price	SecondPrice	Liquidation Qty	Realized
229465	229469	-	Newedge Client	EUREX (LSE)	2.2	2.7	25	52,087.50

First Trade Id	Second Trade Id	Client Account	Counterparty	Book	First Price	SecondPrice	Liquidation Qty	Realized
229466	229470	-	Newedge Client	EUREX (LSE)	2.3	2.8	20	41,670.00
229467	229471	-	Newedge Client	EUREX (LSE)	2.5	2.4	5	-2,083.50
							Total	91,674.00

Note: i. This liquidation is due to buy & Sell and NOT because of position transfer.

ii. In default behavior, after position transfer liquidation is NOT happening.

As shown in below screenshot, position keeper window is showing total unrealized amount = 45,837.00 & realized amount = 91,674.00



Total unrealized + realized = 1,37,511.00

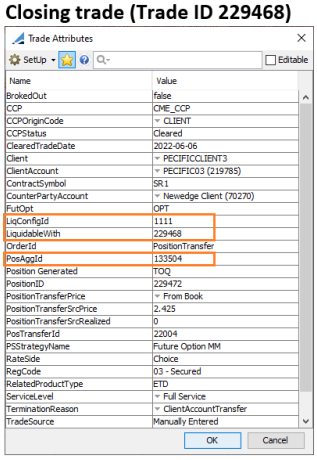
b. Position Transfer - Close-out at Trade Level – "Un-Ticked" (Enhanced Behavior):

Impact on Trade Attributes in enhanced behavior:

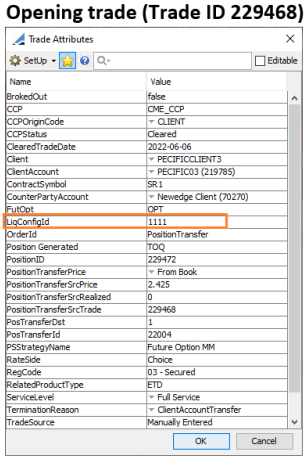
System will remove following highlighted attribute from "Trade Attribute" window to show correct opening & closing trades in TOQ window.

Before Position transfer:

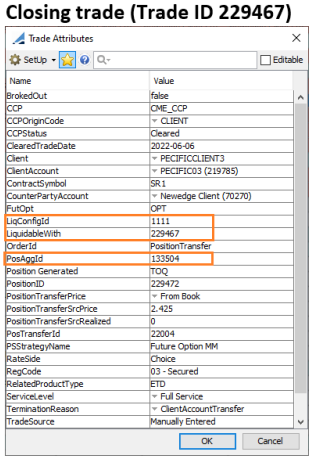
Closing trade (Trade ID 229468)



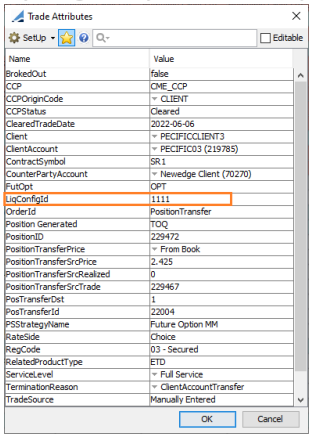
Opening trade (Trade ID 229468)



Closing trade (Trade ID 229467)

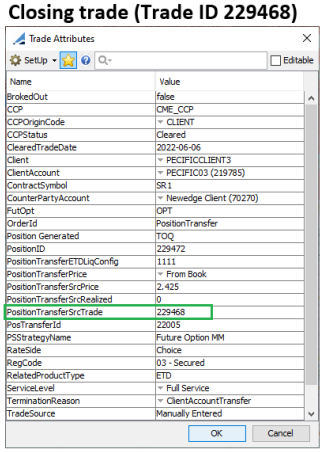


Opening trade (Trade ID 229467)

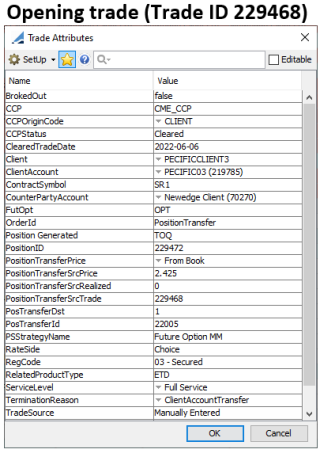


After Position transfer:

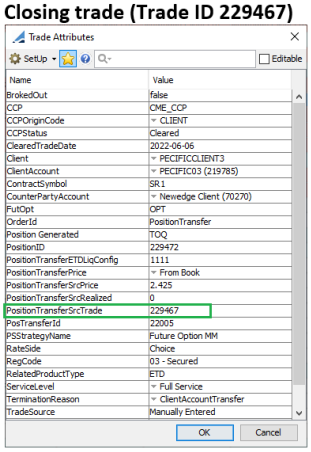
Closing trade (Trade ID 229468)



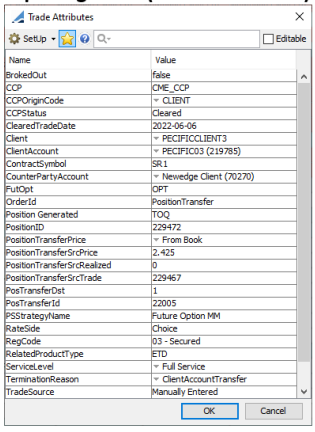
Opening trade (Trade ID 229468)



Closing trade (Trade ID 229467)



Opening trade (Trade ID 229467)



New attribute will be visible with the name “PositionTransferSrcTrade” after position transfer. This attribute value will show trade id.

Note: “PositionTransferSrcTrade” attribute value will allow to close the trade with same trade id under “ETD Liq Config”.

i) Liquidation Config - ETD Liq Config:

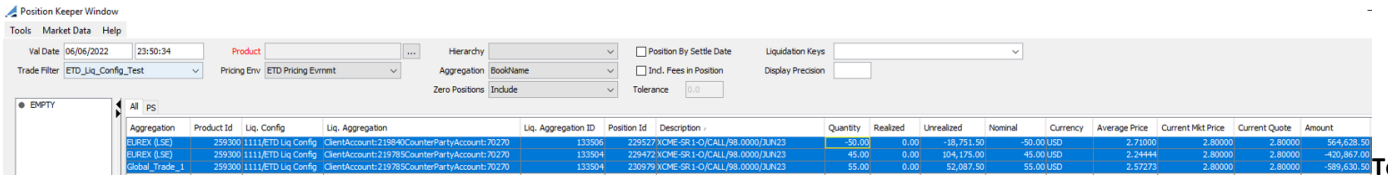
Following (highlighted) new trades have been created with the target book "Global_Trade_1".

Also following trades have been closed with source book "EUREX (LSE)". Based on price difference between first price & second price “Realized” amount is calculated for each trade.

First Trade Id	Second Trade Id	Client Account	Counterparty	Book	First Price	SecondPrice	Liquidation Qty	Realized
229467	244481	PECIFIC03	Newedge Client	EUREX (LSE)	2.5	2.5	15	0
229468	244480	PECIFIC03	Newedge Client	EUREX (LSE)	2.6	2.6	40	0
							Total	0

Note: This liquidation happened in enhanced behavior.

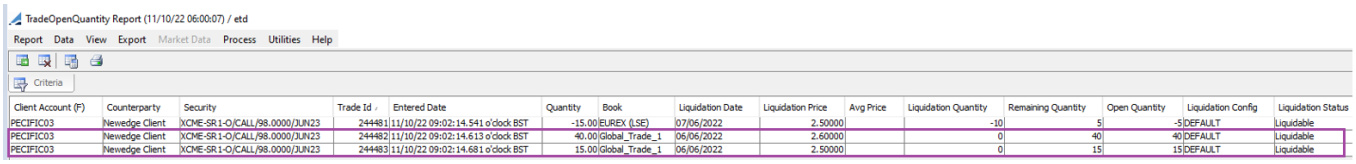
As shown in below screenshot, position keeper window is showing total unrealized amount = 1,37,511 & realized amount = 0



Total unrealized + realized = 1,37,511.00

ii. Liquidation Config - Default:

Following (highlighted) new trades have been created with the target book "Global_Trade_1".



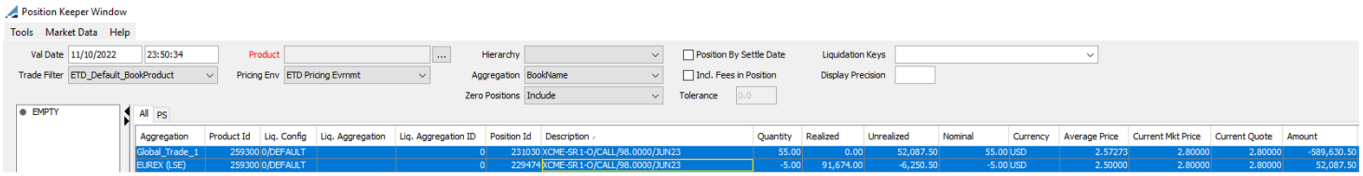
Also the following trades have been closed with source book "EUREX (LSE)".

First Trade Id	Second Trade Id	Client Account	Counterparty	Book	First Price	SecondPrice	Liquidation Qty	Realized
229465	229469	-	-	EUREX (LSE)	2.2	2.7	25	52,087.50
229466	229470	-	-	EUREX (LSE)	2.3	2.8	20	41,670.00
229467	229471	-	-	EUREX (LSE)	2.5	2.4	5	-2,083.50

First Trade Id	Second Trade Id	Client Account	Counterparty	Book	First Price	SecondPrice	Liquidation Qty	Realized
229467	244480	-	-	EUREX (LSE)	2.5	2.6	10	4,167.00
229468	244480	-	-	EUREX (LSE)	2.6	2.6	30	-
229468	244481	-	-	EUREX (LSE)	2.6	2.5	10	-4,167.00
							Total	91,674.00

Note: This liquidation happened in enhanced behavior.

As shown in below screenshot, position keeper window is showing total unrealized amount = 45,837.00 & realized amount = 91,674.00



Total unrealized + realized = 1,37,511.00

iii. Liquidation Config - Internal:

Following (highlighted) new trades have been created with the target book "Global_Trade_1".

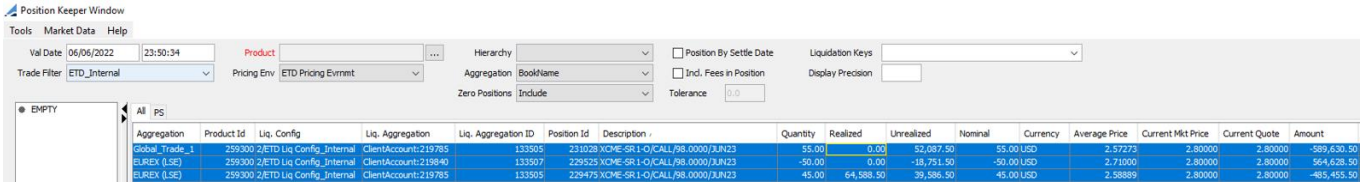
Also following trades have been closed with source book "EUREX (LSE)".

First Trade Id	Second Trade Id	Client Account	Counterparty	Book	First Price	SecondPrice	Liquidation Qty	Realized
229465	244480	PECIFIC03	-	EUREX (LSE)	2.2	2.6	25	41,670.00
229466	244480	PECIFIC03	-	EUREX (LSE)	2.3	2.6	15	18,751.50

First Trade Id	Second Trade Id	Client Account	Counterparty	Book	First Price	SecondPrice	Liquidation Qty	Realized
229466	244481	PECIFIC03	-	EUREX (LSE)	2.3	2.5	5	4,167.00
229467	244481	PECIFIC03	-	EUREX (LSE)	2.5	2.5	10	-
							Total	64,588.50

Note: This liquidation happened in enhanced behavior.

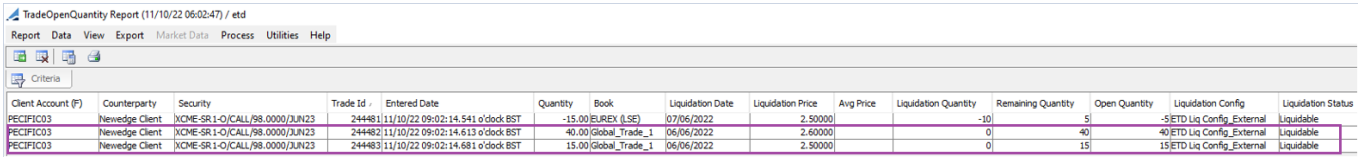
As shown in below screenshot, position keeper window is showing total unrealized amount = 72,922.50 & realized amount = 64,588.50



Total unrealized + realized = 1,37,511.00

iv. Liquidation Config - External:

Following (highlighted) new trades have been created with the target book "Global_Trade_1".



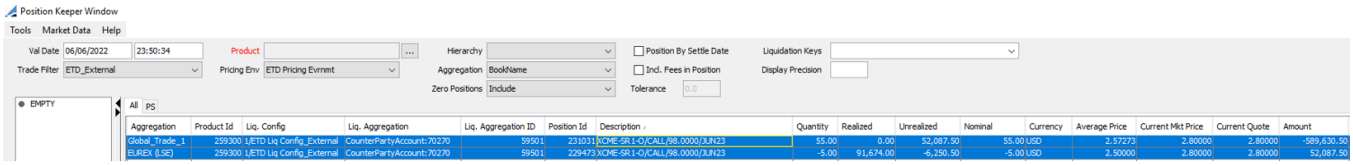
Also following trades have been closed with source book "EUREX (LSE)".

First Trade Id	Second Trade Id	Client Account	Counterparty	Book	First Price	SecondPrice	Liquidation Qty	Realized
229465	229469	-	Newedge Client	EUREX (LSE)	2.2	2.7	25	52,087.50
229466	229470	-	Newedge Client	EUREX (LSE)	2.3	2.8	20	41,670.00
229467	229471	-	Newedge Client	EUREX (LSE)	2.5	2.4	5	-2,083.50
229467	244480	-	Newedge Client	EUREX (LSE)	2.5	2.6	10	4,167.00

First Trade Id	Second Trade Id	Client Account	Counterparty	Book	First Price	SecondPrice	Liquidation Qty	Realized
229468	244480	-	Newedge Client	EUREX (LSE)	2.6	2.6	30	-
229468	244481	-	Newedge Client	EUREX (LSE)	2.6	2.5	10	-4,167.00
							Total	91,674.00

Note: This liquidation happened in enhanced behavior.

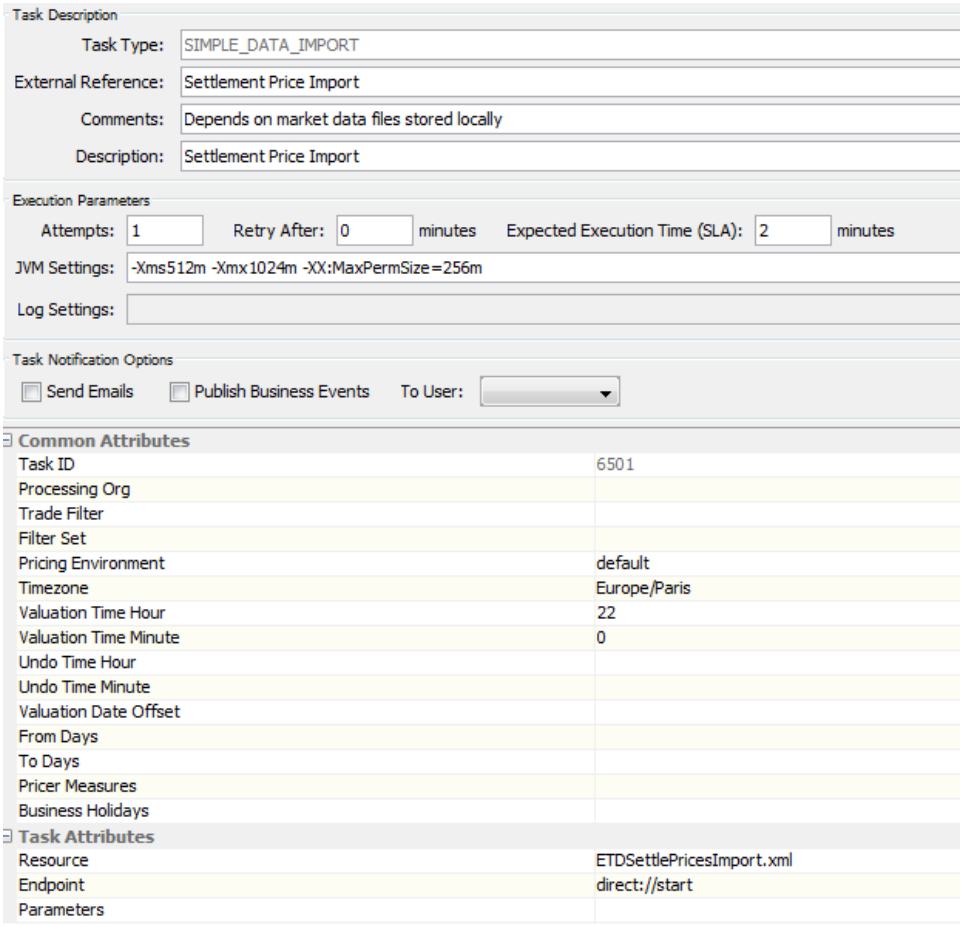
As shown in below screenshot, position keeper window is showing total unrealized amount = 45,837.00 & realized amount = 91,674.00



Total unrealized + realized = 1,37,511.00

Importing Market Data

The scheduled task SIMPLE_DATA_IMPORT is used to import end of day settle prices (for variation margin calculation) and FX quotes, and cabinet prices.



Attribute Name	Purpose/Impact
Task Type	SIMPLE_DATA_IMPORT
Processing Org	The name of the Clearing Broker running the EOD process.
Pricing Environment	The name of the PE from which to source the Closing Prices.
Timezone	The Time Zone in which the Clearing Broker operates.

The market data import process uses the same files as the risk calculation and relies on the folder structure described under Appendix – External Data Locations.

Variation Margin Calculation

12.1 Overview

The Variation Margin is defined as the change in valuation of a portfolio due to new trade activity, lifecycle events, and the daily changes in the settlement prices of futures and options across all exchanges in their settlement currencies. In market terminology, a portfolio's Open Trade Equity (OTE) represents the current valuation of all open positions based on their traded price and the most recent market closing price in each of the individual instruments. In addition, options are commonly valued using Net Option Value (NOV) which represents the options current value, long or short, based on closing prices but ignoring the initial traded price.

Realized gains or losses due to closing out of open positions, payment of option premium, fees, commissions and cash or physical settlement of future and option positions also contributes to the daily variation margin calculation, impacting the cash balance of the account.

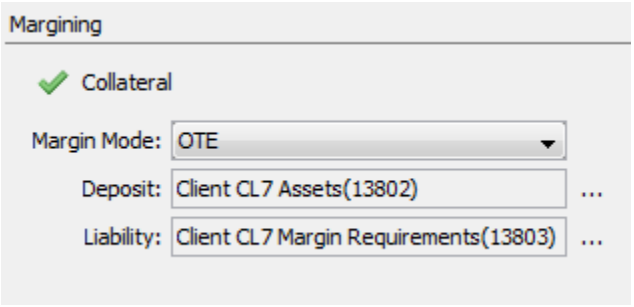
The sum of OTE, NOV and Realized Cash at the end of each day results in that account's closing Cash Net Liquidating Value (NLV), with securities deposited as collateral making up the rest of the account's Total NLV.

The execution of the scheduled task CLEARING_VM_CALC will generate the daily OTE and NOV and present it in a way that the account balances are updated only with the day-to-day change in the account value.

Account Setting - Margin Mode

The PO must configure all client and counterparty collateral accounts to use one of two available VM Margin Modes – "OTE" or "Realized VM" - in order to specify how the unrealized profit or loss of their open positions behave.

- **OTE Mode** treats unrealized PL as a credit or debit to the account balance which can be used to cover Initial Margin Requirements but cannot be withdrawn from the account as cash. In other words, if an account accumulates a large positive OTE without ever realizing the profit by closing out the position, "OTE" margin mode would not make that amount available in the cash balance to transfer back to the client, however it would allow that amount to be used to cover the Initial Margin Requirements, likely eliminating the need for the client to post additional collateral.



We model OTE Mode by calculating the VM in the standard way, creating a Clearing Transfer trade with OTE and NOV amounts.

More specifically, when using that mode, we attach OTEFUT (and its reversal) - to isolate the OTE portion linked to Futures - and OTEOPT (and its reversal) – to isolate the OTE portion linked to Future Style Options.

These technical fees are generating transfers that get associated to the account's VM Contract. In this mode, the OTE-like transfers are enriched with the VM Margin Call id linked to the Clearing Account, they feed the collateral position for that contract but are filtered from the total cash balance as it is not real cash that could be withdrawn.

In parallel, SOV (and its reversal) – for short option value – and LOV (and its reversal) – for long option value – technical fees are created and attached to the Clearing Transfer to impact the option value buckets (SOV, LOV and NOV) in the inventory. The related transfers attached to the Clearing Transfer are not enriched with any margin id. These fees and transfers are just computed to create a bucket for reconciliation and statement purposes. Option Value is only considered by the initial margin process (CLEARING_IM_CALC) to calculate the total margin requirement. Option Value is not real cash that can be withdrawn. The SOV, LOV, NOV flows only impact the related inventory bucket and do not impact the Inventory Cash Balance.

- **Realized PL Mode** treats unrealized PL the same as realized and is essentially the equivalent of closing out all open positions each night at the settlement price and reopening them the next day as a new position at the previous day's price. The unrealized can be used as a cash equivalent to cover IMR or to withdraw if the account is in excess.

  This mode is triggered by selecting 'Realized VM' as the margin mode on the clearing account and works by generating NPV and NPV_REV transfers-like on the Clearing Transfer trade that get updated with the account's associated VM Collateral Contract, and therefore treated as cash assets.

  More specifically, when using that mode, we attach NPVFUT (and its reversal) - to isolate the NPV portion linked to Futures - and NPVOPT (and its reversal) – to isolate the NPV portion linked to Future Style Options. These technical fees are generating transfers that get associated to the account's VM Contract. In this mode, the NPV-like transfers are enriched with the VM Margin Call id linked to the Clearing Account, they feed the collateral position for that contract and impact the total cash balance as it is real cash that could be withdrawn.

  The behavior of the OTE or NPV is driven in part by the Fee definition. The highlighted 'Margin' field is set to "Account Level" in the standard system configuration, meaning that based on the setting of the Margin Mode on each account, the fee transfer may or may not get tagged with the MarginCall XferAttribute that is required for it to be considered as an asset in the Deposit contract.

Account Setting – Family Accounts

Variation Margin is calculated on open positions at the level of each account and contract that is eligible to hold positions – what we refer to as Standard Accounts and Child Accounts. When an account is a child, the OTE/NPV and NOV related transfers generated at the child account level & contract are duplicated to the parent account so that both accounts are equally impacted. This holds true for other transfer types as well, such as Premium, Realized PL and Option Cash Settlement. What this means is that for a parent child structure, the total VM at the parent level is the sum of all flows across all child accounts.

Settle Prices

To calculate the Variation Margin, the system requires that each instrument in the portfolio has a closing price saved under the CLOSE instance on the process date.

In case no price exists for the day, the latest available market price is used. You can define how many business days in the past the market price can be looked up using in the domain ProcessingConfig:

Value = ETDClearing.VM.PastQuoteDays

Comment = <number of business days>

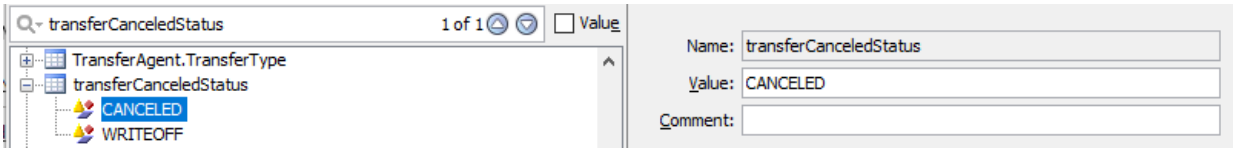
In case no market price is found, the latest available trade price is used.

