

## 1. EOD VALUATION