12.2 Scheduled Task CLEARING_VM_CALC

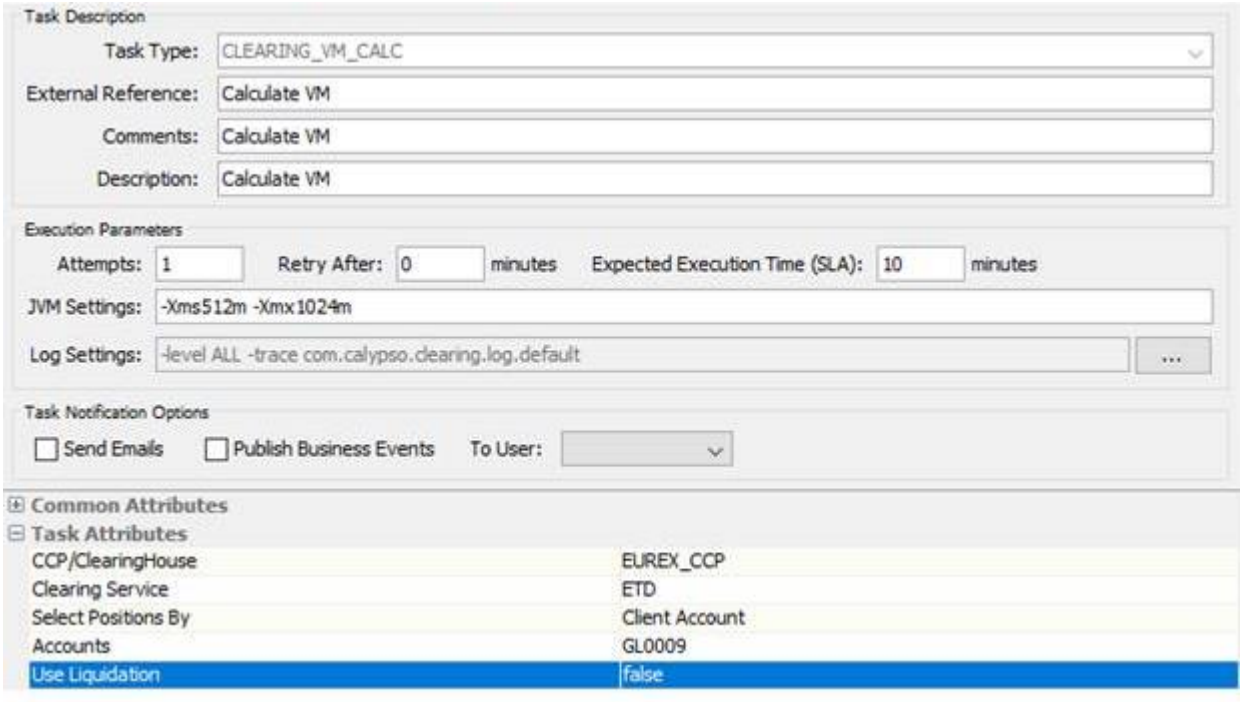
NOTE: If the domain "transferCanceledStatus" does not contain any value, the CLEARING_VM_CALC scheduled task ignores the existence of the "CANCELED" status clearing transfer and regenerates a new clearing transfer.

If the domain "transferCanceledStatus" contains any value other than "CANCELED" status for Collateral Manager usage or any other asset class usage, for example "WRITEOFF", the CLEARING_VM_CALC scheduled task will consider that a clearing transfer is already available for that day, even though the clearing transfer is in "CANCELED" status and the scheduled task fails to generate a new clearing transfer.

In order to avoid this, you need to add "CANCELED" to the domain "transferCanceledStatus" in order to ignore the "CANCELED" clearing transfer and generate new clearing transfers when the scheduled task runs again.



Configuring the Scheduled Task



Attribute Name	Purpose/Impact
Task Type	CLEARING_VM_CALC
Processing Org	The name of the Clearing Broker running the EOD process.
Pricing Environment	The name of the PE from which to source the Closing Prices.
Timezone	The Time Zone in which the Clearing Broker operates.
Valuation Time Hour/Minute	The Valuation Time of the scheduled task can be set to ensure that each time the task is run, it is run at the same Valuation Time regardless of the Execution Time. The ST should be run at a time in the specified Time Zone which is before the Book EOD time of all Books which hold positions for the accounts included in the run. If the scheduled task valuation time is after the Book EOD time on date 'T', the task will be run as if it is running for EOD on T+1.
CCP/ClearingHouse	This field indicates the list of markets to process. Allows the user to select a list from any Legal Entity with Role 'CounterParty', or to simply select 'ALL' to process all markets.
Clearing Service	Always set to ETD for Listed Market processing. This uses the 'RelatedProductType' attribute of the trade to locate trades and positions related to ETD processing.
Select Positions By	Allows the user to determine the Account Types that they may want to filter on in the next field.
Accounts	Allows the user to select from a list of Standard and Child Accounts of the type selected in the previous field. Can be used to isolate specific accounts for processing or can be set to 'ALL' to process all accounts.
Use Liquidation	True or false. Default is false. Clearing transfers are created based on the average price of the position. If set to true (not recommended), clearing transfers are created based on the liquidated price depending on the liquidation method defined in Liquidation Info.
Clearing Transfer by Attribute	You can select the following: • CONTRACT (or not set): Clearing transfer trades are created at the contract level (default behaviour) + Liquidation Key Config if any. The contract name stored in the trade keyword ContractName. • BOOK: Clearing transfer trades are created at the Book level + Liquidation Key Config if any. • BOOK_PRODUCT: Clearing transfer trades are created at Book + Product description level. The product description is stored in the trade keyword ProductDescription.

Attribute Name	Purpose/Impact
Liquidation Key Config	You can select a liquidation key config to create clearing transfers based on the selected aggregation key.

In the domain ProcessingConfig, setting the value = ETDClearing.VM.UseNativePricers to true or not defining that value at all will mean the CLEARING_VM_CALC scheduled task is using the standard Calypso pricers (pricers are more demanding in terms of market data but ensures consistency with numbers produced in accounting and TOQ report) to compute the option and future values.

To de-activate this feature, put that domain to false and the CLEARING_VM_CALC scheduled task will compute its own calculation, without having to set specific pricing configuration.

Clearing Transfer Trades

The VM flows generated through the task are stored on a Calypso product called a Clearing Transfer trade. Storing these calculated amounts on a trade allows us to leverage the robust support for trade workflow, transfer generation, settlement routing and reporting that is supported across all Calypso products. We simply use the Clearing Transfer product as a convenient container for the VM transfers.

Once the trade level valuations are complete, the results will be consolidated into a single OTEFUT/OTEOPT/NPVFUT/NPVOPT and a single SOV/LOV amount for each unique combination of CCP, Clearing Service, Client Account, Counterparty Account, Contract and Currency by default.

You can also elect to create those trades by CCP, Clearing Service, Client Account, Counterparty Account, Book or CCP, Clearing Service, Client Account, Counterparty Account, Book, Product Description using the following domain:

Domain = ProcessingConfig

Clearing Transfer Trades will then be formed to contain these flows and generate BO transfers. The current design removes the existing design of CT trade mirroring, and instead generates a single CT trade with fees and transfers facing both the client and counterparty.

The Clearing Transfer trade is created with the following logic:

Trade Element	Population Logic
Counterparty	The LE on the Counterparty Account associated to the trade.
Role	Hardcoded to Counterparty.
PO	The PO specified in the executed Scheduled Task.
Book	The default Client or House Clearing Book specified on the PO, based on the Origin of the Account to which the Margin Group is associated.
Trade Date	The Process Date of the Scheduled Task.

Trade Element	Population Logic
Settle Date	The Process Date of the Scheduled Task. Our Inventory balances will be built using Settle Date logic, and we need the CT trades generated on the processing date to impact the balances for that date.
Currency	The Currency of the CT trade will be taken from the currency of the aggregated transaction valuations.
Principal	The sum of the amounts of all of the counterparty flows included in the trade. We do not include all flows, because by definition these would always sum to zero.
Pay/Rec	This should be set based upon the sign of the Principal flow. A positive principal results in a setting of Receive and a negative principal amount results in a setting of Pay
Transfer Type	Hard coded to 'CASH_SETTLEMENT'
Client Account	The Client Account on the aggregated transaction valuations.
Counterparty Account	The Counterparty Account on the aggregated transaction valuations.
Trade Keywords	**CCP** - Taken from the CCP keyword of the trades whose valuation is contributing to the CT Trade. This is included because of the users' ability to run the task for a subset of all CCPs. If we did not uniquely identify the CT trade by CCP, the execution of the ST for one CCP would overwrite the flows for another previously executed CCP, and our finalization process would fail. **CCPOriginCode** - The Origin of the Client Account specified – House or Client. **RelatedProductType** - ETD.

We describe below the calculation mode implemented by the scheduled task when not using the native Calypso pricers. If Calypso pricers are used, flow types created will be the same as listed below. The calculation will depend on your pricing params, especially considering the difference between future (where you consider the trade price) and option value (where you only consider the current market quote).

OTEFUT/OPT related Cashflows

For Accounts in MarginMode = OTE, generate OTE flows as follows.

For the selected trade, if the product is a Future:

- Flow type = "OTEFUT"
- SettleCurrency = The settle currency defined on the product
- Flow Amount = Sum of {Round*(Market Price * Tick Size * Tick Value) – Round(Traded Price * Tick Size * Tick Value)}* Quantity*} for the open quantity of each transaction that comprises the open position, where the sign of the Quantity follows these rules

For the selected trade, if the product is an Option with the PremiumPaymentConvention attribute = 'VariationMargined':

- Flow type = "OTEOPT"
- SettleCurrency = The settle currency defined on the product
- Flow Amount = Sum of {Round*(Market Price * Tick Size * Tick Value) – Round(Traded Price * Tick Size * Tick Value)}* Quantity*} for the open quantity of each transaction that comprises the open position, where the sign of the Quantity follows these rules

If the product is an option with the PremiumPaymentConvention attribute not equal to 'VariationMargined', the system will generate a SOV or LOV flow, no OTE or NPV.

OTEFUT/OPT_REV related Cashflows

For accounts in Margin Mode of OTE, generate as follows:

Will be equal but opposite direction to the OTEFUT/OTEOPT amount on the previous day's CT trade with the equivalent trade attributes. If no CT trade is found, the amount will equal 0.

The previous day is the preceding business day subject to the holiday calendar designated on the PO under the "Clearing Business Calendar" attribute.

NPVFUT/OPT related Cashflows

For Accounts in MarginMode = Realized VM, generate NPV flows as follows.

For the selected trade, if the product is a Future:

- Flow type = "NPVFUT"
- SettleCurrency = The settle currency defined on the product
- Flow Amount = Sum of {Round*(Market Price * Tick Size * Tick Value) – Round(Traded Price * Tick Size * Tick Value)}* Quantity*} for the open quantity of each transaction that comprises the open position, where the sign of the Quantity follows these rules

For the selected trade, if the product is an Option with the PremiumPaymentConvention attribute = 'VariationMargined':

- Flow type = "NPVOPT"
- SettleCurrency = The settle currency defined on the product
- Flow Amount = Sum of {Round*(Market Price * Tick Size * Tick Value) – Round(Traded Price * Tick Size * Tick Value)}* Quantity*} for the open quantity of each transaction that comprises the open position, where the sign of the Quantity follows these rules

If the product is an option with the PremiumPaymentConvention attribute not equal to 'VariationMargined', the system will generate a SOV or LOV flow, no OTE or NPV.

NPVFUT/OPT_REV related Cashflows

For accounts in Margin Mode Realized VM, generate as follows:

Will be equal but opposite direction to the NPVFUT/NPVOPT amount on the previous day's CT trade with the equivalent trade attributes. If no CT trade is found, the amount will equal 0.

The previous day is the preceding business day subject to the holiday calendar designated on the PO under the "Clearing Business Calendar" attribute.

SOV/LOV related Cashflows

If the product is an Option with the PremiumPaymentConvention attribute = 'Conventional':

- Flow type = "LOV" if long position or "SOV" if short position globally for the CT aggregation level
- SettleCurrency = The settle currency defined on the product
- Amount = Sum of {*Market Price * Tick Size * Tick Value * Quantity*} for the open quantity of each individual transaction that comprises the open position

SOV/LOV_REV related Cashflows

Will be equal but opposite direction to the SOV/LOV amount on the previous day's CT trade with the equivalent trade attributes. If no CT trade is found, the amount will equal 0.

The previous day is the preceding business day subject to the holiday calendar designated on the PO under the "Clearing Business Calendar" attribute.

FWD_DISC_OTE Cashflow

For Accounts in MarginMode = OTE, generate an OTE flow as follows.

For the selected trade, if the product is a Future with the PremiumPaymentConvention attribute = 'VariationMargined' and the Exchange set to a LE with a MIC value of "LME":

- Flow type = "OTE"
- SettleCurrency = The settle currency defined on the product
- Flow Amount = Sum of {Round*(Market Price * Tick Size * Tick Value) – Round(Traded Price * Tick Size * Tick Value)}* Quantity*} for the open quantity of each transaction that comprises the open position, where the sign of the Quantity follows these rules

You can select the date used to calculate the LME discount factor based on domain "ProcessingConfig" and "Value = ETDClearing.LME.DF.CTLevel".

The Comment can be set as:

- Expiry_Date - Discount Factor as of the expiry date of the future
- First_Delivery_Date - Discount Factor as of the First Delivery Date of the future
- Last_Delivery_Date - Discount Factor as of the Last Delivery Date of the future

- CCP_Date - Discount Factor as of the CCP Date of the future.

If the domain is not added or if left empty, the default date for is Expiry Date.

FWD_DISC_OTE_REV Cashflow

Will be equal but opposite direction to the OTE amount on the previous day's CT trade with the equivalent trade attributes. If no CT trade is found, the amount will equal 0.

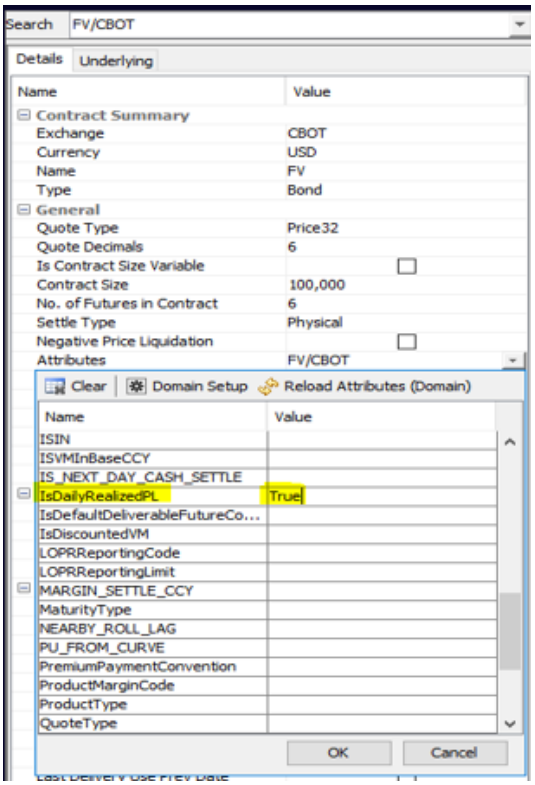
The previous day is the preceding business day subject to the holiday calendar designated on the PO under the "Clearing Business Calendar" attribute.

Managing Clearing Transfers for Daily Realized MTM Contracts

For certain markets, such as the Brazilian exchange's rate-based futures, contracts utilizing Daily Realized Mark-to-Market (MTM) can lead to frequent daily Variation Margin (VM) exchanges. To streamline this process and avoid generating daily clearing transfers, the system now utilizes a new calculation method to generate both realized and unrealized VM.

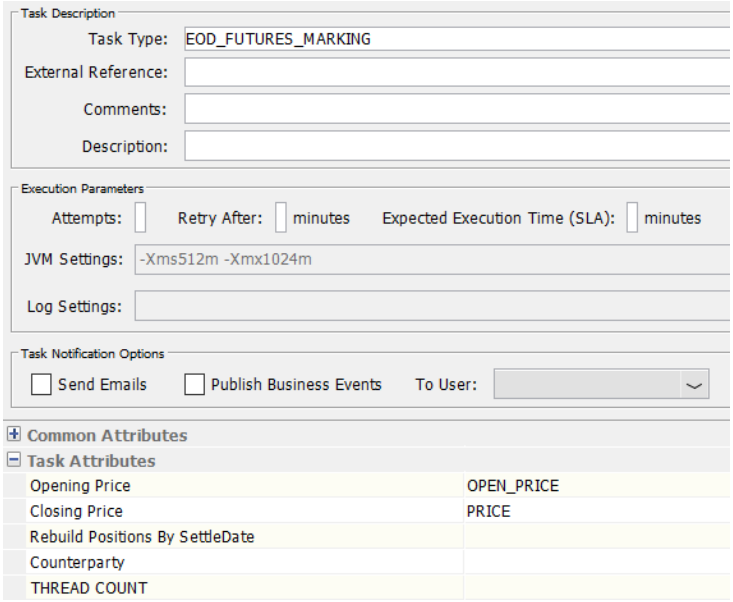
To identify contracts that use Daily Realized MTM and therefore should not generate daily clearing transfers, a contract definition attribute called "IsDailyRealizedPL" has been introduced.

- IsDailyRealizedPL = True: If this attribute is set to "True" for a contract, the system will recognize it as a Daily Realized MTM product and will not generate daily clearing transfers for it. Instead, realized and unrealized VM will be calculated using the new method.
- IsDailyRealizedPL = False or Blank: If this attribute is set to "False" or left blank, the system will identify the contract as a standard VM-based product and will generate Clearing Transfers as per the usual process.



12.3 Recording Daily Value Changes

The EOD_FUTURES_MARKING scheduled task allows recording daily value changes as the difference between pricer measures OPEN_PRICE and PRICE.

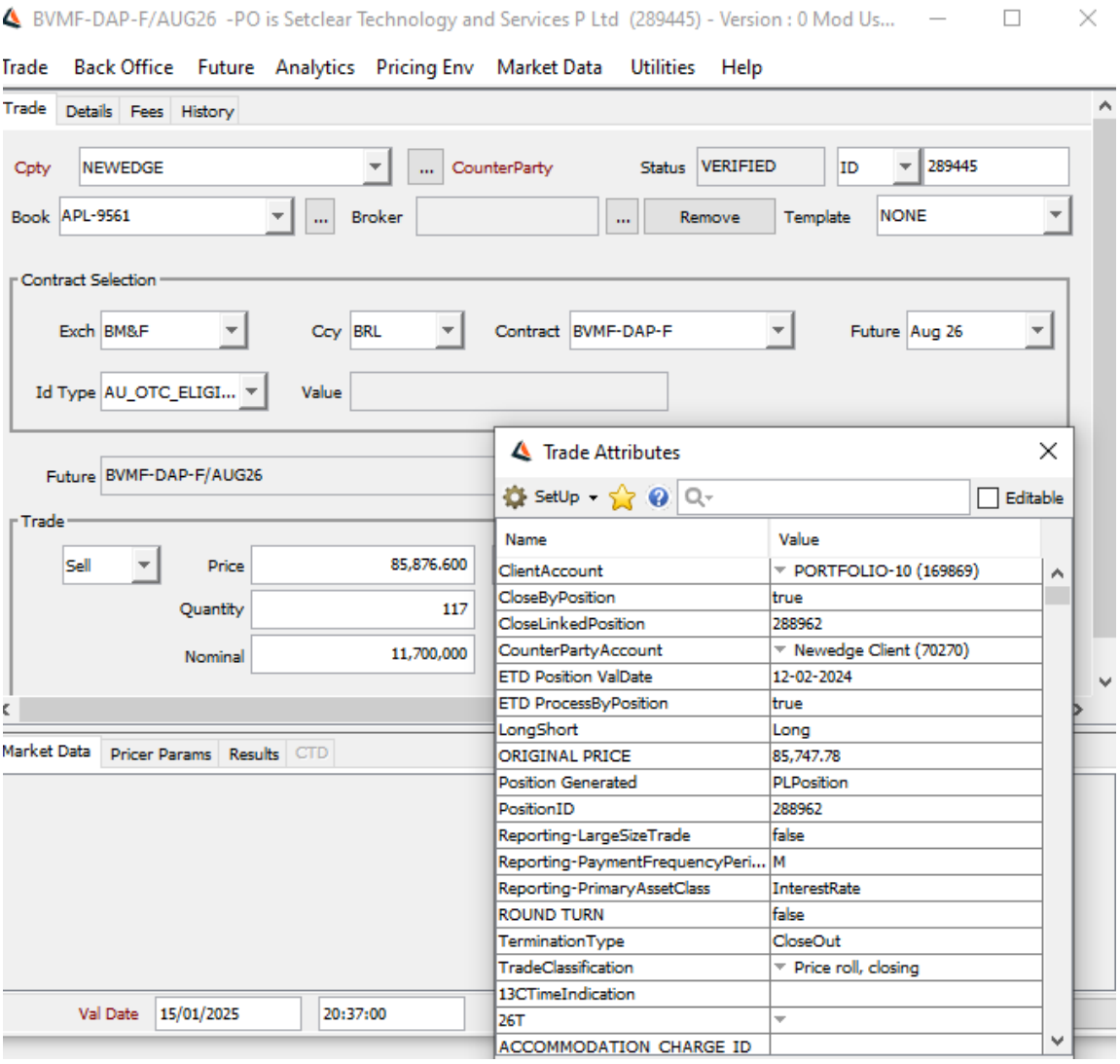


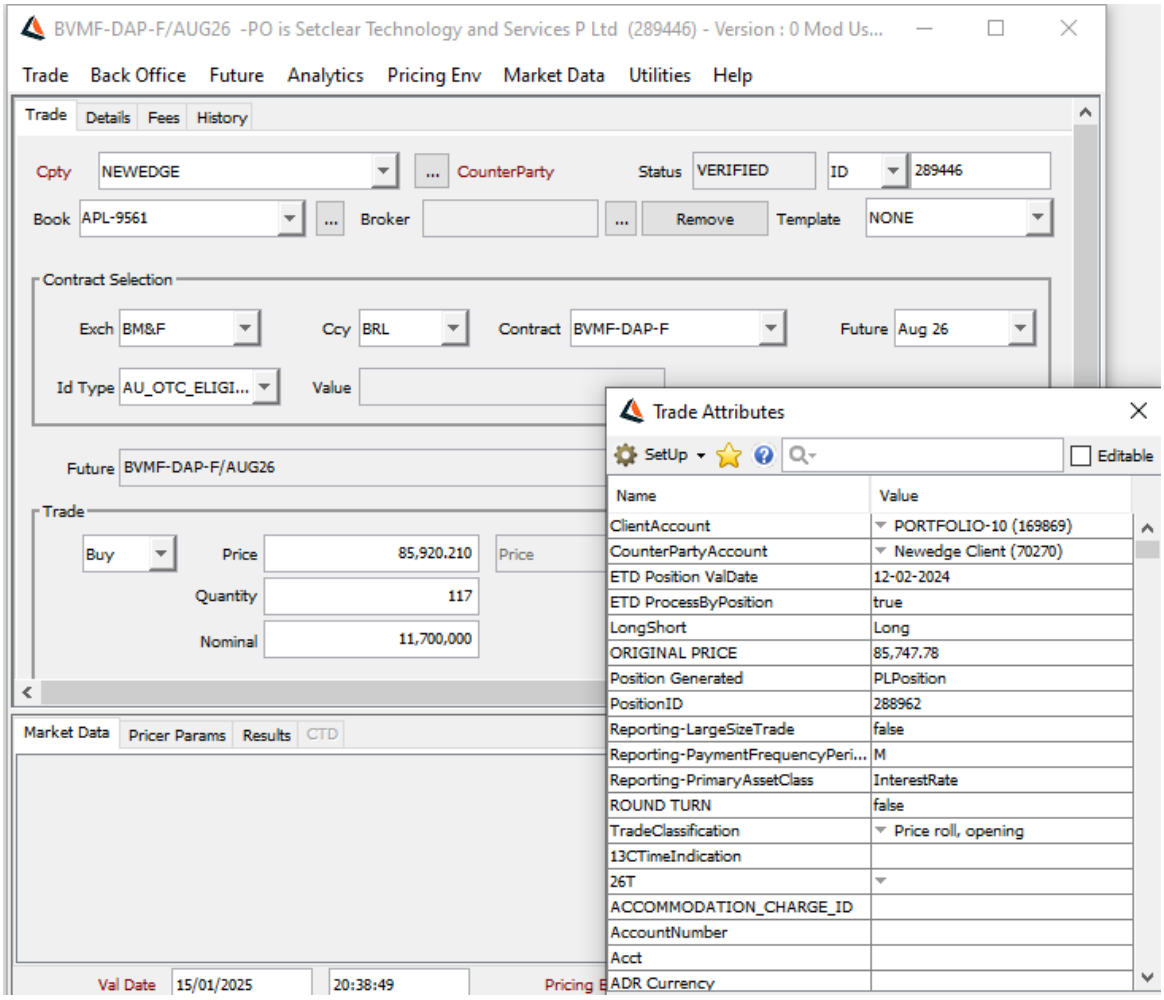
Select a trade filter and a pricing environment in the common attributes. This only applies to trade filters with the position specification defined in domain "DefaultETDPosSpec".

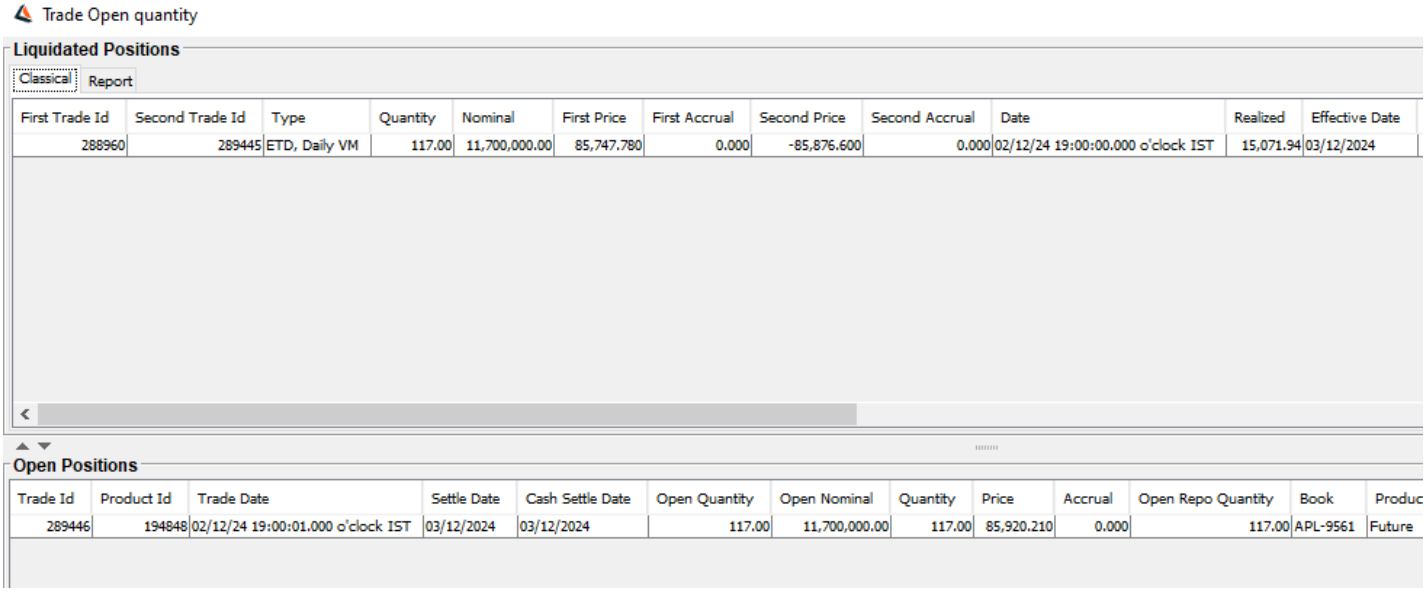
Task Attributes

- **Opening Price**: Enter the opening rice pricer measure.
- **Closing Price**: Enter the closing price pricer measure.
- **Rebuild Positions By SettleDate**: Select true to rebuild the positions by settle date as needed.
- **Counterparty**: Select a counterparty as needed.
- **THREAD COUNT**: Enter a number of threads to run the scheduled task on multiple threads.

The scheduled task creates trades to close the positions at Opening Price and open the positions as Closing Price in order to record the daily value change as realized P&L.


BVMF-DAP-F/AUG26 -PO is Setclear Technology and Services P Ltd (289445) - Version : 0 Mod Us...
Trade Back Office Future Analytics Pricing Env Market Data Utilities Help
Trade Details Fees History
Cpty NEWEDGE ... CounterParty Status VERIFIED ID 289445
Book APL-9561 ... Broker ... Remove Template NONE
Contract Selection
Exch BM&F Ccy BRL Contract BVMF-DAP-F Future Aug 26
Id Type AU_OTC_ELIGI... Value
Future BVMF-DAP-F/AUG26
Trade
Sell Price 85,876.600
Quantity 117
Nominal 11,700,000
Market Data Pricer Params Results CTD
Val Date 15/01/2025 20:37:00
Trade Attributes
SetUp Editable
Name Value
ClientAccount PORTFOLIO-10 (169869)
CloseByPosition true
CloseLinkedPosition 288962
CounterPartyAccount Newedge Client (70270)
ETD Position ValDate 12-02-2024
ETD ProcessByPosition true
LongShort Long
ORIGINAL PRICE 85,747.78
Position Generated PLPosition
PositionID 288962
Reporting-LargeSizeTrade false
Reporting-PaymentFrequencyPeri... M
Reporting-PrimaryAssetClass InterestRate
ROUND TURN false
TerminationType CloseOut
TradeClassification Price roll, closing
13CTimeIndication
26T
ACCOMMODATION_CHARGE_ID


BVMF-DAP-F/AUG26 -PO is Setclear Technology and Services P Ltd (289446) - Version : 0 Mod Us...
Trade Back Office Future Analytics Pricing Env Market Data Utilities Help
Trade Details Fees History
Cpty NEWEDGE CounterParty Status VERIFIED ID 289446
Book APL-9561 Broker Remove Template NONE
Contract Selection
Exch BM&F Ccy BRL Contract BVMF-DAP-F Future Aug 26
Id Type AU_OTC_ELIGI... Value
Future BVMF-DAP-F/AUG26
Trade
Buy Price 85,920.210 Price
Quantity 117
Nominal 11,700,000
Market Data Pricer Params Results CTD
Val Date 15/01/2025 20:38:49 Pricing E
Trade Attributes
SetUp Editable
Name Value
ClientAccount PORTFOLIO-10 (169869)
CounterPartyAccount Newedge Client (70270)
ETD Position ValDate 12-02-2024
ETD ProcessByPosition true
LongShort Long
ORIGINAL PRICE 85,747.78
Position Generated PLPosition
PositionID 288962
Reporting-LargeSizeTrade false
Reporting-PaymentFrequencyPeri... M
Reporting-PrimaryAssetClass InterestRate
ROUND TURN false
TradeClassification Price roll, opening
13CTimeIndication
26T
ACCOMMODATION_CHARGE_ID
AccountNumber
Acct
ADR Currency


Trade Open quantity
Liquidated Positions
Classical Report
First Trade Id | Second Trade Id | Type | Quantity | Nominal | First Price | First Accrual | Second Price | Second Accrual | Date | Realized | Effective Date
288960 | 289445 | ETD, Daily VM | 117.00 | 11,700,000.00 | 85,747.780 | 0.000 | -85,876.600 | 0.000 | 02/12/24 19:00:00.000 o'clock IST | 15,071.94 | 03/12/2024
Open Positions
Trade Id | Product Id | Trade Date | Settle Date | Cash Settle Date | Open Quantity | Open Nominal | Quantity | Price | Accrual | Open Repo Quantity | Book | Produc
289446 | 194848 | 02/12/24 19:00:01.000 o'clock IST | 03/12/2024 | 03/12/2024 | 117.00 | 11,700,000.00 | 117.00 | 85,920.210 | 0.000 | 117.00 | APL-9561 | Future

Initial Margin Calculation

For Initial Margin Calculation and Reporting, please refer to the *Calypso ETD Clearing Margin User Guide*.

Listed Derivatives Contracts

From the Calypso Navigator, navigate to Configuration > Listed Derivatives > Future Contracts (menu action `refdata.FutureDefinitionWindow`) for creating future contracts, and future products.

From the Calypso Navigator, navigate to Configuration > Listed Derivatives > Future Option Contracts (menu action `refdata.FutureOptionDefinitionWindow`) for creating future option contracts, and future option products.

From the Calypso Navigator, navigate to Configuration > Listed Derivatives > Option Contracts (menu action `refdata.ETOContractWindow`) for creating ETO contracts, and ETO products.

You can also access contract information from the Clearing Dashboard > Product Data tab.

14.1 Contract Attributes

To be included in the 3 type domain names:

- FutureContractAttributes
- FutureOptionContractAttributes
- ETOContractAttributes

The following contract attributes are used for processing future and options:

Attribute Name	Purpose/Impact
CascadeFrom	After the creation of the shorter-duration contracts, this attribute will reference the 'ContractName' of the longer-duration contract the contract cascading from. Since there can be a "one to many" ratio of the longer to the shorter duration contracts, it makes sense to place the reference on the latter. Note that in the case that a quarterly product is created from the cascading of an annual contract, and will cascade itself into a monthly contract, that quarterly contract would reference the annual contract in the 'CascadeFrom' attribute, while the monthly contract would reference the quarterly contract name. *Mandatory*
CascadeTo	In the cascading process, this is an attribute stored on a long duration contract that references the shorter duration contract that will get cascaded to. *Mandatory*
ContractStrategyMargin	A specific margin strategy stored on unique contracts that differ from the contract's exchange margin methodology. *Mandatory for unique contracts.*

Attribute Name	Purpose/Impact
CascadePriceType	For longer duration contracts, this attribute dictates how the prices of the trades created during the cascade process will be set. When the attribute is set to 'Closing', the trade price of the close out trade and the newly generated opening trade in the shorter duration product(s) will be set to the closing price of the parent product on the cascade date. This price is taken from the Instance Type (Close, Last, etc.) set in the Quote Set from the Pricing Environment selected on the Scheduled Task. When the attribute is set to 'Trade', the trade price of the close out trade and the newly generated opening trade in the shorter duration product(s) will be set to the traded price of the parent trades that form the open position. This implies that the cascade process could generate multiple trades in the same product with different traded prices. If this field is empty or has an unrecognizable value, the process will run with a default value of 'Trade'.
CascadeDateLag	A positive integer value that represents the number of business days, according to the calendar in the 'Holidays' field on the contract, prior to the product's First Delivery Date that the cascading event will occur. The business days will be according to the calendar set on the Contract definition. An empty value in this field will be considered a lag of zero by default.
ContractCode	Populated by FOW. The short name code for the contract.
ContractStrategyRate	When calculating Initial Margin for a position in this contract using the 'Strategy' method, this attribute will set the IM requirement amount per lot in the contract settlement currency. If the attribute is empty, we will use the default value of 1,000.
CabinetPrice	Lowest tradeable value for a specific option contract. Only is used to close out option positions that are very deep out of the money. *Optional*
SettlementDateLag	Number of business days, according to the calendar(s) in the Holidays field of the contract, after the expiration date that the future or option settles. You can customize the settlement date of future expiry closeout trades using the following currency attributes: "<counterparty>ETDExpirySettleDate" - Select the date to be used for the settlement date per counterparty. "<counterparty>ClearingTransferSettleLag" - Enter a number of days lag per counteparty over the selected date as needed.

Attribute Name	Purpose/Impact
	If these attributes are not set, then attributes "ETDExpirySettleDate" and "ClearingTransferSettleLag" are used instead. They apply to all counterparties.
ProductMarginCode	Identifies the contract symbol used in the risk array files when calculating Initial Margin. Required when the symbol used in the risk file is different than the ClearingExchangeSymbol.

- Please refer to *Calypso Futures and Future Options Trading* documentation for details on setting up future and future option contracts.
- Please refer to *Calypso Equity Derivatives Trading* documentation for details on setting up ETO contracts.

14.2 Flex Options

Exchanges such as Eurex offer “Flex” future and option contracts which allow members to submit specifications for bespoke products to be traded on the exchange and cleared on the clearinghouse. These contracts need to adhere to the general guidelines of the contract framework – contract size, underlying asset, contract symbol – but the parties involved in the trade are able to choose their own ‘flexible’ expiration date, delivery type (physical/cash) and exercise type (American/European). Importantly, this means that it is a valid use case to have a single ETO or future option contract with multiple expiries in the same month.

To defined Flex Options, you need to set the Contract Date Format to ‘Daily’, triggering the display of the contract date in the trade capture screen and the generation of the quote name to include the day, month and year when describing the product.

The user also has to set the formatting of the contract date in the trade capture screen by populating the “DateFormat” contract attribute with a java-compatible format value. Recommended approach is to use the value of “dd MMM yyyy”.

14.3 Import

Listed Derivatives Contracts can be imported using the FOW Trade Data interface through the scheduled task FOW_REFERENCE_DATA_IMPORT.

- Please refer to the *Calypso FOW Integration Guide* for complete details.

ⓘ [IMPORTANT NOTE: Once the contracts are created, you need to generate the actual products that will be traded]

14.4 Introduction

This feature will allow the user to generate Clearing Transfer & Expiry close trade with settle date as a First or last delivery date for Nasdaq OMX future product as per exchange requirement therefore user can be able to settle NPVFUT + NPVFUT_REV (CT) & REALIZED_PL (Expiry close trade) on a First or last delivery day as per exchange requirements.

14.5 Important features

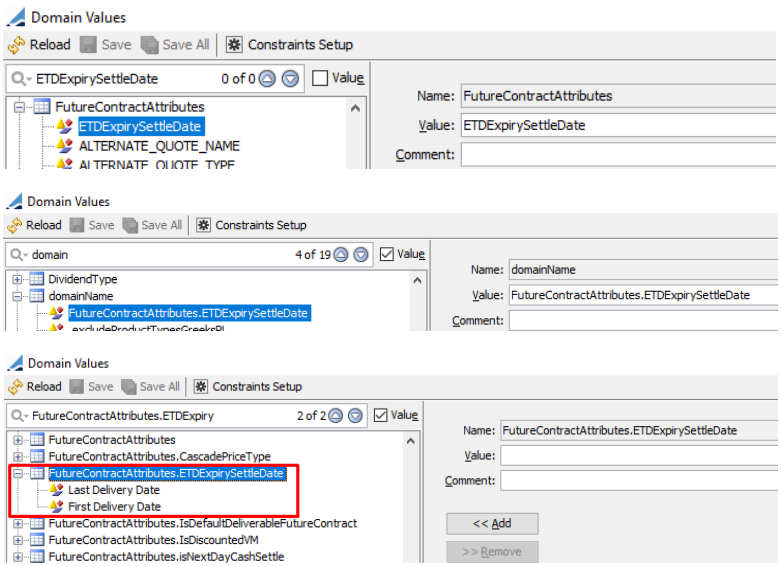
- Existing Currency Default attributes “ETDCloseoutSettleDate” and “NEWEDGEETDCloseoutSettleDate” have been replaced with new contract level attribute “ETDExpirySettleDate” for Nasdaq OMX future.
- New date logic has been introduced for last (Nasdaq OMX future) CT & future expiry closeout trade as when Processing Date/Booking date = Expiry Date then the system will look for the Contract attribute " ETDExpirySettleDate " to update the Settle Date value.

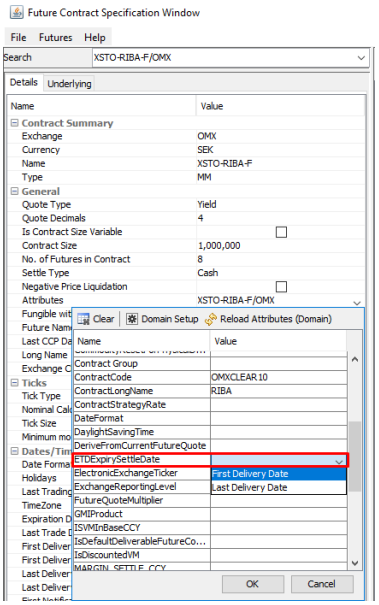
Note: *V.17 MR September 2023 onward, the system will not consider Currency Default attributes “ETDCloseoutSettleDate” and “NEWEDGEETDCloseoutSettleDate” to set settle date value on future expiry closeout trade.*

User will have to set this new contract attribute “ETDExpirySettleDate” under Future Contract Specification window for all contracts where settle date value on last Clearing transfer and Future expiry closeout trade needs to set as “First Delivery Date” or “Last Delivery Date” etc.

14.6 Configuration

Following values needs to be configure under Domain values:





There will be three options to choose the value of contract attribute as shown in the below screenshot.

First Delivery Date*: When user selects this value in attribute then settle date value on Last CT trade & Expiry closeout trade will be taken from column "First Delivery Date" under "Future Contract Specification Window".*

Last Delivery Date: *When user selects this value in attribute then settle date value on last CT trade & Expiry closeout trade will be taken from column "Last Delivery Date" under "Future Contract Specification Window".*

Blank: *If the attribute value is blank or attribute not set, then system will look for attribute value "ClearingTransferSettleLag" and "NEWEDGEClearingTransferSettleLag" to capture settle date value for last CT trade & Expiry closeout trade.*

Note: *Above mentioned logic has been introduced for Nasdaq OMX future trades only. Other exchanges trades will generate last CT trades and Future expiry closeout trades based on default behavior means based on attribute value "ClearingTransferSettleLag" and "NEWEDGEClearingTransferSettleLag".*

Following date logic have been introduced:

Date Logic	Attributes Name	Contract Attribute Value	Description
Processing Date/Booking date = Expiry Date	Contract attribute – "ETDExpirySettleDate"	First Delivery Date Last Delivery Date Blank	If Processing Date/ Booking Date is equal to Expiry Date, then system will look for contract attribute " ETDExpirytradeSettleDate " to update Settle Date value on last CT trade & future expiry closeout trade. **Note:** If attribute value is blank or attribute not set then Settle date value will be taken from "ClearingTransferSettlelag" or

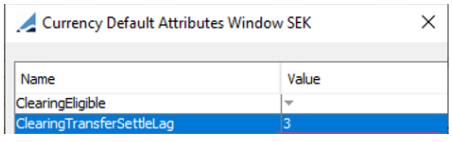
Date Logic	Attributes Name	Contract Attribute Value	Description
			"NEWEDGEClearingTransferSettleLag" attribute value.
Processing Date/Booking date <> (not equal to) Expiry Date	Currency default attribute – "ClearingTransferSettleLag" or "NEWEDGEClearingTransferSettleLag"	Any numerical value	If Processing Date/Booking date is not equal to Expiry Date, then system will look for currency Default attribute "ClearingTransferSettleLag" or "NEWEDGEClearingTransferSettleLag" attribute value to update Settle Date value on last CT trade.

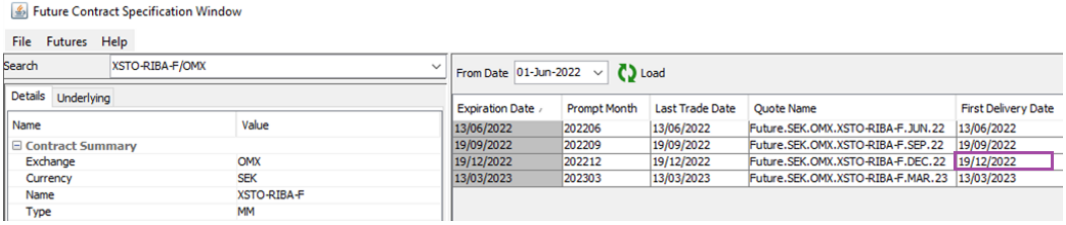
Note:

- *This logic will be applicable for (expiry date) last Clearing Transfer trade generated through ST "CLEARING_VM_CALC" & Future expiry close trades generated through ST or Calypso GUI.*
- *This feature is only applicable when user generates CT trade at "BOOK_PRODUCT" level. User needs to select "BOOK_PRODUCT" value under task attribute "Clearing Transfer by attribute" to generate CT at Book & Product level.*

14.7 Expected Result

As shown in below screenshot, system has captured "Trade Settle Date" value as "First Delivery Date" i.e., 19 Dec 2023 for last CT & expiry closeout trade as per contract attribute "ETDExpirytradeSettleDate" on expiry date.





Cascading Process

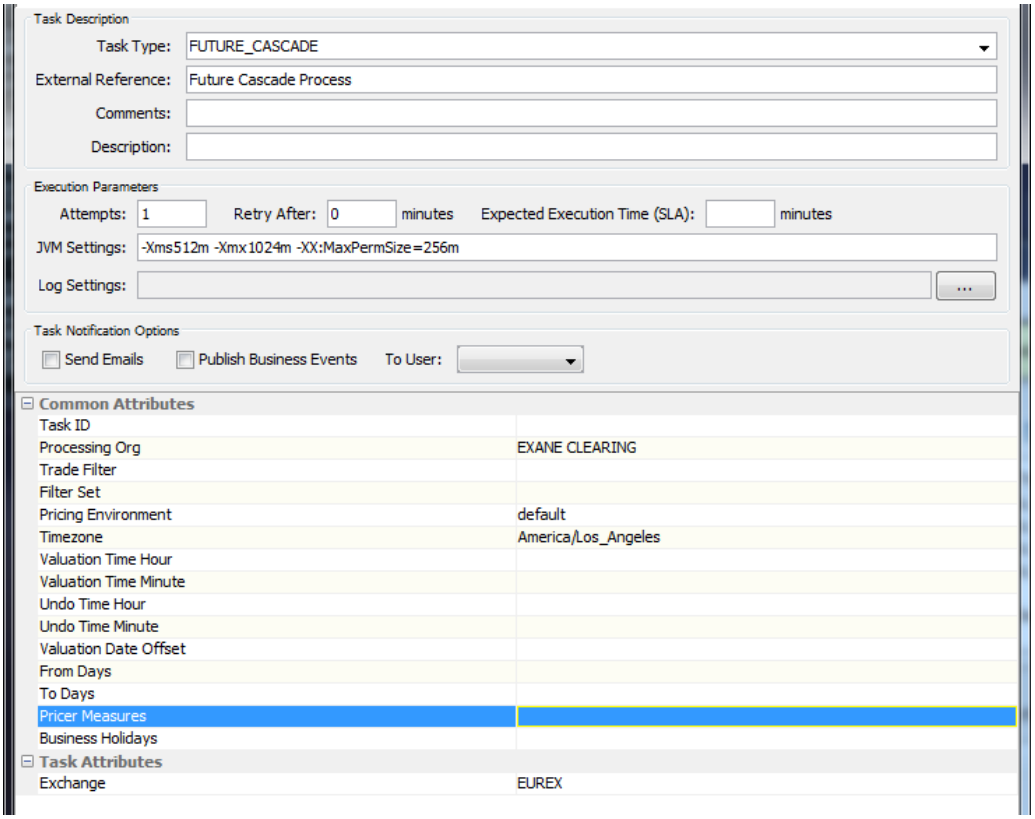
Important: In order to properly execute the cascading process, we require that the shorter-duration contracts are created in the database and the underlying futures are saved as products prior to the execution of the cascading process.

15.1 Triggering the Cascade Process

The cascade process will be run each day through the execution of a scheduled task called FUTURE_CASCADE. This task should be run at EOD after all offsetting is run, but before IM and VM calculation and statements are generated. Products which are eligible for cascading are determined by the list of values of the CascadeFrom attribute across all contracts. The cascade process will be triggered only on the open positions in these products where the First Delivery Date adjusted by the CascadeDateLag, and the ST process date are equal.

The cascading process only needs to be applied to open positions in cascading products. If transactions in a cascading contract have been cleared, and have since all been closed out, the cascading process does not need to be triggered.

Although it is not expected, this task can be run backdated. If the cascade process has already been run, by definition all positions will be closed, so there will be no impact of running it on a date for which it has already been run.



Attribute Name	Purpose/Impact
Processing Org	Processing Org in order to indicate which entities positions should be considered
Pricing Environment	Pricing Environment to source the closing price of the cascaded contract
Exchange	Exchange Attribute field which can be used to select one, several or all exchanges on which to run the process. This will be useful to run the process in a "follow the sun" mode. The pick list should be limited to LE's with a Role of 'MarketPlace'

15.2 Results of the Cascade Process

Running the cascade scheduled task on a day when open positions exist in a product which is linked to one or more other contracts by their CascadeFrom attribute will result in 1) the close out of the open position at either the closing price that day or the original trade price and 2) the generation of open positions in all of the existing products on the contracts which were pointing to the original position. If a contract exists, but the underlying future products have not been saved, new positions will not be generated.

Listed Derivatives Fees & Commissions

This section recommends the market standard configuration that a Clearing Broker could use for their daily activities. Of course, the system is configurable and can be adapted to any client or user to best meet their needs.

There are 2 supported charging strategies for ETD products – "Trade Fees" for daily billing and detailed on the client statement and "Billing Fee" for period to date billing, typically accrued for the calendar month and billed a set number of days into the next month.

16.1 Inventory Buckets

Inventory Buckets are used aggregating different fee types into balance buckets for viewing and reporting in the system via the Inventory Position Report and for reporting on the client statement. The following two buckets are recommended

- Domain Value

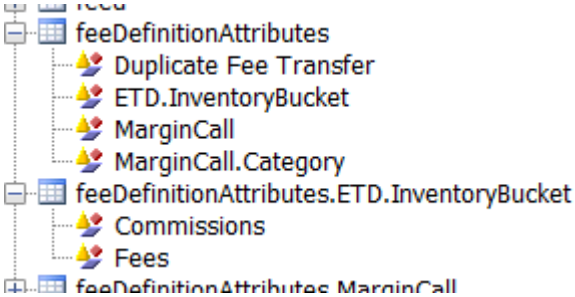
– feeDefinitionAttributes

  ETD.InventoryBucket – to enable the user to configure which buckets the different fee types can be grouped together

– feeDefinitionAttributes.ETD.InventoryBucket

  Commissions – for the FCM's add-on charge for its services

  Fees – for the pass-through charges of an exchange or 3rd party broker, which the FCM will need to pay out

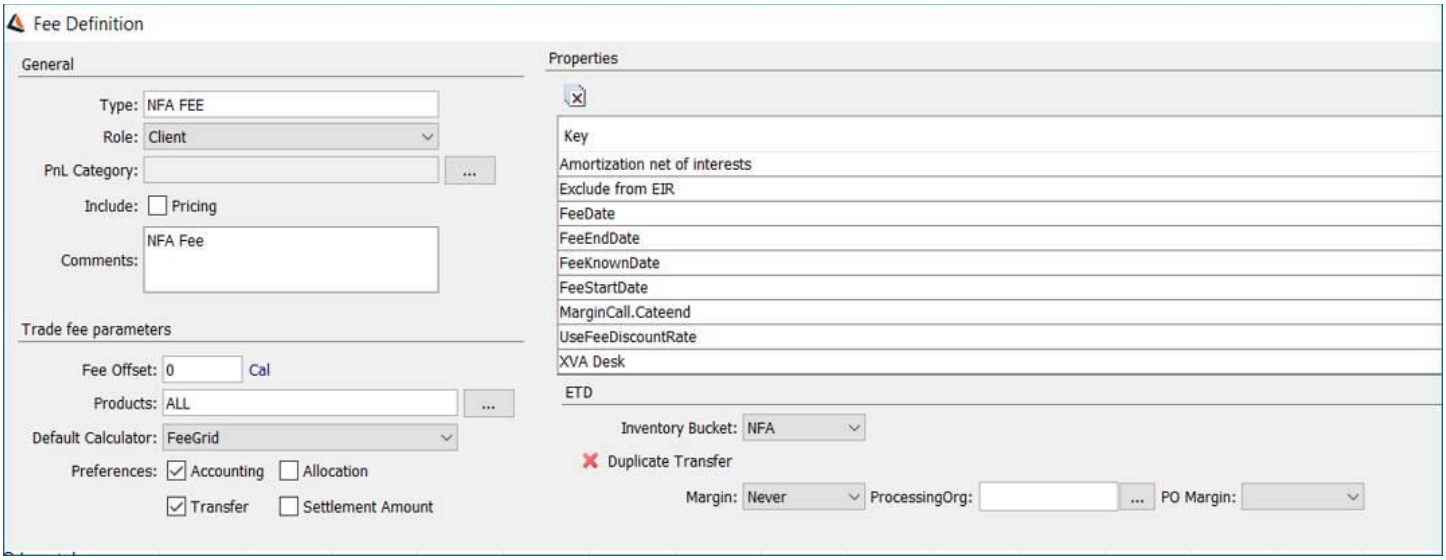


16.2 Fee Definition

Configuration > Fees, Haircuts & Margin Calls > Fee Definition

The following Fee Definitions are recommended

Fee Type	Role	Calculator	Inventory Bucket	Notes
COMMISSION	Client	FeeGrid	Commission	Client Commission
EXCHANGE_FEE	Counterparty	FeeGrid	Fees	Exchange fee payable to counterparty
EXCHANGE FEE	Client	FeeGrid	Fees	Exchange fee passed onto the client
CLEARING_FEE	Counterparty	FeeGrid	Fees	Clearing house fee payable to counterparty
CLEARING FEE	Client	FeeGrid	Fees	Clearing house fee passed onto the client
EXECUTION_FEE	ExecutingBroker	FeeGrid	Fees	Execution fee (Cleared Only / Give Ins) to pay to the Executing Broker
EXECUTION FEE	Client	FeeGrid	Brokerage	Execution fee (Cleared Only / Give In) passed onto the client
EXECUTION BROKERAGE	Counterparty	FeeGrid	Fees	Execution fee (Execution Only / Give Ups) to receive from the clearing broker counterparty
FLOOR_BROKERAGE	Counterparty	FeeGrid	Fees	Floor brokerage payable to the counterparty
FLOOR BROKERAGE	Client	FeeGrid	Fees	Floor brokerage passed onto the client
NFA_FEE	NFA	FeeGrid	Fees	NFA fee payable to the National Futures Association
NFA FEE	Client	FeeGrid	Fees	NFA fee passed onto the client



Margin - For all POs one can define whether to generate Margin in Account level or Always or Never

ProcessingOrg - when configuring this, it will enables to select certain POs that do not follow the same Margin selection which is selected all POs in "Margin" field and the value which is select on "PO Margin" will be considered for these POs.

PO Margin - This Option is applicable for Specific PO which is mentioned on the field "ProcessingOrg" to enable and select option to generate Margin in Account level or Always or Never.

16.3 Fee Grid

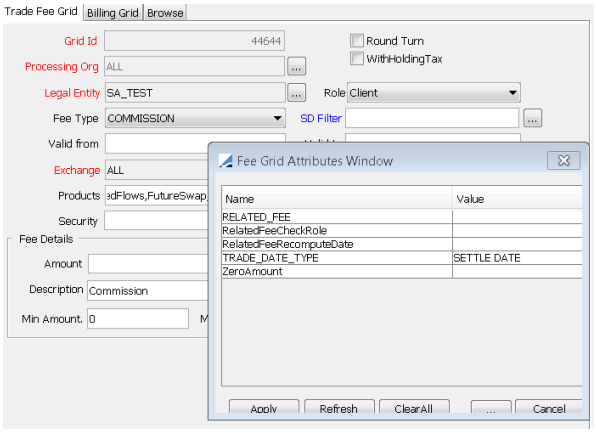
Configuration > Fees, Haircuts & Margin Calls > Fee Grid

The following Fee Grid configurations are recommended

16.3.1 Client Commission Example

COMMISSION

Attribute: TRADE_DATE_TYPE = SETTLE DATE



16.3.2 Counterparty Fees Example

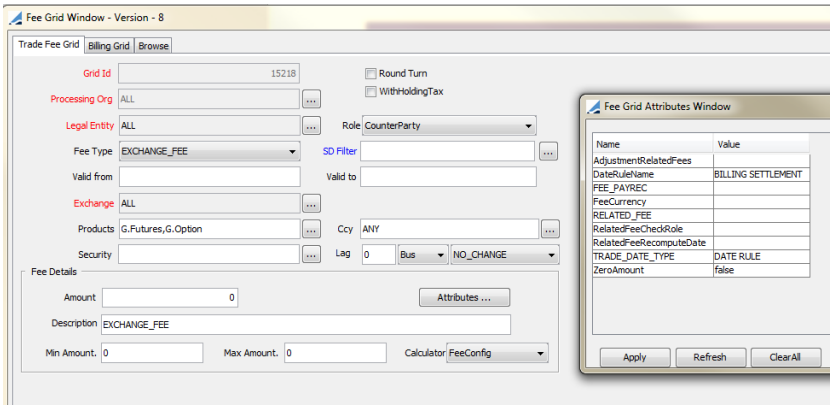
EXCHANGE_FEE & CLEARING_FEE

Associated FeeConfigs required (EXCHANGE_FEE & CLEARING_FEE)

- To set exchange, product, formula and rates

Attribute: TRADE_DATE_TYPE = DATE RULE + DateRuleName

- fee settle date will be set by the date rule, typically for End of Month settled fees



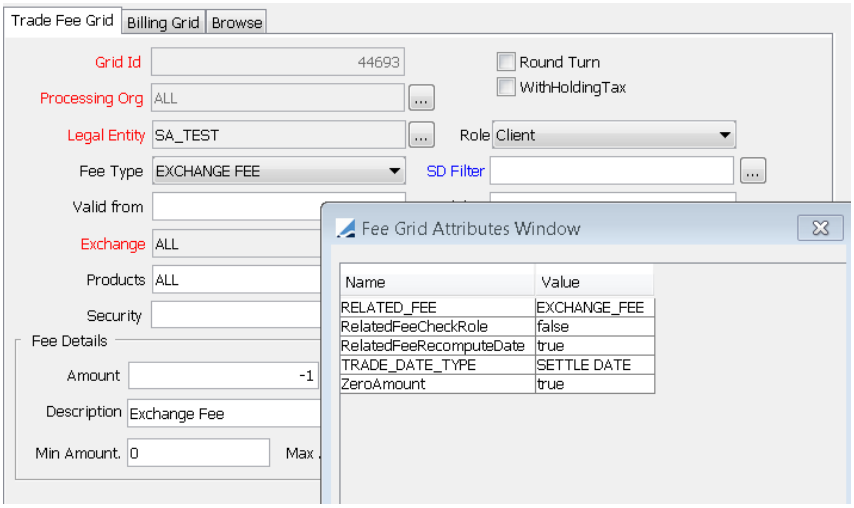
16.3.3 Client Fees (Copied from the Counterparty) Example

EXCHANGE FEE & CLEARING FEE

No FeeConfigs required, as taken from the Counterparty FeeConfig (above)

Attributes

- RELATED_FEE = Fee Type to copy
- RelatedFeeCheckRole = false, allows to copy from a different role (from Counterparty to Client)
- RelatedFeeRecomputeDate = true, tells the system to rework the fee dates after the copy
- TRADE_DATE_TYPE = TRADE DATE, changing from the End of Month (CtPty) to Daily (Client)



16.3.4 Recommended Fee Grids

Fee Type	Grid Type	Legal Entity	Role	Attributes	Calculator	SD Filter
COMMISSION	Trade Fee	One per clearing client LE	Client	TRADE_DATE_TYPE = SETTLE DATE ZeroAmount = true	FeeConfig	

Fee Type	Grid Type	Legal Entity	Role	Attributes	Calculator	SD Filter
EXCHANGE_FEE	Trade Fee	ALL	Counterparty	DateRuleName = BILLING SETTLEMENT TRADE_DATE_TYPE = DATE RULE ZeroAmount = true	FeeConfig	
EXCHANGE FEE	Trade Fee	One per clearing client LE	Client	RELATED_FEE = EXCHANGE_FEE RelatedFeeCheckRole = false RelatedFeeRecomputeDate = true TRADE_DATE_TYPE = SETTLE DATE	FeePercentage @ -100	
CLEARING_FEE	Trade Fee	ALL	Counterparty	DateRuleName = BILLING SETTLEMENT TRADE_DATE_TYPE = DATE RULE ZeroAmount = true	FeeConfig	
CLEARING FEE	Trade Fee	One per clearing client LE	Client	RELATED_FEE = CLEARING_FEE RelatedFeeCheckRole = false RelatedFeeRecomputeDate = true TRADE_DATE_TYPE = SETTLE DATE	FeePercentage @ -100	
EXECUTION_FEE	Trade Fee	One per Executing Broker LE	ExecutingBroker	DateRuleName = BILLING SETTLEMENT TRADE_DATE_TYPE = DATE RULE ZeroAmount = true	FeeConfig	
EXECUTION FEE	Trade Fee	One per clearing client LE	Client	RELATED_FEE = EXECUTION_FEE RelatedFeeCheckRole = false	FeePercentage @ -100	

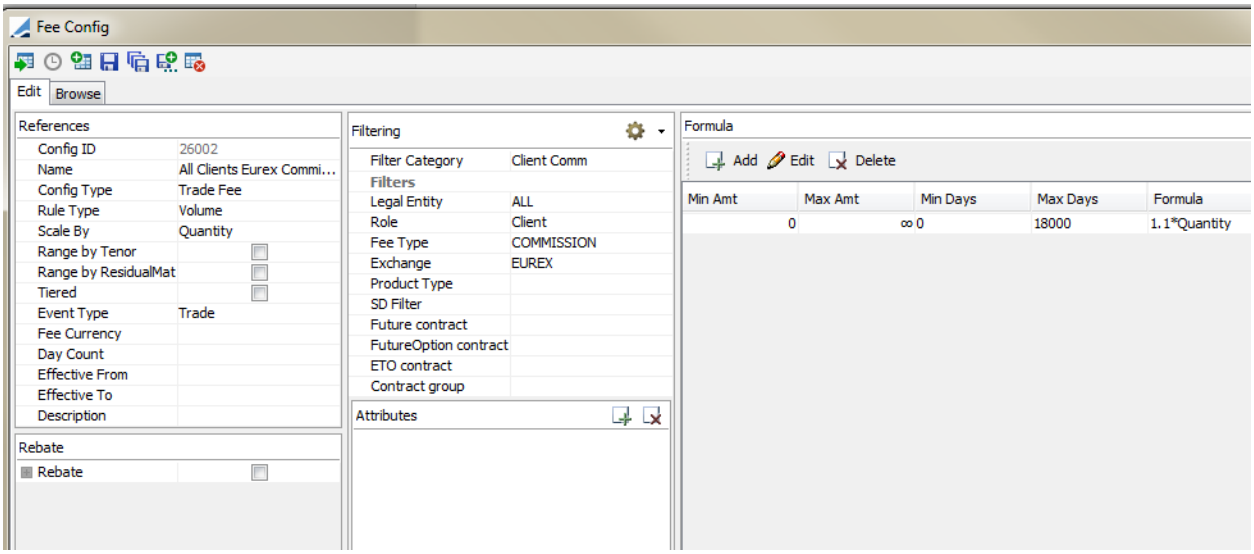
Fee Type	Grid Type	Legal Entity	Role	Attributes	Calculator	SD Filter
				RelatedFeeRecomputeDate = true TRADE_DATE_TYPE = SETTLE DATE		
EXECUTION BROKERAGE	Billing Fee	One per Give up Clearing Broker	Counterparty		FeeGrid	Fees
FLOOR_BROKERAGE			Counterparty		FeeGrid	Fees
FLOOR BROKERAGE			Client		FeeGrid	Fees

16.4 Fee Config

Configuration > Fees, Haircuts & Margin Calls > Fee Configuration

Example 1

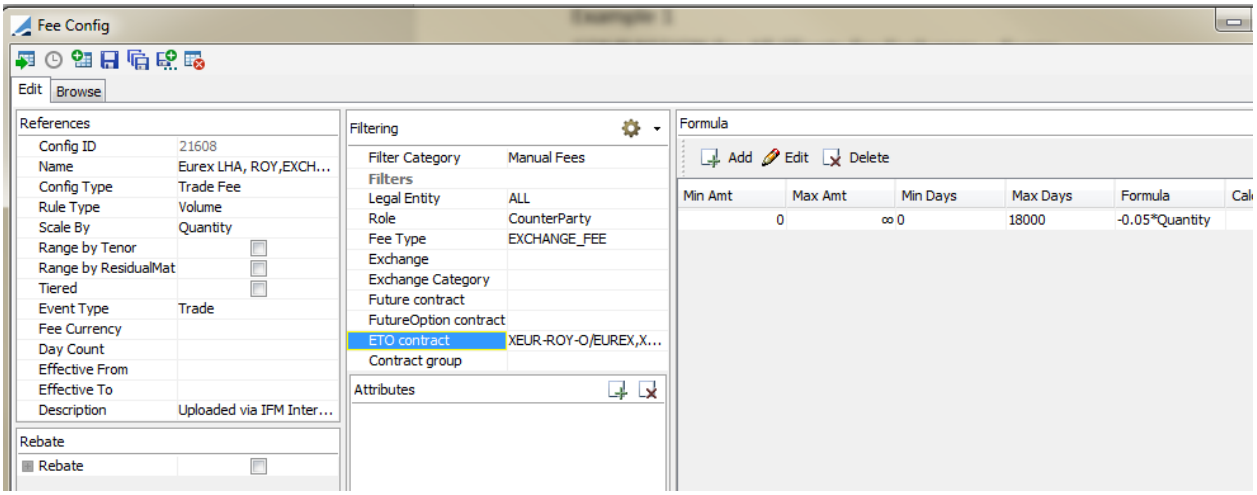
COMMISSION for All Clients for Exchange = Eurex



For subsets of clients, SD Filter is required

Example 2

EXCHANGE_FEE for All Counterparty for a specific ETO contracts



16.5 Advanced Fee Methodology – Overall Minimum Total Fee

In addition to standard fees, an Overall Minimum fee can be calculated.

The system will check for any other additional fees that have been applied to that Legal Entity and check if the Overall Minimum Total has been exceeded.

If not, then the Fee Type (COMMISSION) is recalculated so the Overall Minimum Total is met.

Use Fee Config formula Variables – 'RelatedFeesAmount' to define the formula & rate of the Overall Minimum Fee.

Use Fee Grid attribute 'AdjustmentRelatedFees' > fee types, comma separated

E.g. AdjustmentRelatedFees = EXCHANGE FEE, CLEARING FEE

If empty, then no adjustment needed

Calculation logic example:

Applicable fees for this trade are COMMISSION (client), EXCHANGE_FEE (counterparty), EXCHANGE FEE (client – copied from EXCHANGE_FEE)

Fee config COMMISSION (client)

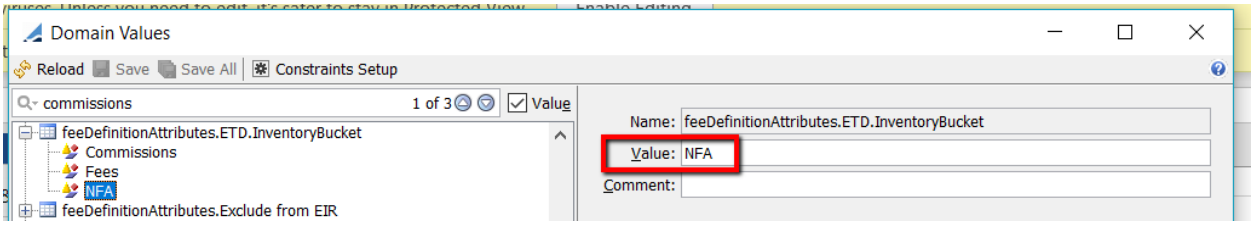
- 3.10 * Quantity
- Overall Minimum Total = 3.50 * Quantity
- Formula would be
  - Max(3.10*Quantity + RelatedFeesAmount, 3.50*Quantity) - RelatedFeesAmount

Fee config EXCHANGE_FEE (counterparty)

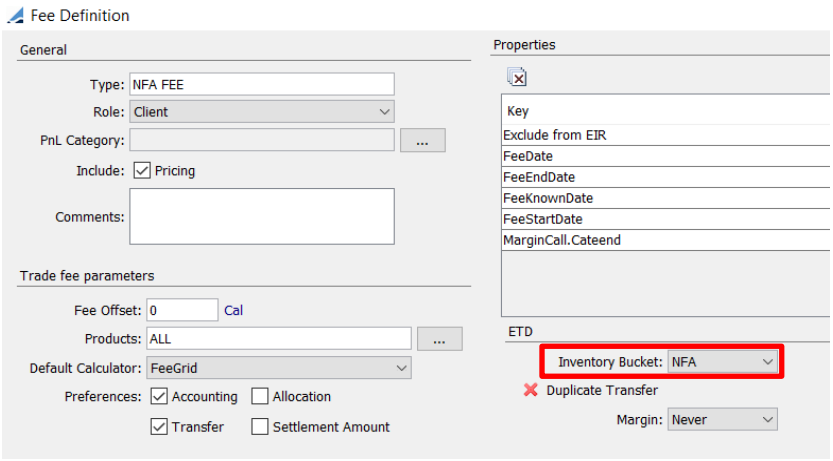
- 0.20 * Quantity

16.6 NFA Fees

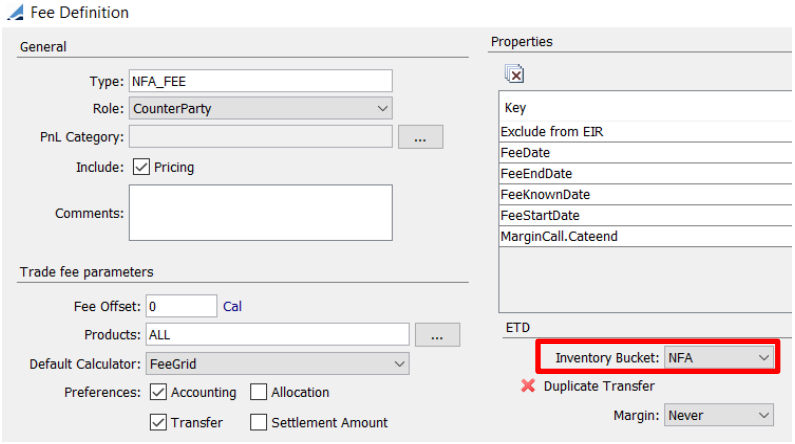
Make sure that NFA is added to the domain "feeDefinitionAttributes.ETD.InventoryBuket.

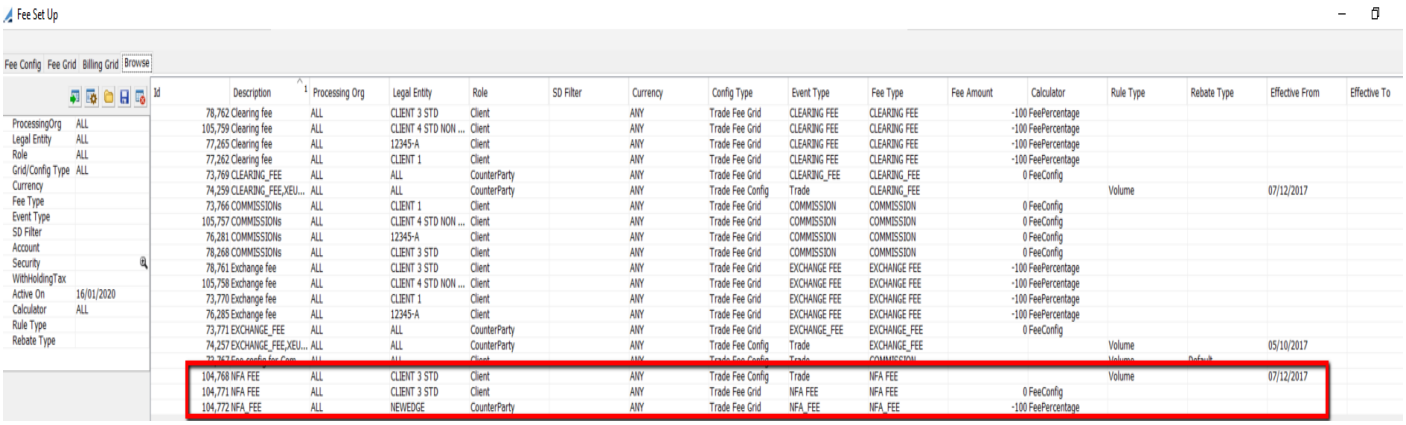


Fee definition for Client

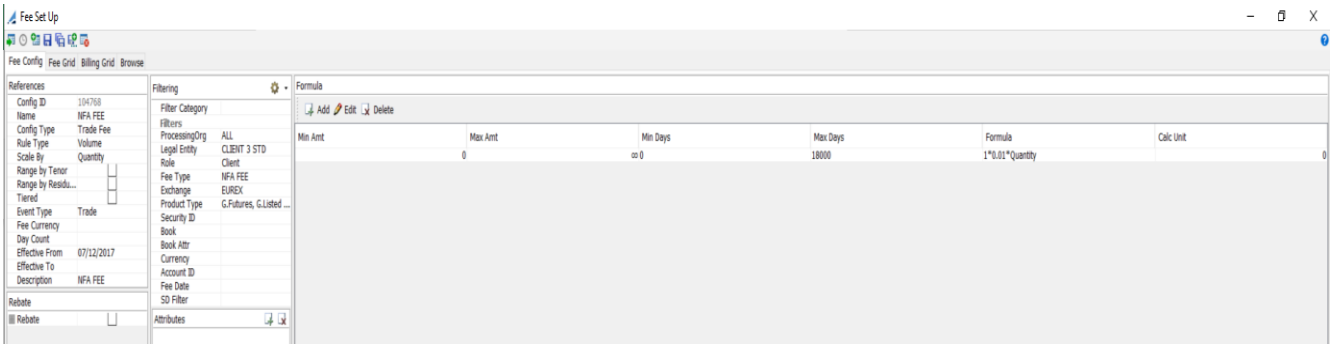


Fee definition for Counterparty

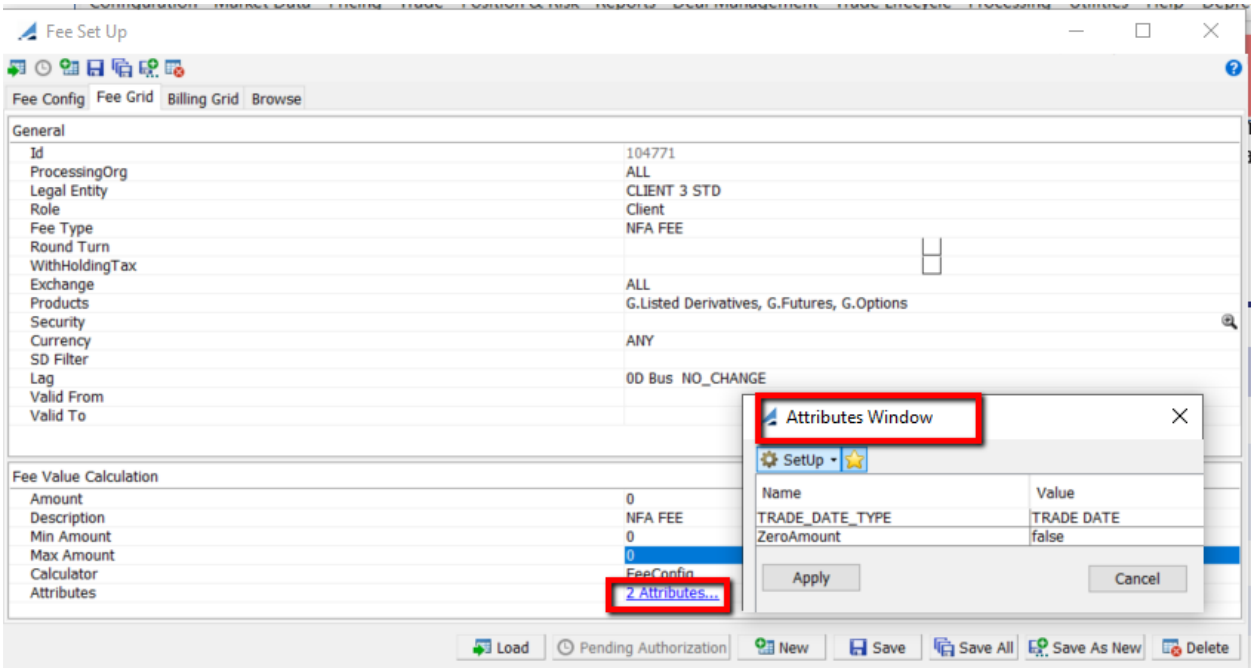




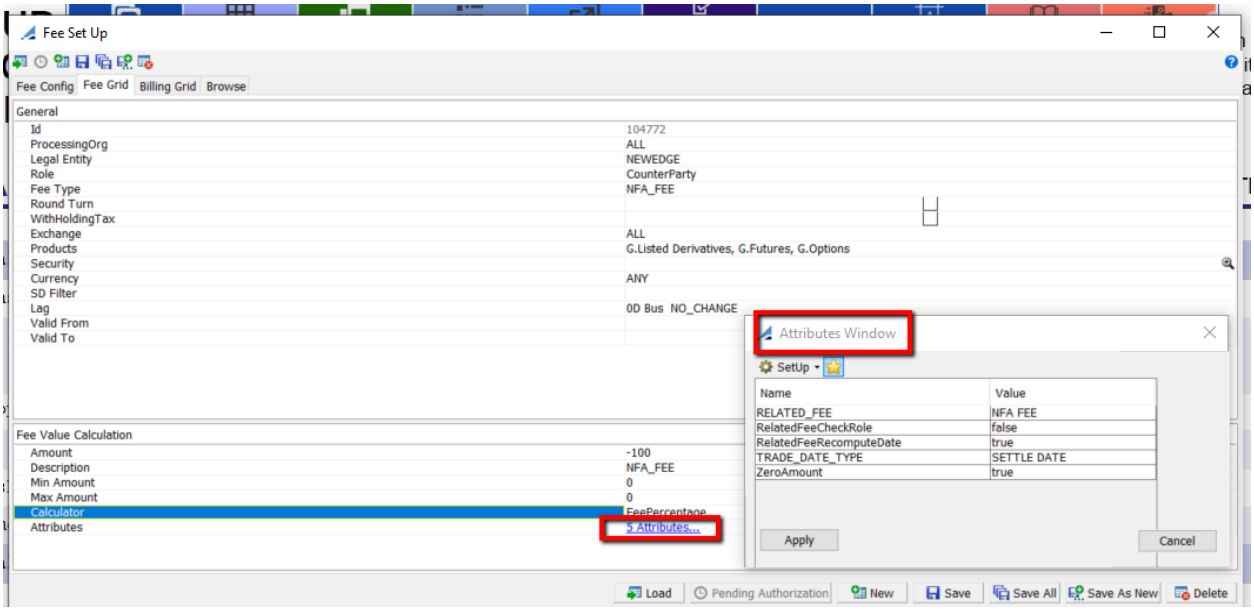
Above are the feeGrid, FeeConfig required to auto apply NFA fees in trades.



Setup Fee Config for role “Client” with Formula.

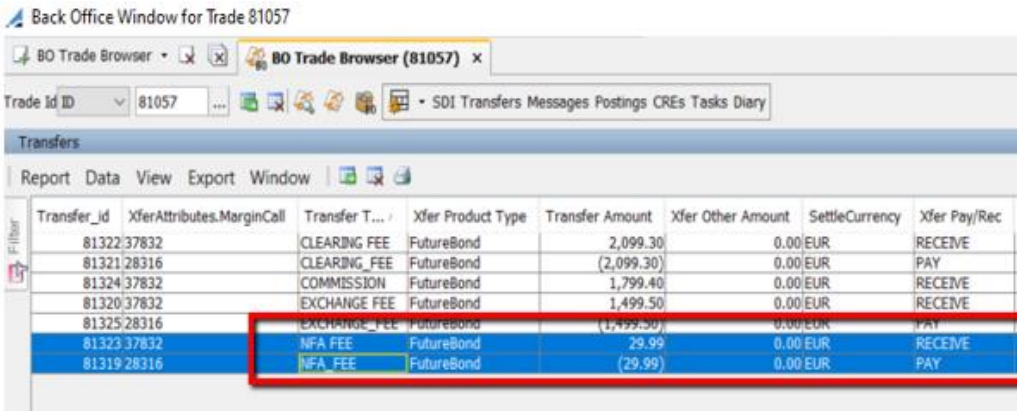


Setup FeeGrid for role “Client”



Setup FeeGrid for role “Counterparty” and link the Client Fee Definition Type in Attributes RELATED_FEE field.

Sample NFA fees



16.7 Automatic Fees Override

When viewing automatic fees, you can override the fee amount.

Select an automatic fee and enter the modified amount in the Amount field. Then click **Modify.**

The ‘Manual Amount’ column will appear checked.

To prevent the fee from being automatically recomputed upon saving the trade, clear the Override column.

Save the trade.

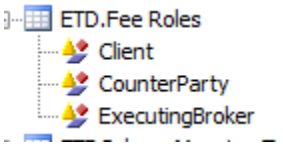
16.8 Check Fees Workflow Rule

Workflow rule 'ETDCheckFees' will block a trade in the workflow and raise a task station exception when one of the Legal Entities on the trade doesn't have at least one fee generated.

To control this workflow the following are required

Domain Value: ETD.Fee Roles

- tells the system which LE to check for fees
- default settings are



Legal Entity Attribute

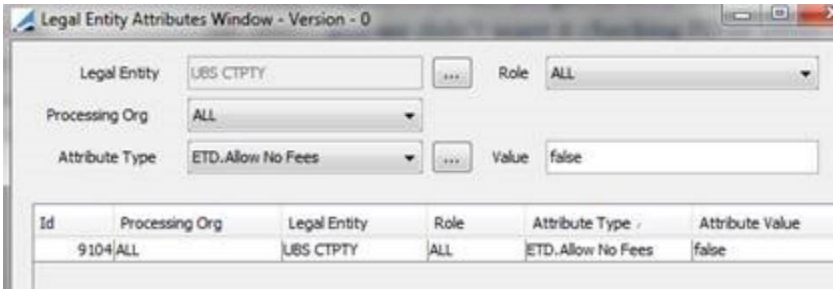
ETD.Allow No Fees <true/false>

If this LE attribute is missing or 'false' and the trade has no fees for this LE, then the trade will be blocked

If this LE attribute is 'true' and the trade has no fees for this LE, then the trade will NOT be blocked

Example #1

Counterparty LE has ETD.Allow No Fees = false



Trade entered and Trade Fees shows fees only for the Client, none for the Counterparty

Trade is blocked as PENDING

Task Station exception raised

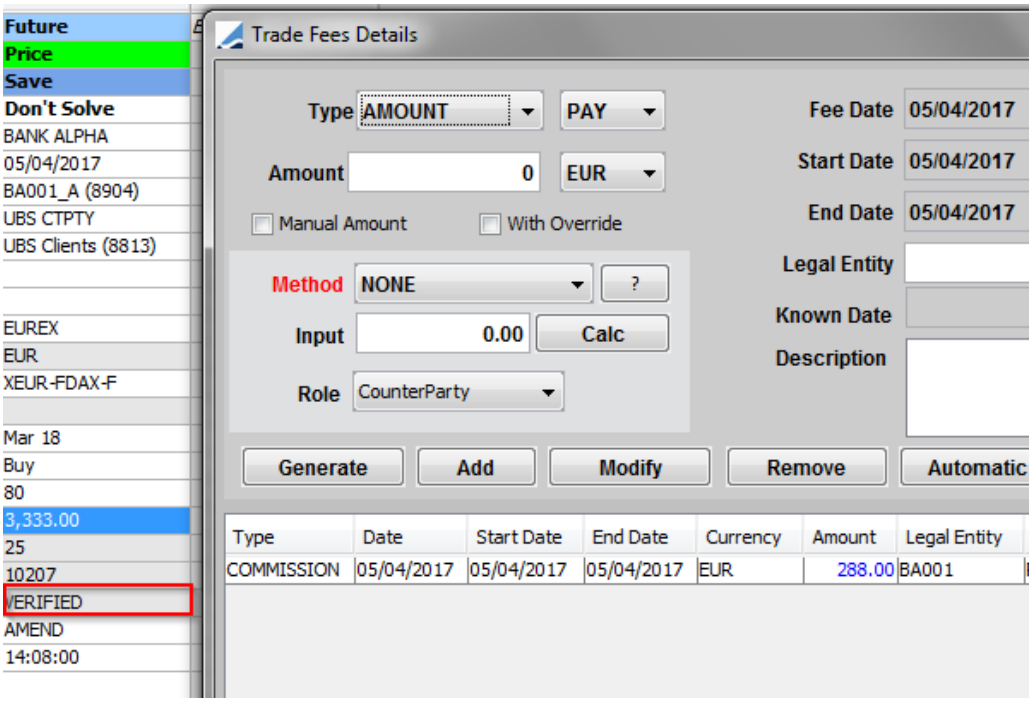
AUTHORISE	BANK ALPHA	No fees found for UBS CTPTY Role=CounterParty/[ETDCheckFees]		05/04/17 14:25:41.116 o'clock BST	PSEventTrade	PENDING_TRADE		UBS CTPTY

Example #2

Counterparty LE has ETD.Allow No Fees = true

Attribute Type	Attribute Value
ETD.Allow No Fees	true

Now allow the trade to go to VERIFED even though no Counterparty fees



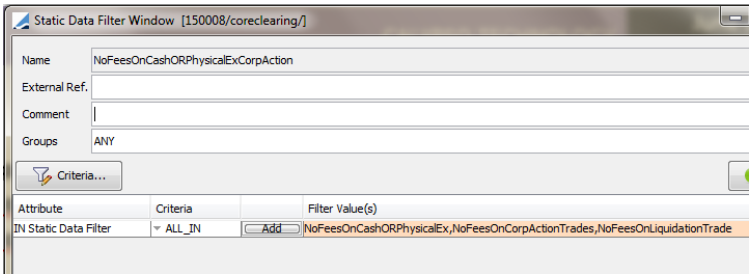
16.9 Static Data Filters

Filters required to suppress the specific Fee Grid being triggered by the AutomaticFees workflow rule for the following

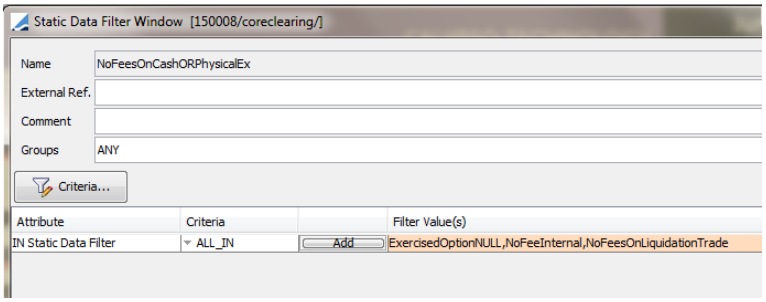
- 'Closeout' trade for an Option exercise, assignment or expiry
- 'Closeout' trade for a Futures expiry
- 'Closeout' trade used in the Corporate Action process to close the old trades, which are replaced by the new transformed trades
- Internal "cross" trades

SD Filters needed, see screenshots on configuration details

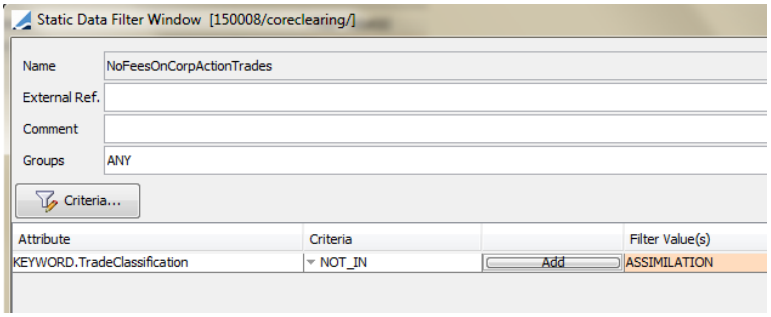
- NoFeesOnCashORPhysicalExCorpAction



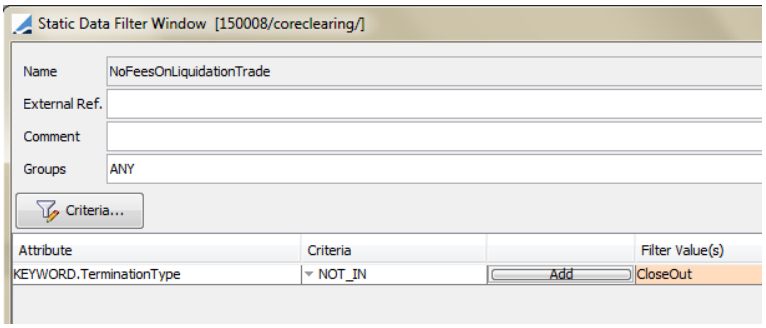
- NoFeesOnCashORPhysicalEx



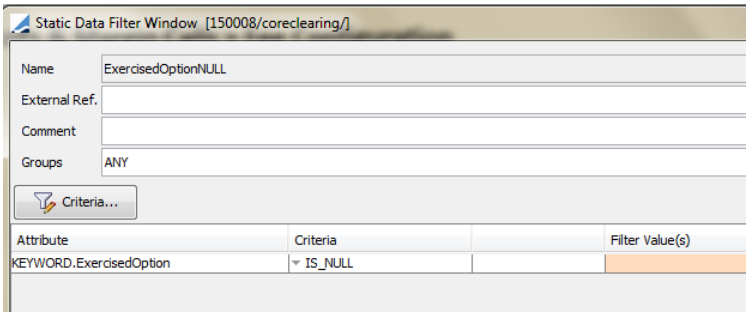
- NoFeesOnCorpActionTrades



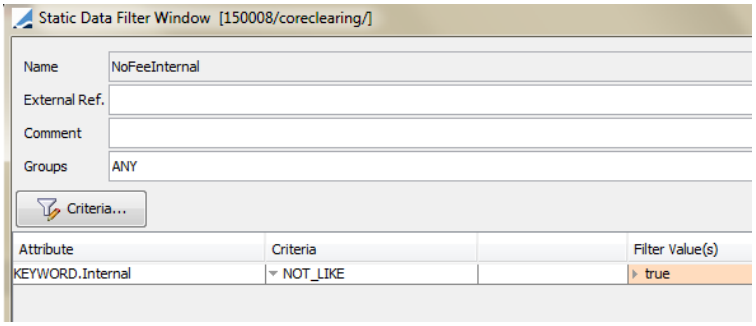
- NoFeesOnLiquidationTrade



- ExercisedOptionNULL

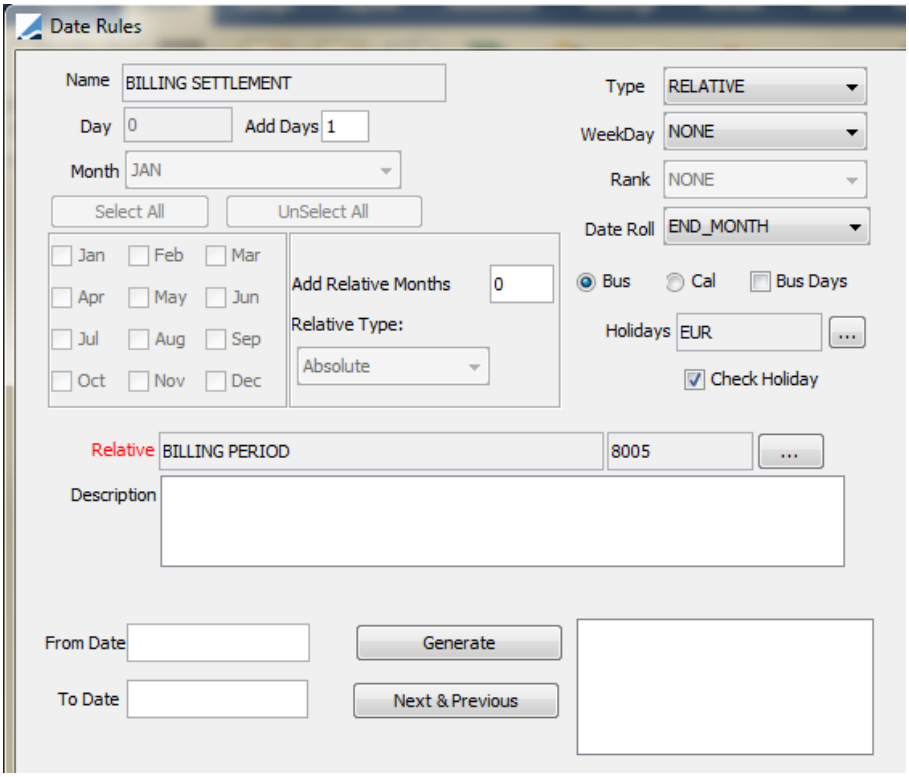


- NoFeeInternal



16.10 Billing Date Rule

Example End of Month billing rule

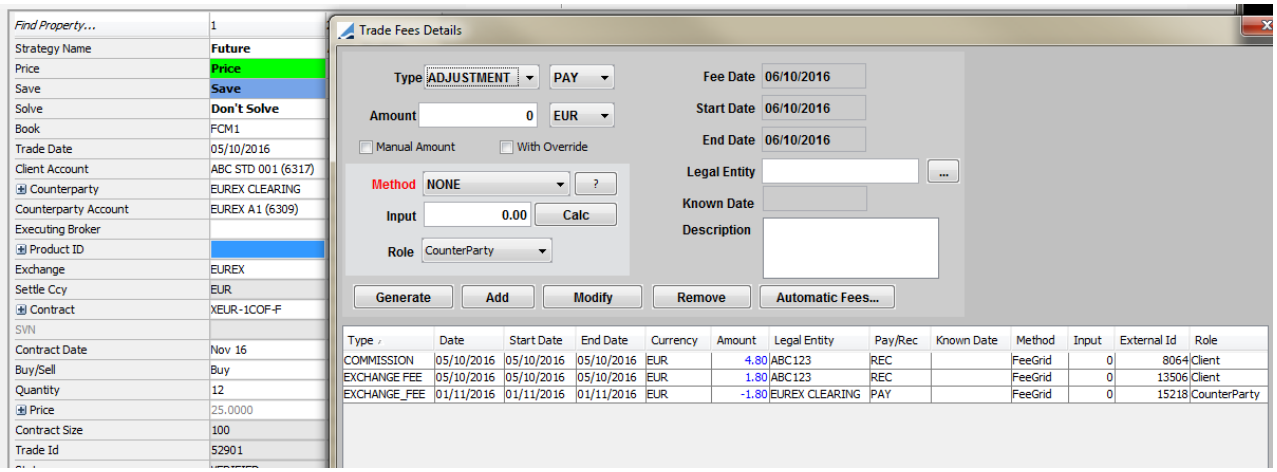


16.11 Trade + Fees Examples

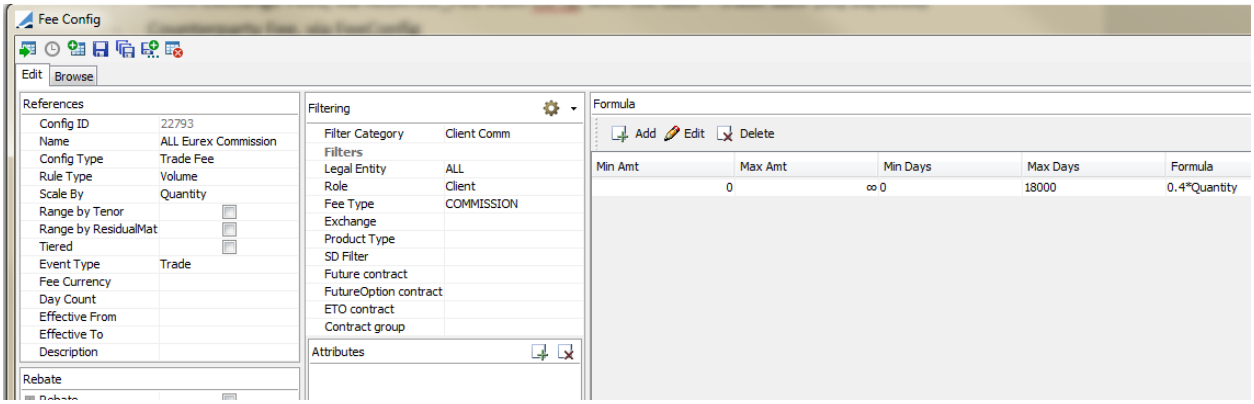
Example of set-up and results

Trade with

- Client Commission, via FeeConfig
- Client Exchange Fees, via RELATED_FEE from CounterParty, with fee date = settle date (05/10/2016)
- Counterparty Fee, via FeeConfig, with fee date = end of month (01/11/2016)

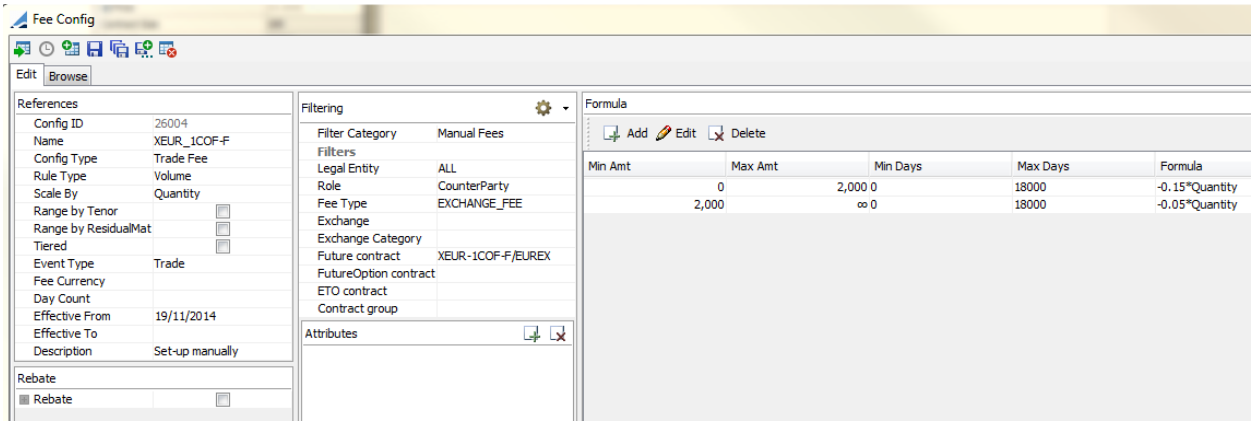


Client COMMISSION FeeConfig



Trade Quantity = 12 @ 0.4 = 4.8, to 'REC' receive from the client

Counterparty EXCHANGE_FEE FeeConfig (replicating the Eurex Fee Structure)



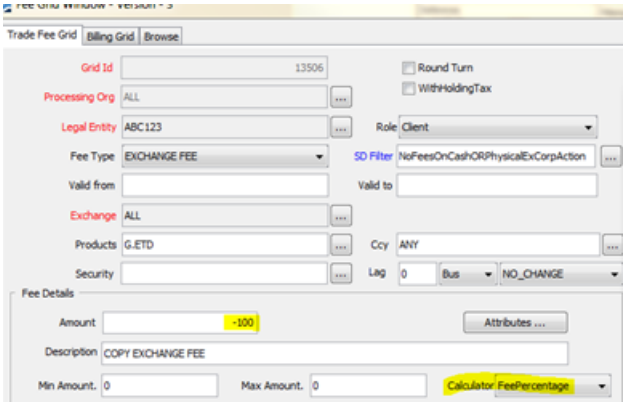
Trade Quantity = 12 (Tier 1, quantity less than 2000)

Trade Quantity = 12 @ 0.15 = 1.8, to 'PAY' to the Counterparty

Client EXCHANGE FEE

No FeeConfig, Fee Grid with RELATED_FEE to the Counterparty EXCHANGE_FEE

With Calculator = FeePercentage, Amount = -100 to reverse the REC/PAY



Fee attributes

Name	Value
RELATED_FEE	EXCHANGE_FEE
RelatedFeeCheckRole	false
RelatedFeeRecomputeDate	true
TRADE_DATE_TYPE	SETTLE DATE
ZeroAmount	true

1.8 to REC from Client

For additional information on fee configuration, please refer to the general Calypso Fee User Guide.

ETD Clearing Multi region B2B Trade Support

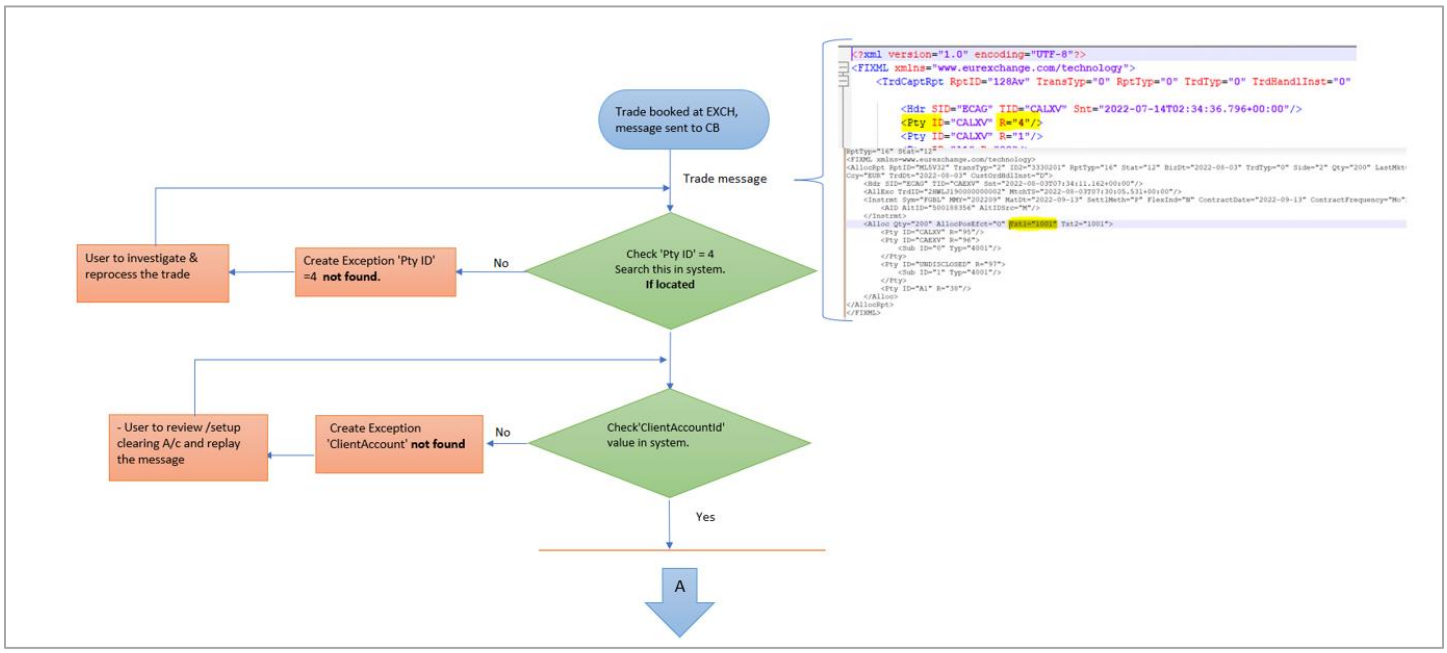
17.1 Introduction

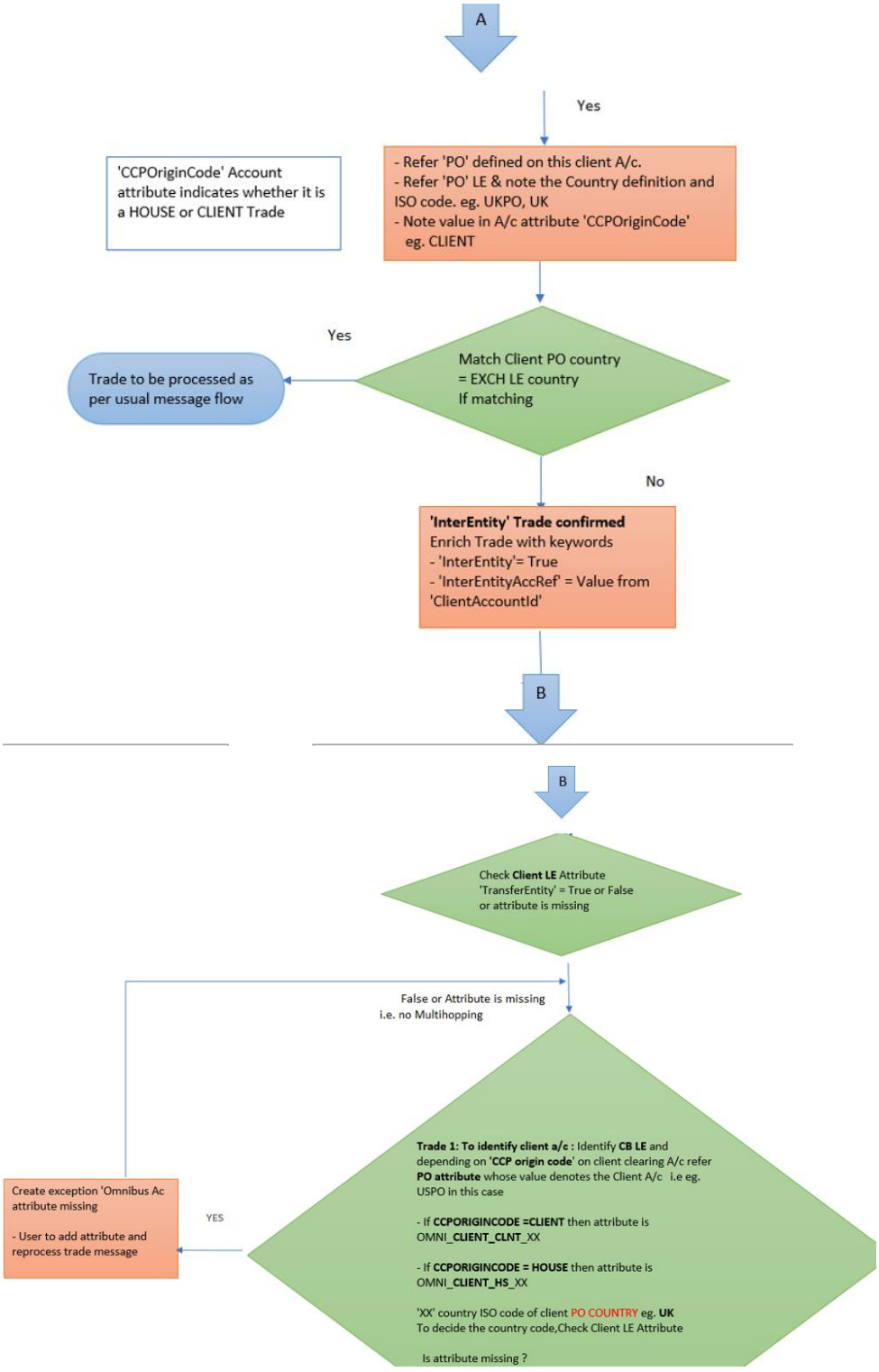
If a client executes a trade on non-domicile Exchanges, the system generates B2B trades between Domicile PO of Exchange to Non-Domicile PO and to end client.

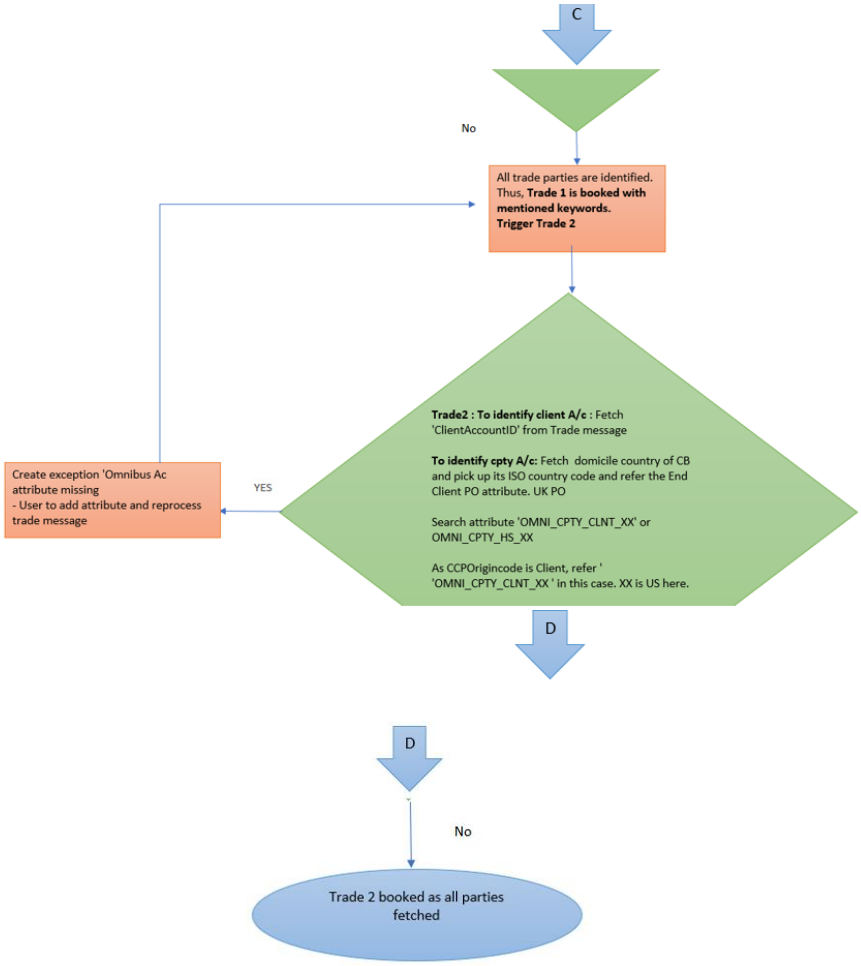
To transfer this position, we are creating equal B2B trades between the respective POs to reflect the position in the end client A/c.

Position transfer is supported between 2 countries only.

Below is the trade flow which is supported.




A
Yes
'CCPOriginCode' Account attribute indicates whether it is a HOUSE or CLIENT Trade
- Refer 'PO' defined on this client A/c.
- Refer 'PO' LE & note the Country definition and ISO code. eg. UKPO, UK
- Note value in A/c attribute 'CCPOriginCode' eg. CLIENT
Yes
Match Client PO country = EXCH LE country If matching
Trade to be processed as per usual message flow
No
'InterEntity' Trade confirmed
Enrich Trade with keywords
- 'InterEntity'= True
- 'InterEntityAccRef' = Value from 'ClientAccountId'
B
B
Check Client LE Attribute 'TransferEntity' = True or False or attribute is missing
False or Attribute is missing i.e. no Multihopping
Trade 1: To identify client a/c : Identify CB LE and depending on 'CCP origin code' on client clearing A/c refer PO attribute whose value denotes the Client A/c i.e eg. USPO in this case
- If CCPORIGINCODE =CLIENT then attribute is OMNI_CLIENT_CLNT_XX
- If CCPORIGINCODE = HOUSE then attribute is OMNI_CLIENT_HS_XX
'XX' country ISO code of client PO COUNTRY eg. UK
To decide the country code,Check Client LE Attribute
Is attribute missing ?
YES
Create exception 'Omnibus Ac attribute missing
- User to add attribute and reprocess trade message



17.2 Use Case

We will take the following use case as a base to document this enhancement.

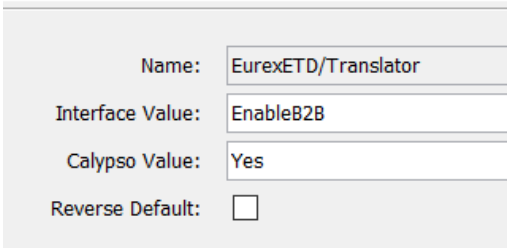
- End Client 'STRATEGY02' is domiciled in UK, onboarded on UK PO: SETCLEAR (ISO country code GB)
- Client executed trade on CME EXCH, domiciled in US connected with Clearing Broker US PO: NETWEST
- Position will be transferred from US PO Netwest to UK PO Set clear using resp Omnibus Accounts (Client & Cpty role Accounts) and then finally to End Client A/c.

Step 1: UK Client executes trade on CME Exchange (i.e. EXCH is domiciled in USA), US PO - NETWEST is the Clearing Broker at CME EXCH.

Step 2: CME EXCH sends the trade message to CB NETWEST.

Config 1: User must enable below Calypso mapping to create Inter-entity trades for the respective module. If this mapping is not added, then B2B trades will not be created. (Currently, we are failing the trade message and not booking the trade to any error A/c if the mapping is missing)

E.g. If the user wants to enable B2B trades for Eurex EXCH then this mapping should be added in Eurex ETD node.



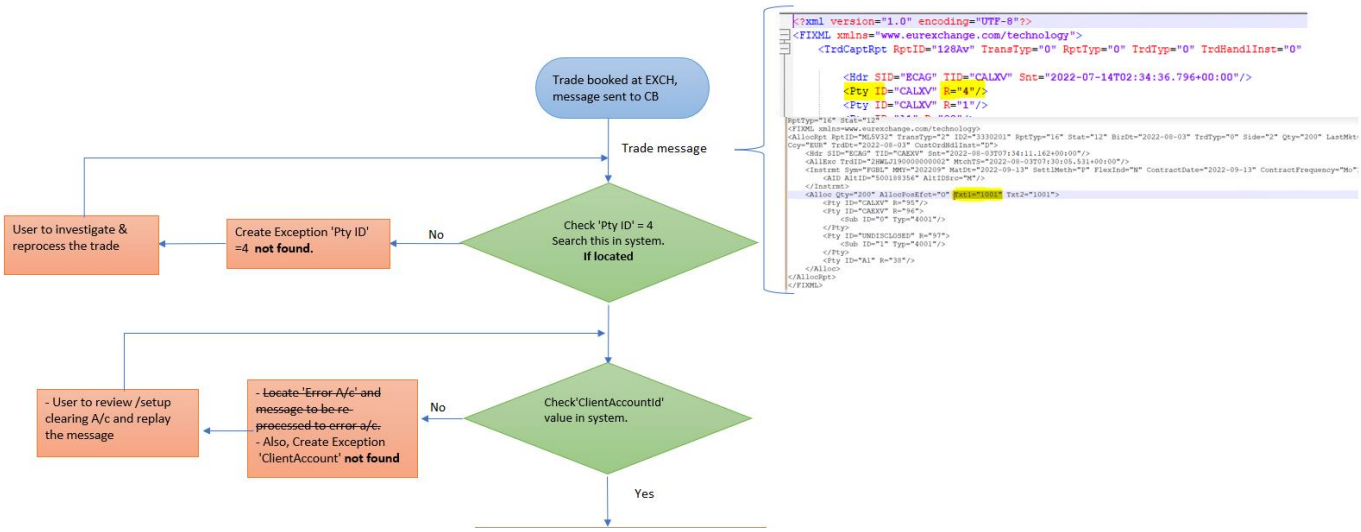
B2B is currently supported through FCM trade Interface framework only. Interfaces such as EurexETD, UBS, LmeETD, NasdaqETD which are built using the FCM trade interface framework will support B2B. (CME *Clear connect to be checked) - Pricing sheet behavior to be checked. /csv file upload)

Step 3: After the above check, system will look for the resp 'ClearingMemberID' from the trade message (Tag Pty Id : 4) and fetch the resp Clearing Broker PO.

- If memberfirmId is **not** found then create exception 'MemberId not found'. User must fix the config and reprocess the trade message.

Step 4: Post the 'ClearingMemberID' is identified, system will search for 'ClientAccount' from the trade message.

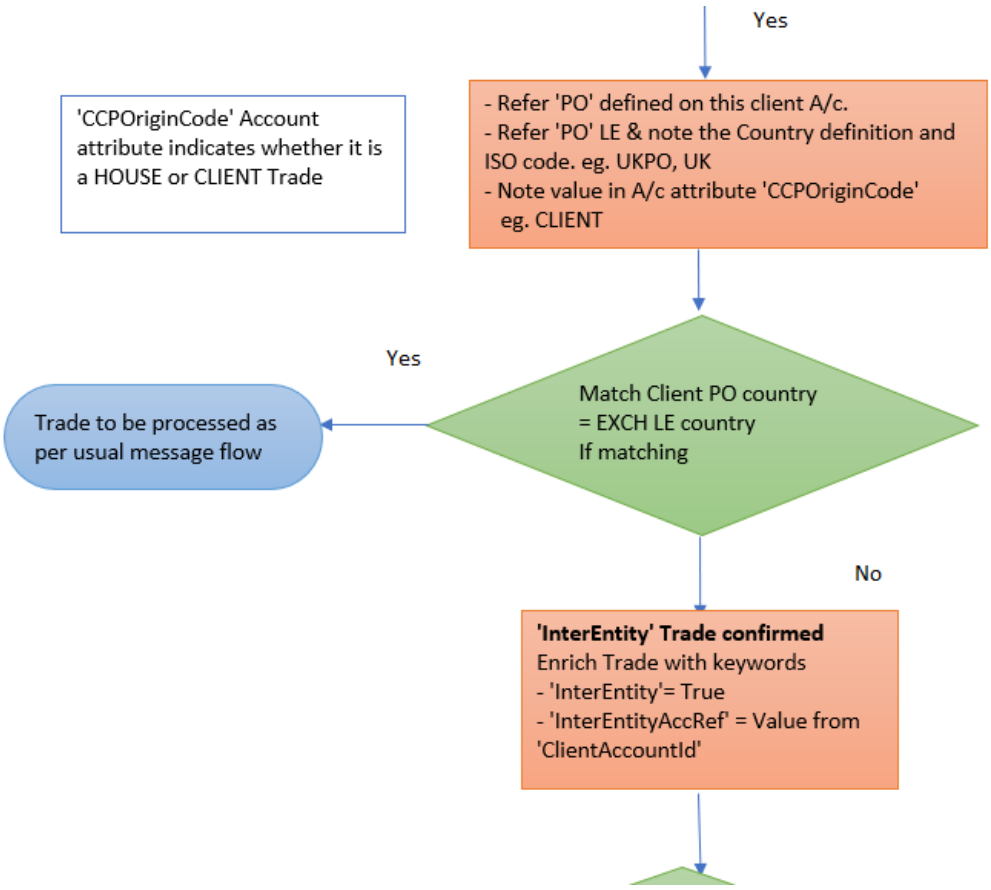
- If 'ClientAccount' is not found then create exception 'ClientAccount not found'. User must fix the config and reprocess the trade message. *Currently, we are not supporting trade booking to error account considering the complexity of the enhancement.



Step 5: If the ClientAccount' is found then identify the Client PO and 'CCPOriginCode' from the A/c.

Here we check the domiciled country of Client PO LE and match it with the domiciled country of EXCH LE.

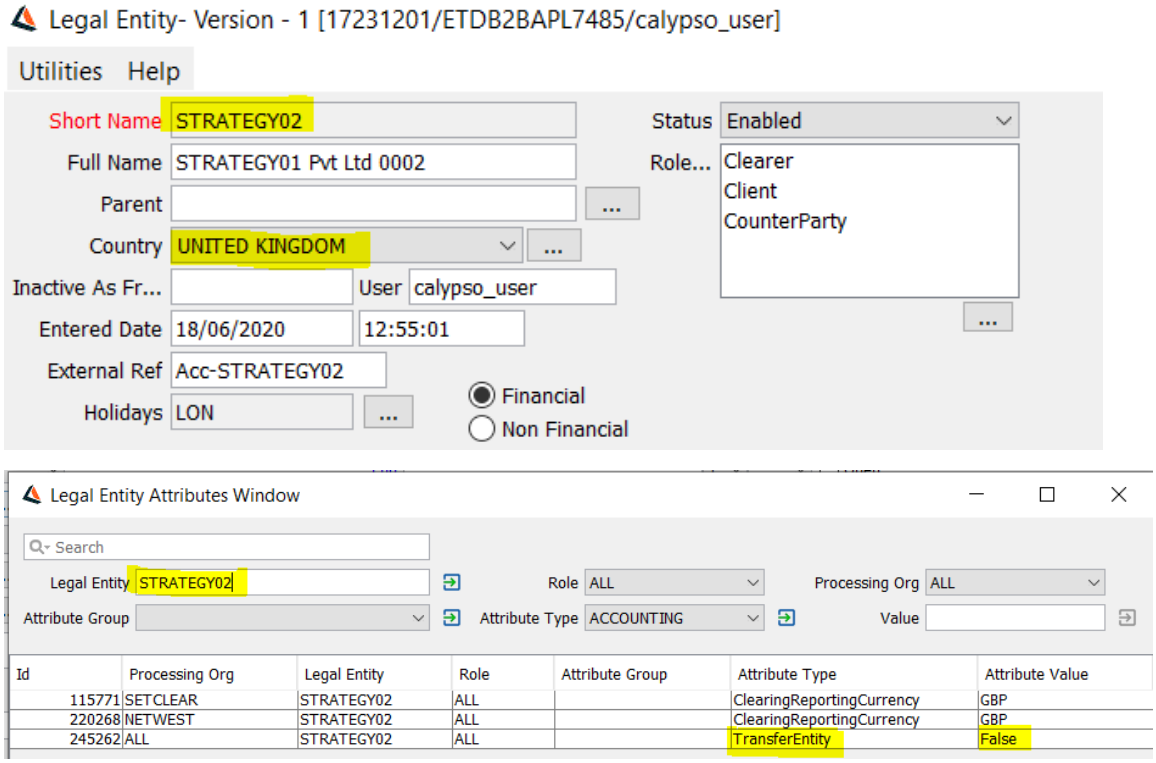
- If it matches, then it's confirmed that the trade is not 'Interentity', and the trade is booked as a normal trade flow.
- If the country does not match, then it is confirmed that these are 'Interentity Trades' and B2B trade creation is triggered.



- The trade is enriched with keywords:
  - InterEntity = True
  - InterEntityAccRef = <ClientAccountId>
  - InterEntityTradeType = "Child_EndClient" for an end client child trade, "Child_OmniClient for an intermediary client child trade, “Parent” for a parent trade

Step 6: Before booking the B2B trades, system will check Client LE attribute ‘TransferEntity’

- If this is set as ‘True’ then the position is to be transferred via multiple countries i.e. multihopping to transfer it to the end client. (not currently supported)
- If set as ‘False’ then it is considered that only 2 countries are involved i.e. the Clearing Broker (CB) PO and the End client PO – Only option currently supported.



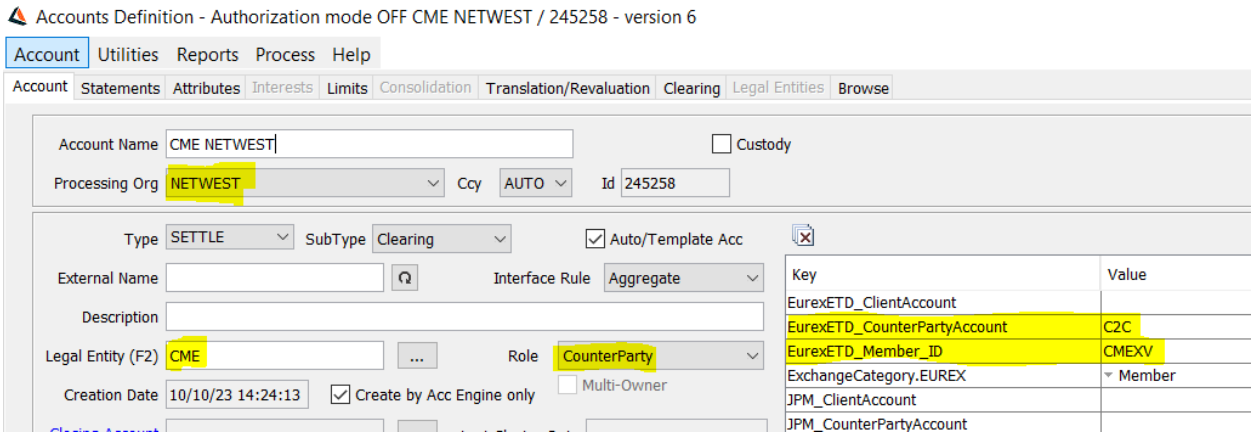
17.2.1 Logic for 1st Trade

- To identify CPTY A/c:
  As this is the 1st trade, CB PO is receiving the trade message from EXCH, thus Exchange A/c with Cpty role will be the Cpty for the 1st trade.

  For e.g. In this case, CME EXCH A/c will be the cpty A/c:

  Trade message:

```
<?xml version="1.0" encoding="UTF-8"?>
<FIXML xmlns="www.eurexchange.com/technology">
    <TrdCaptRpt RptID="171Av" TransTyp="0" RptTyp="0" TrdTyp="0" TrdHandlInst="0" TrnsfrRs
        <Hdr SID="ECAG" TID="CMEXV" Snt="2022-06-23T02:34:36.796+00:00"/>
        <Pty ID="CMEXV" R="4"/>
        <Pty ID="CMEXV" R="1"/>
        <Pty ID="C2C" R="38"/>
        <Pty ID="SIM001" R="12"/>
        <Pty ID="CALXVSIM001" R="11"/>
        <Instrmt Sym="48" MMY="202311" MatDt="" StrkPx="100" OptAt="0" SettlMeth="P" Exers
            <AID AltID="500205414" AltIDSrc="M"/>
        </Instrmt>
        <Amt Typ="PREM" Amt="0"/>
        <TrdRegTS TS="2022-06-23T02:34:36.723+00:00" Typ="1"/>
        <TrdRegTS TS="2022-06-23T02:34:36.738+00:00" Typ="2"/>
        <TrdRegTS TS="2022-06-23T02:34:36.788+00:00" Typ="7"/>
        <RptSide Side="2" TrdID="318767307" PosEfct="O" Txt2="1001C2C" AllocInd="0" Agrsr
            <TrdRegTS TS="2022-06-23T02:34:36.723+00:00" Typ="8"/>
            <Qty Typ="TOT" Long="20" Short="0"/>
            <Qty Typ="ALC" Long="0" Short="0"/>
            <Qty Typ="PA" Long="20" Short="0"/>
            <TrdRptOrdDetl OrdID="1648000" OrdTyp="2" OrdStat="2">
                <OrdQty Qty="20"/>
            </TrdRptOrdDetl>
            <ReltdPos ID="Q6DAD" Src="3"/>
        </RptSide>
    </TrdCaptRpt>
</FIXML>
```



- To identify Client A/c:

  As this trade is to be transferred from NETWEST to SETCLEAR, SETCLEAR is the client for NETWEST. Thus, for such Inter-entity trades, we use OMNIBUS A/c's to transfer the position.

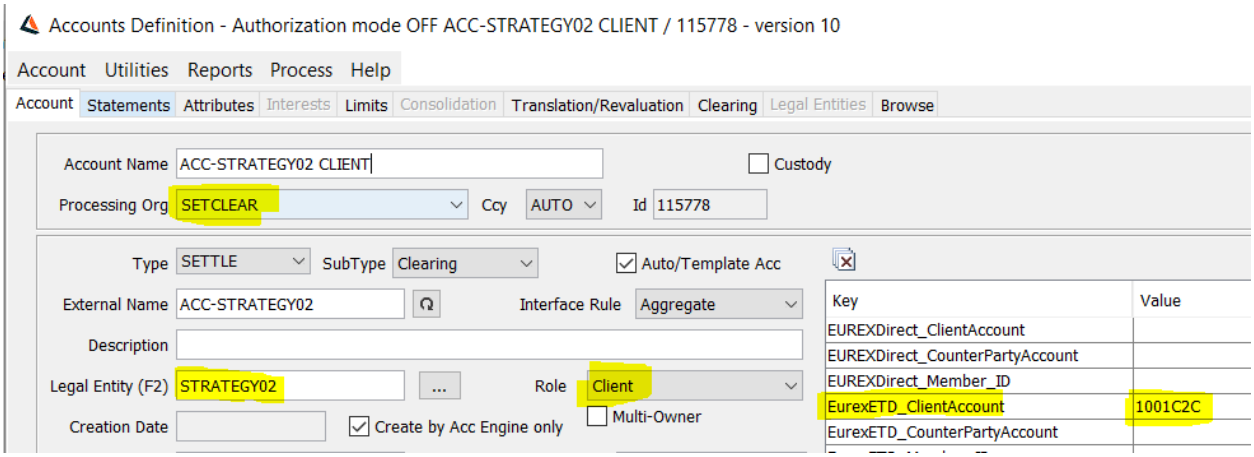
  Therefore, to identify the Omnibus A/c for the trade, we 1st check the Client PO ISO country code and CCP Origin code.

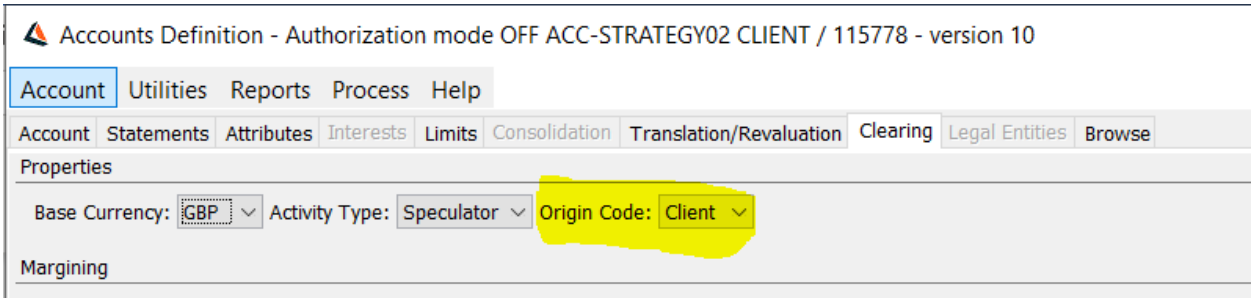
  Based on the origin code, the Omni Client A/c attribute is selected.

- If the CCP Origin code = Client, then refer CB PO LE attribute OMNI_CLIENT_CLNT_XX
- If the CCP Origin code = House, then refer CB PO LE attribute OMNI_CLIENT_HS_XX

  where HS stands for 'House' & CLNT stands for 'Client'.

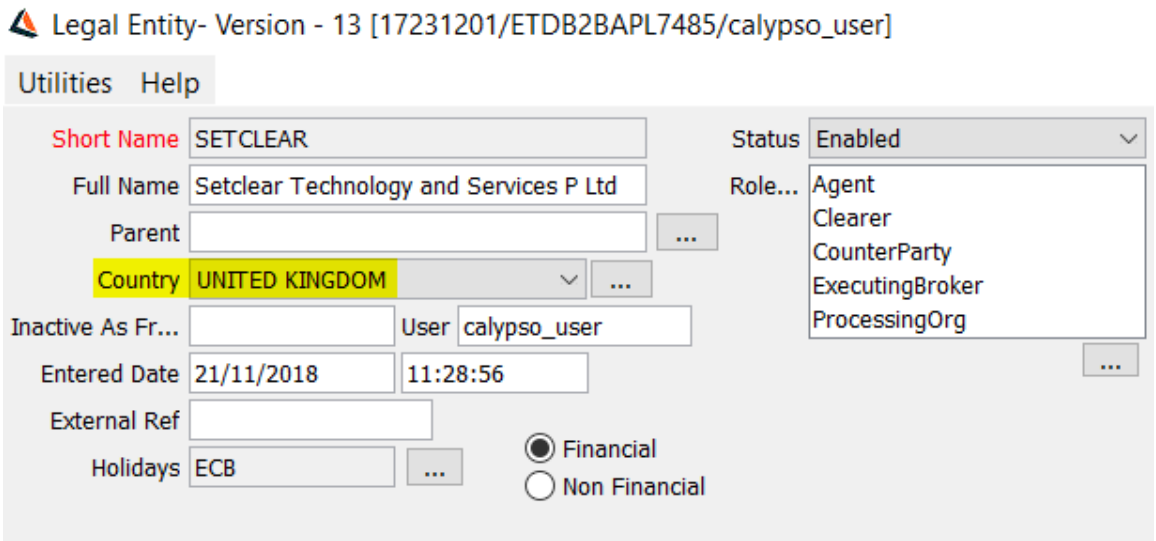
  In the Clearing Tab, user defines whether the CCP Origin Code is House or Client from which it identifies whether it's Client or House.



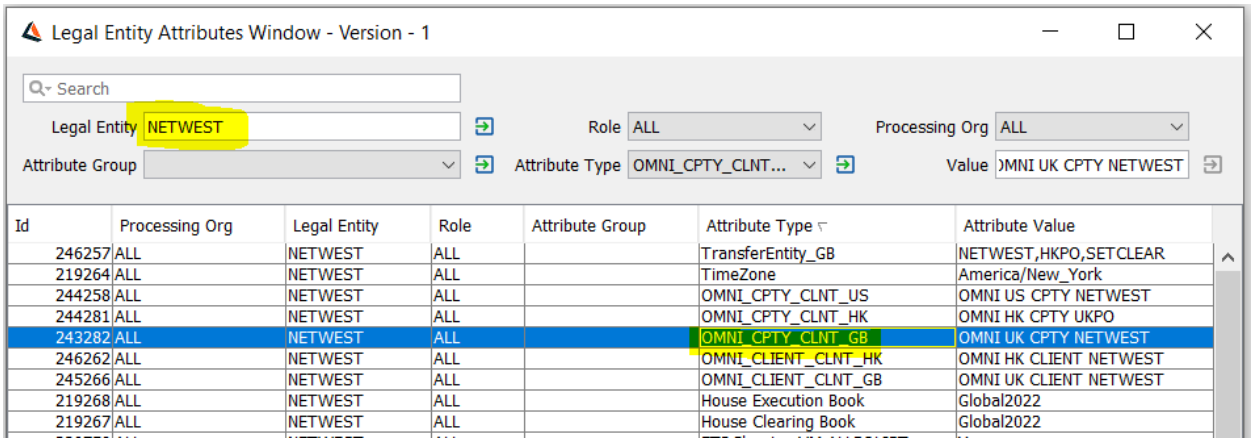


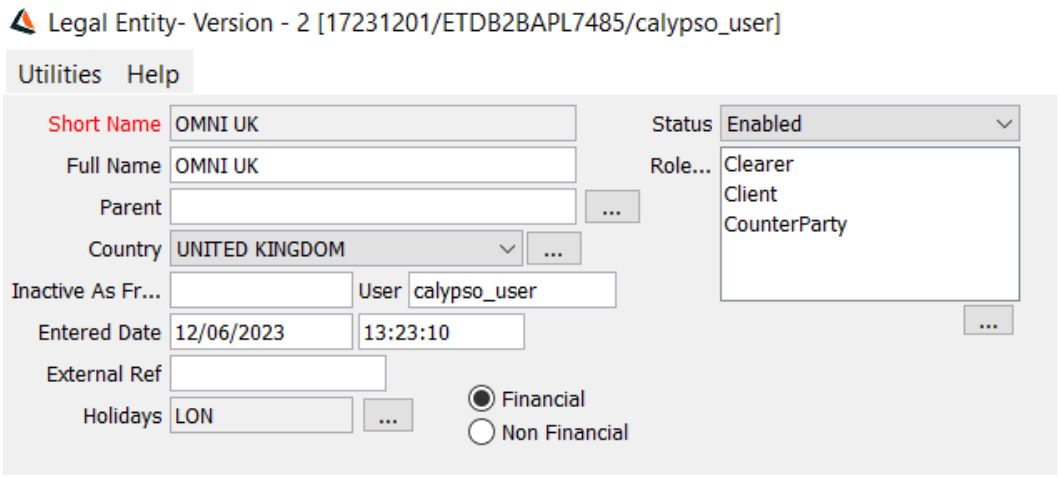
To identify the 'XX' country code, XX stands for the end client PO LE country code.

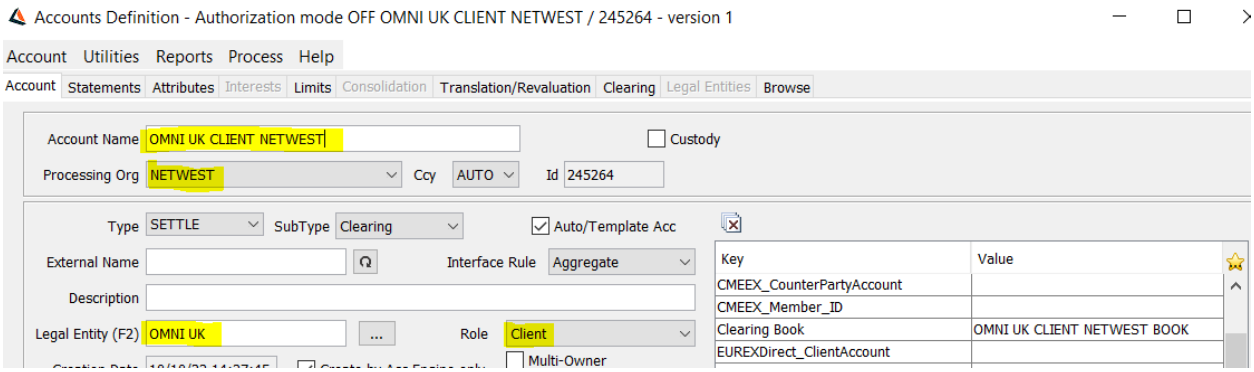
Thus, in this e.g. we consider CCP Origin code = Client and End Client PO country code is 'GB'



Therefore, the system will refer attribute 'OMNI_CLIENT_**CLNT**_GB' on Clearing Broker: NETWEST

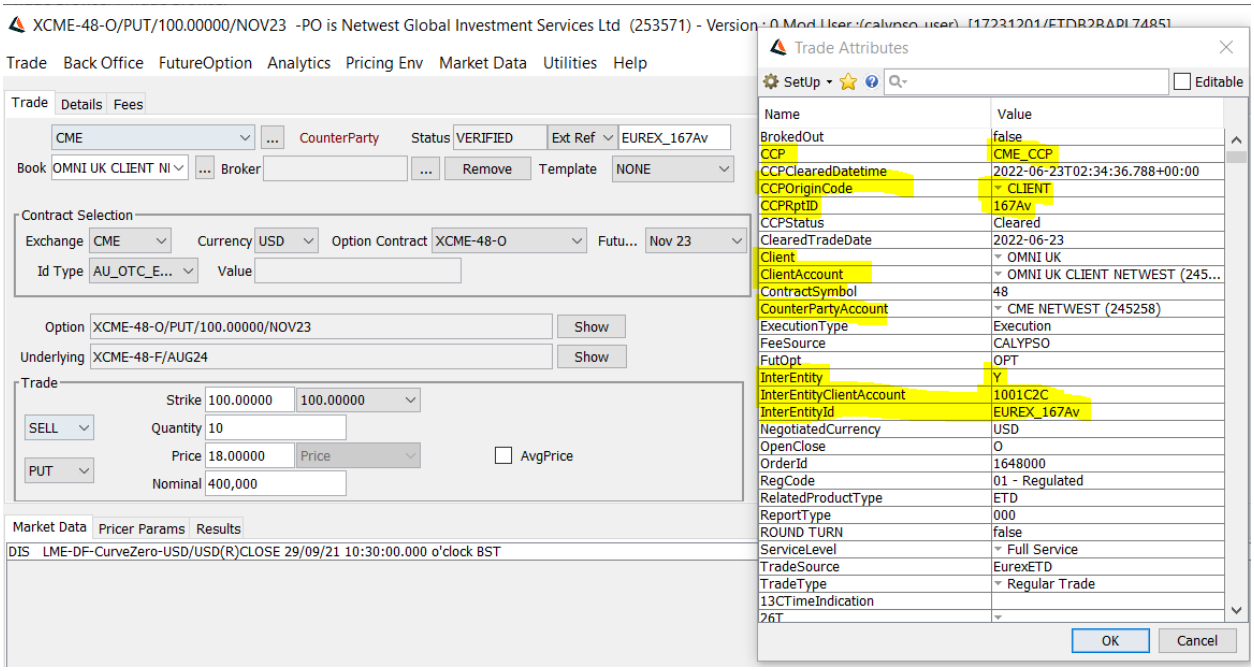






So, once the client A/c for the 1st trade is identified, the system will book the 1st trade.

Legal Entity	Client Account	CounterParty Acc	Trade Id	External Reference...	Book	Product Type	Trade Date	Product Description
OMNI UK	OMNI UK CLIENT NETWEST	CME NETWEST	253571	EUREX_167Av	OMNI UK CLIENT NETWEST BOOK	FutureOptionCommodity	Jun 23, 2022 07:34 AM	XCME-48-O/PUT/100.00000/NOV23



17.2.2 Logic for 2nd Trade

Post the 1st trade is booked; system will now trigger the mirror trade which is equal in all economic parameters.

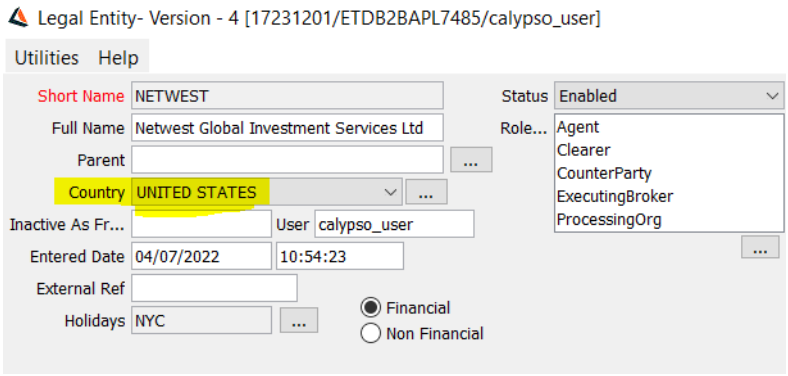
For Trade 2, we refer the 2nd PO in the sequence i.e. SETCLEAR. To locate the client and cpty for this trade, system will refer to attributes on the SETCLEAR PO.

- To identify CPTY A/c:

Now the trade is being transferred from US to UK entity i.e. NETWEST to SETCLEAR. Thus, US entity will have the counterparty role here.

As mentioned earlier, for such position transfers we use Omnibus Cpty A/c's of the respective country.

Therefore, to identify the Omnibus **Cpty** A/c for the trade, we 1st check the CB PO country code and have noted the CCP Origin code from End Client A/c.



Based on the origin code, the Omni **Cpty** A/c attribute is selected.

- If the CCP Origin code = Client, then refer End Client PO LE attribute OMNI_CPTY_CLNT_XX

- If the CCP Origin code = House, then refer CB PO LE attribute OMNI_CPTY_HS_XX

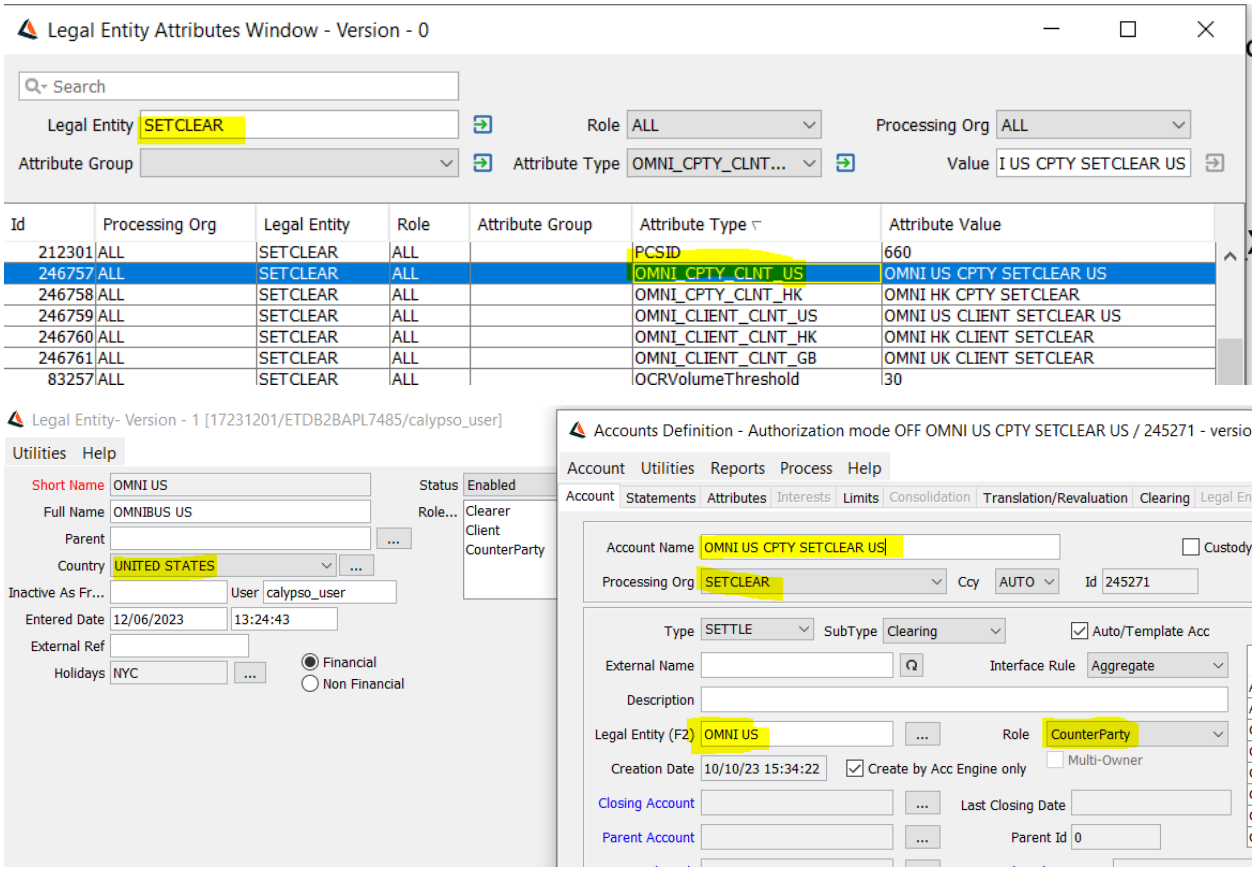
  where HS stands for 'House' & CLNT stands for 'Client'.

  In the Clearing Tab, user defines whether the CCP Origin Code is House or Client from which it identifies whether it's Client or House.

  To identify the 'XX' country code, XX stands for the CB PO LE country code.

  Thus, in this e.g. we consider CCP Origin code = Client and End Client PO country code is 'US

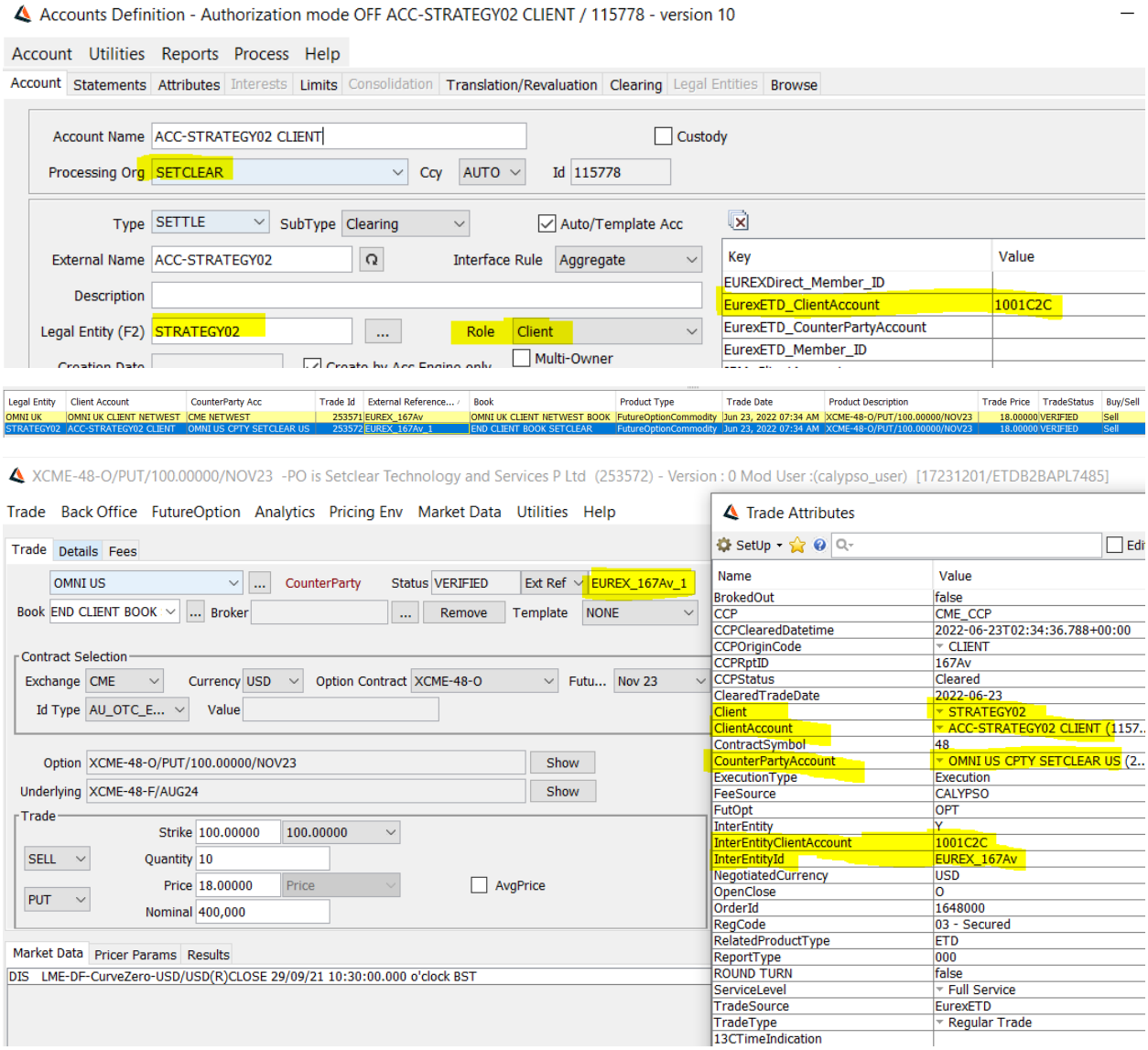
  Therefore, the system will refer attribute 'OMNI_CPTY_**CLNT**_US on End Client PO: SETCLEAR



- To identify Client A/c:

  For the 2nd trade, as the position is being transferred from US to UK and end client is based in UK, then the client A/c will be the actual End client A/c.

  Thus, Cpty and Client both are identified, and trade can be booked.



This completes the trade flow for trade transfer between 2 countries.

17.3 ETD Clearing Multi region B2B Trade Support

This is an extension to the B2B trade support feature to support more than 2 POs to transfer the trade to the end client.

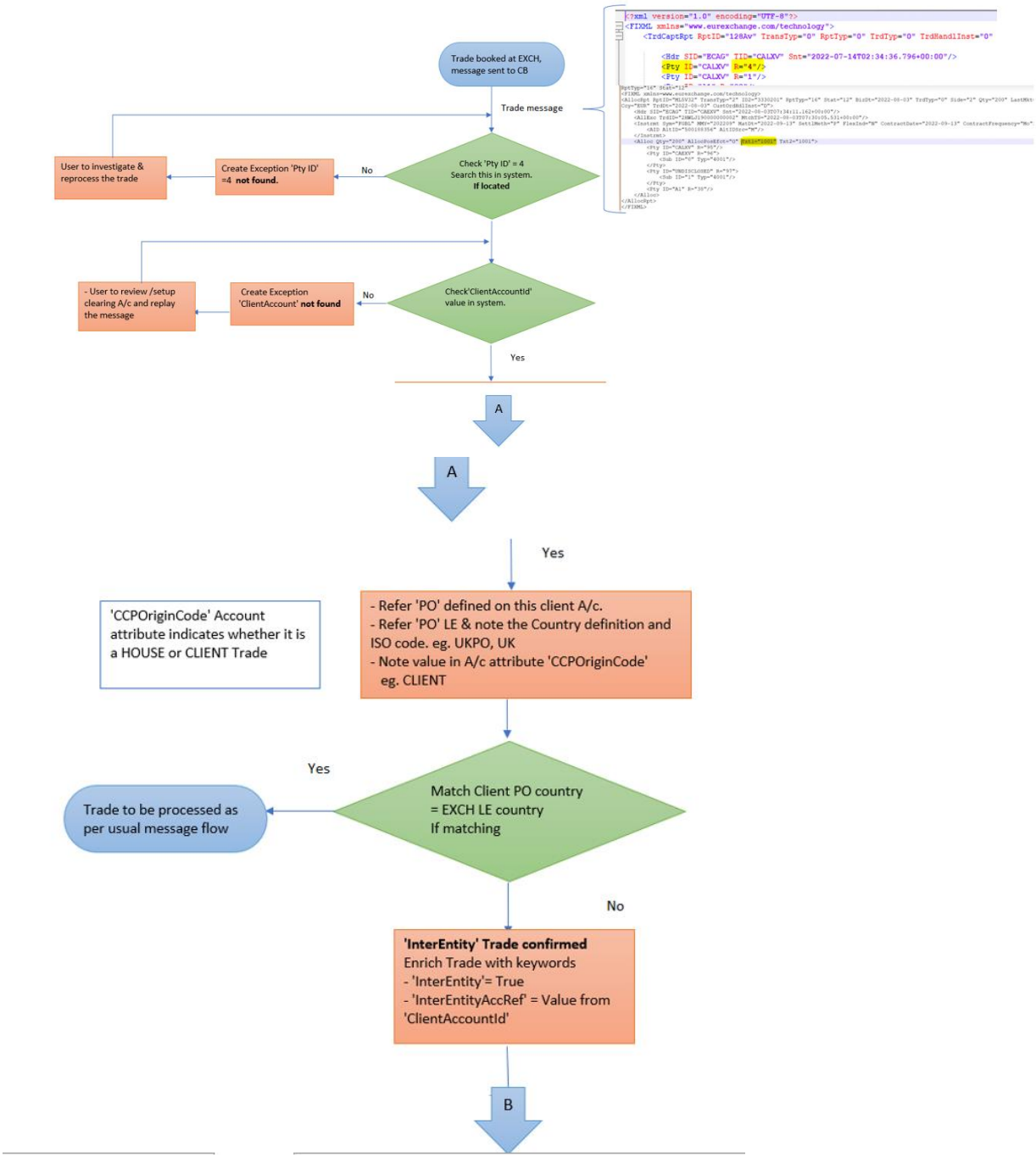
If a client is domiciled in Hongkong and has executed trade on CME Exchange, domiciled US. Due to regulatory restrictions, the positions cannot be transferred directly from US to HK, Country route is followed. Positions will be 1st received by the USPO then it will be transferred to the UK PO, then to the SG PO and finally to the HKPO - end client A/c.

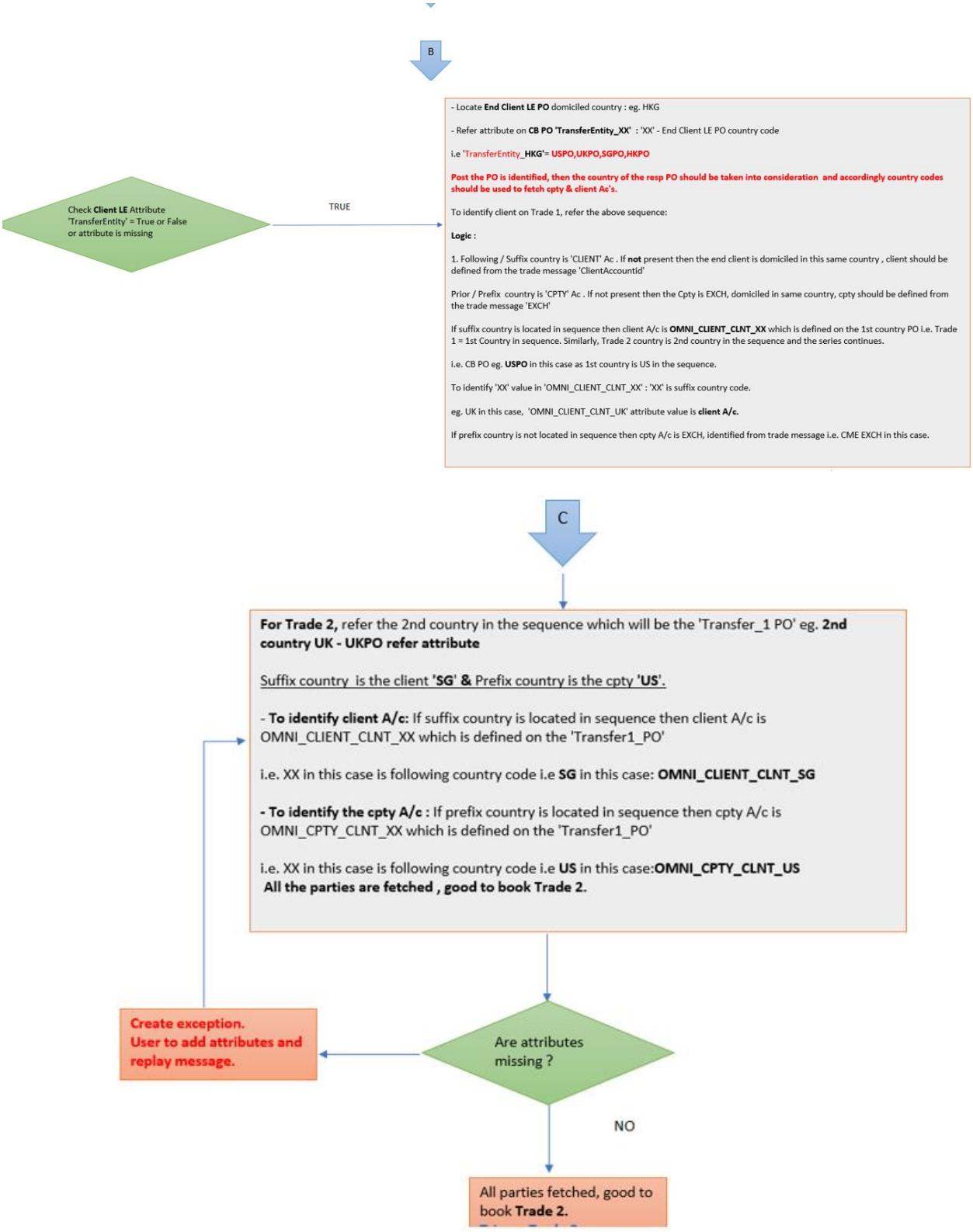
Before booking the B2B trades, system checks Client LE attribute 'TransferEntity'.

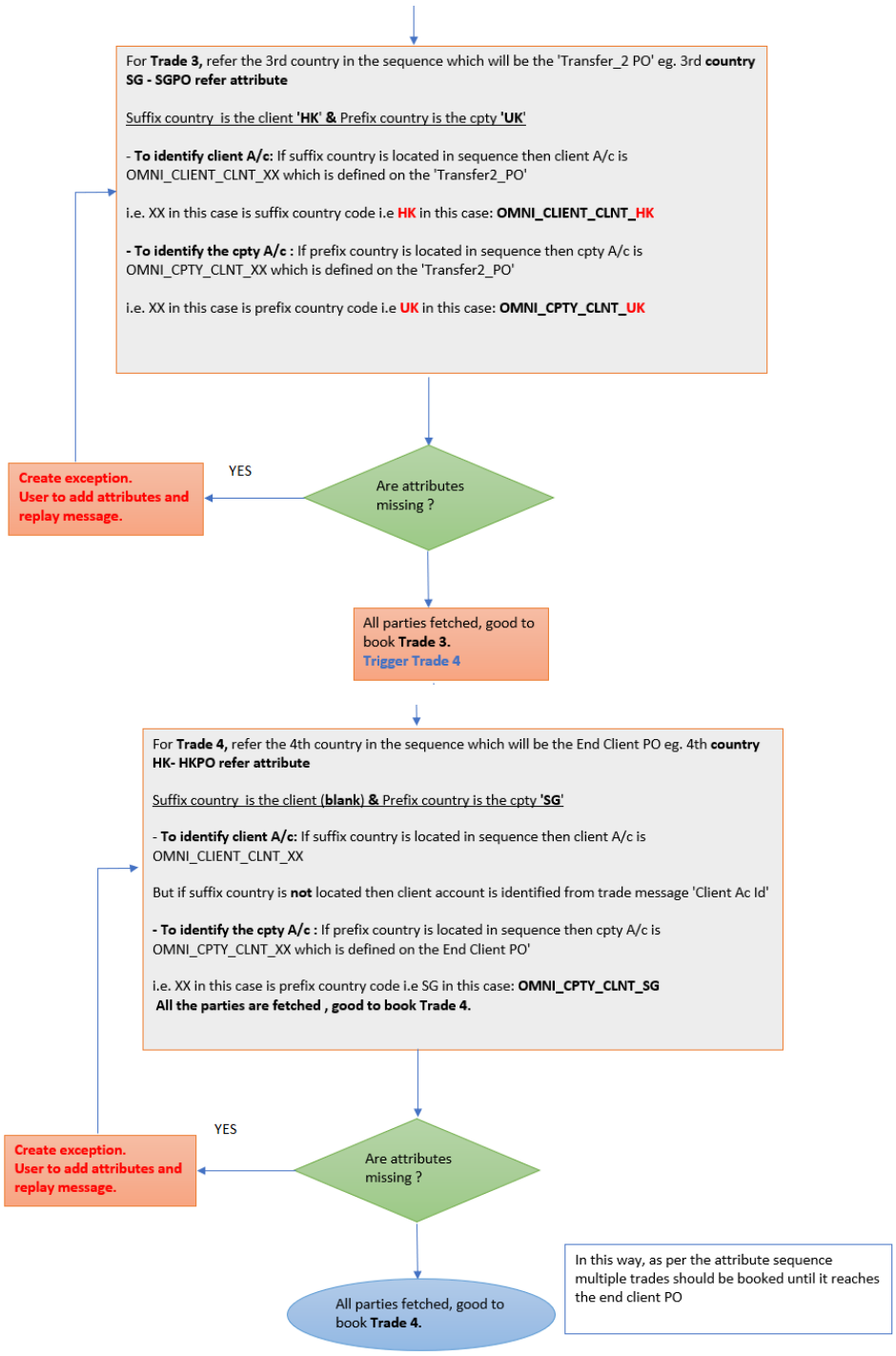
- If this is set as 'True' then the position is to be transferred via multiple countries i.e. multihopping to transfer it to the end client.
- If set as 'False' then it is considered that only 2 countries are involved i.e. the Clearing Broker (CB) PO and the End client PO

Once the route is identified, logic of suffix / prefix country code is followed.

Below is the trade flow:




B
Check Client LE Attribute 'TransferEntity' = True or False or attribute is missing
TRUE
- Locate End Client LE PO domiciled country : eg. HKG
- Refer attribute on CB PO 'TransferEntity_XX' : 'XX' - End Client LE PO country code
i.e 'TransferEntity_HKG'= USPO,UKPO,SGPO,HKPO
Post the PO is identified, then the country of the resp PO should be taken into consideration and accordingly country codes should be used to fetch cpty & client Ac's.
To identify client on Trade 1, refer the above sequence:
Logic :
1. Following / Suffix country is 'CLIENT' Ac . If not present then the end client is domiciled in this same country , client should be defined from the trade message 'ClientAccountid'
Prior / Prefix country is 'CPTY' Ac . If not present then the Cpty is EXCH, domiciled in same country, cpty should be defined from the trade message 'EXCH'
If suffix country is located in sequence then client A/c is OMNI_CLIENT_CLNT_XX which is defined on the 1st country PO i.e. Trade 1 = 1st Country in sequence. Similarly, Trade 2 country is 2nd country in the sequence and the series continues.
i.e. CB PO eg. USPO in this case as 1st country is US in the sequence.
To identify 'XX' value in 'OMNI_CLIENT_CLNT_XX' : 'XX' is suffix country code.
eg. UK in this case, 'OMNI_CLIENT_CLNT_UK' attribute value is client A/c.
If prefix country is not located in sequence then cpty A/c is EXCH, identified from trade message i.e. CME EXCH in this case.
C
For Trade 2, refer the 2nd country in the sequence which will be the 'Transfer_1 PO' eg. 2nd country UK - UKPO refer attribute
Suffix country is the client 'SG' & Prefix country is the cpty 'US'.
- To identify client A/c: If suffix country is located in sequence then client A/c is OMNI_CLIENT_CLNT_XX which is defined on the 'Transfer1_PO'
i.e. XX in this case is following country code i.e SG in this case: OMNI_CLIENT_CLNT_SG
- To identify the cpty A/c : If prefix country is located in sequence then cpty A/c is OMNI_CPTY_CLNT_XX which is defined on the 'Transfer1_PO'
i.e. XX in this case is following country code i.e US in this case:OMNI_CPTY_CLNT_US
All the parties are fetched , good to book Trade 2.
Are attributes missing ?
Create exception. User to add attributes and replay message.
NO
All parties fetched, good to book Trade 2.


For **Trade 3,** refer the 3rd country in the sequence which will be the 'Transfer_2 PO' eg. 3rd **country SG - SGPO refer attribute**
Suffix country is the client **'HK' &** Prefix country is the cpty **'UK'**
- **To identify client A/c:** If suffix country is located in sequence then client A/c is OMNI_CLIENT_CLNT_XX which is defined on the 'Transfer2_PO'
i.e. XX in this case is suffix country code i.e **HK** in this case: **OMNI_CLIENT_CLNT_HK**
- To identify the cpty A/c : If prefix country is located in sequence then cpty A/c is OMNI_CPTY_CLNT_XX which is defined on the 'Transfer2_PO'
i.e. XX in this case is prefix country code i.e **UK** in this case: **OMNI_CPTY_CLNT_UK**
Are attributes missing ?
YES
Create exception. User to add attributes and replay message.
All parties fetched, good to book **Trade 3.** Trigger Trade 4
For **Trade 4,** refer the 4th country in the sequence which will be the End Client PO eg. 4th **country HK- HKPO refer attribute**
Suffix country is the client (**blank**) **&** Prefix country is the cpty **'SG'**
- **To identify client A/c:** If suffix country is located in sequence then client A/c is OMNI_CLIENT_CLNT_XX
But if suffix country is **not** located then client account is identified from trade message 'Client Ac Id'
- To identify the cpty A/c : If prefix country is located in sequence then cpty A/c is OMNI_CPTY_CLNT_XX which is defined on the End Client PO'
i.e. XX in this case is prefix country code i.e SG in this case: **OMNI_CPTY_CLNT_SG**
All the parties are fetched , good to book Trade 4.
Are attributes missing ?
YES
Create exception. User to add attributes and replay message.
All parties fetched, good to book **Trade 4.**
In this way, as per the attribute sequence multiple trades should be booked until it reaches the end client PO

17.3.1 Logic for 1st Trade

In this case, 1st PO which is mentioned in the sequence is the country in which the Exchange is located.

So, the logic is defined as cpty for the 1st trade will be the Exchange A/c i.e. CME Exchange A/c.

Now, to locate the client A/c to this 1st trade, system will refer the subsequent PO country code i.e. UKPO in this case, so the country is GB.

Thus, the position will be transferred to the Omnibus A/c of the subsequent PO.

We will be using Omnibus A/c with roles defined as Counterparty and Client to transfer the positions from one PO to another.

Now that GB is the suffix country it is playing the client role, thus, we will be using UK Omnibus A/c with Client role.

Thus, system will look for the attribute OMNI_CLIENT_CLNT_XX where 'XX' will be GB i.e. attribute is OMNI_CLIENT_CLNT_GB. Attribute value is the resp Client Account name. Thus, trade 1 is booked.

17.3.2 Logic for 2nd Trade

Now the position will be transferred from US PO to UK PO,

For the trade 2, we refer the 2nd PO in the sequence i.e. UK PO. To locate the client and cpty for this trade, system will refer to attributes on the UK PO.

OMNI_CLIENT_CLNT_XX & OMNI_CPTY_CLNT_XX

Thus, to locate the cpty A/c, system must refer 2nd PO LE Attribute : OMNI_CPTY_CLNT_XX where XX in this case is prefix PO country code i.e. in this case it is USPO, US

Therefore, system will look for the attribute as OMNI_CPTY_CLNT_US.

For client to be identified, we refer OMNI_CLIENT_CLNT_XX, for XX to be identified we will refer the subsequent PO in the sequence after UK PO, In this case, we have SG PO mentioned after UK PO. So, the domiciled country for SGPO is Singapore with country ISO code as SG.

Therefore, we will look for OMNI_CLIENT_CLNT_SG on UK PO LE attribute. Thus, the Trade 2 is also booked.

Note: This trade sequence is followed until the trade is booked to the end client A/c. Now the position will be transferred from UK PO to SG PO, so the prefix country -Omnibus A/c will be the cpty.

17.3.3 Logic for 3rd Trade

For the trade 3, we refer the 3rd PO in the sequence i.e. SG PO. To locate the client and cpty for this trade, system will refer to attributes on the SG PO.

OMNI_CLIENT_CLNT_XX & OMNI_CPTY_CLNT_XX

For client to be identified, we refer OMNI_CLIENT_CLNT_XX, for XX to be identified we will refer the subsequent PO in the sequence after SG PO, in this case, we have HK PO mentioned after SG PO. So, the domiciled country for HKPO is Hongkong with country ISO code as HK.

Thus, to locate the cpty A/c, system must refer OMNI_CPTY_CLNT_XX where XX in this case will prefix PO country code i.e. in this case it is UKPO, UK

Therefore, system will look for the attribute as OMNI_CPTY_CLNT_UK. Thus, the Trade 3 is also booked.

This trade sequence is followed until the trade is booked to the end client A/c.

17.3.4 Logic for 4th Trade

For the trade 4, we refer the 4th PO in the sequence i.e. HK PO. To locate the client and cpty for this trade, system will refer to attributes on the HK PO.

OMNI_CLIENT_CLNT_XX & OMNI_CPTY_CLNT_XX

Now to identify the client and cpty Ac country codes

For client to be identified, we refer OMNI_CLIENT_CLNT_XX, for XX to be identified we will refer the subsequent PO in the sequence after HK PO.

In this case, we have no PO mentioned after HK PO which indicates that end client is domiciled in this PO country and the client A/c used will be End client A/c.

For the cpty A/c to be identified, we refer the prefix PO updated prior the current PO. In this case, its SGPO mentioned before HKPO. Therefore, we set XX as SG for the cpty a/c attribute OMNI_CPTY_CLNT_XX i.e. attribute is OMNI_CPTY_CLNT_SG.

Now, the client and cpty A/c's have been identified, system will book the Trade 4, and the mirroring process stops here.

17.4 Configuration

Additional mapping: PO LE Shortname sequence.

Appendix – External Data Locations

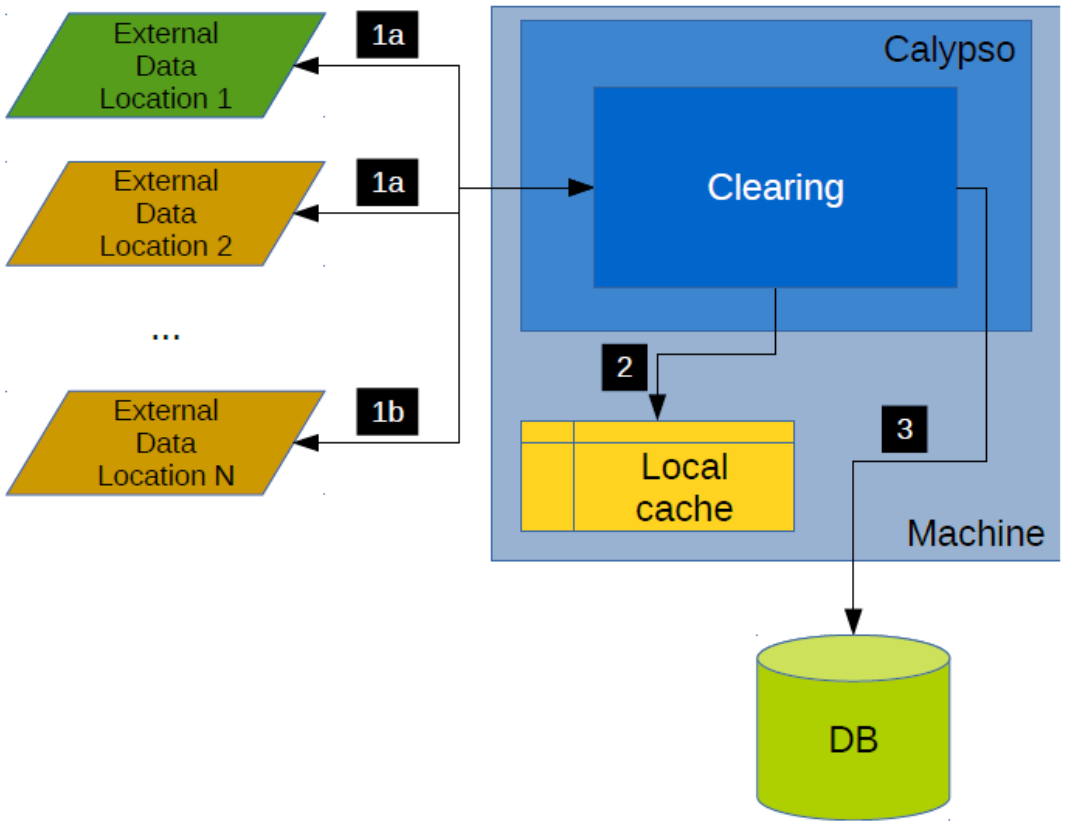
This section describes how external data locations can be configured.

General Conventions

All paths are case-sensitive

All dates are represented in ISO 8601 compact format, yyyyMMDD (e.g. 20160331)

External Data Import



1 – When some external data is required, the configured external data locations are probed

1a - External data locations are iterated in order, jumping to the next one if the file is missing

1b - Eventually, the file is found at Location N

2 - The file is cached in case it is needed in the future. Its origin (Location N) is stored too for audit purposes.

3 - After processing, the data are stored in DB in different formats:

3a - Risk parameters are stored in the CLEARING_MARGIN_DATA table

3b - IM calculation log output is stored in the CLEARING_MARGIN_OUTPUT table

3c - Computed margin numbers are stored as Collateral Exposure P&L Marks

3d - Contracts are stored in standard Calypso format (X_CONTRACT tables)

3e - Entities are stored as regular Legal Entities

18.1 External Data Locations

You can specify multiple locations for the external data.

If a location successfully provides a file, subsequent locations are ignored. Only when a location fails to provide a file is the next one probed.

Locations can be asset as `file:C:/<path>` on Windows platforms or `file:/<path>` on *nix platforms, and are probed in the following order:

1. Environment property CLEARING_EXTERNAL_DATA_LOCATIONS

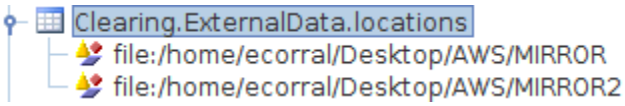
You can specify multiple locations in the environment property. The locations are probed from left to right.

Example: **CLEARING_EXTERNAL_DATA_LOCATIONS=file:/home/jdoe/MIRROR,file:/home/jdoe/MIRROR2**

2. Domain “Clearing.ExternalData.locations”

You can specify multiple locations in the domain. The locations are probed from top to bottom.

Example:



3. <user home>/Calypso

The default location is <user home>/Calypso if no other location is specified.

It corresponds to:

- Windows platforms - `file:C:/Users/<username>/Calypso`
- *nix platforms - `file:/home/<username>/Calypso`

18.2 Local Cache Locations

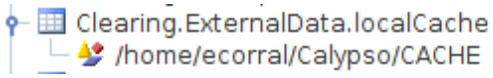
Before being imported into the system, external data are copied to a local cache.

Local cache locations can be set as `C:/<path>` on Windows platforms or `/<path>` on *nix platforms, and are probed in the following order:

1. Environment property CLEARING_EXTERNAL_DATA_LOCAL_CACHE

CLEARING_EXTERNAL_DATA_LOCAL_CACHE=/home/jdoe/cache

2. Domain “Clearing.ExternalData.localCache”



3. <user home>/Calypso/clearing

It corresponds to:

- Windows platforms - /home/<username>/Calypso/clearing
- *nix platforms - C:/Users/<username>/Calypso/clearing

18.3 File Naming Conventions

This section describes how the system builds the relative paths to locate external data. These paths are appended to the external data locations described above.

FOW Exchange Files

FOW files are **zipped csv files**, containing only one exchange per file, and stored with the following naming convention.

```
reference-data/<date>/exchange_<ISOMIC code>_<date>.zip
```

Risk Arrays

SPAN/PRISMA files are **zipped text files** (one exchange per file) and stored with the following naming convention.

```
risk-arrays/<date>/<SPAN/PRISMA zip>
```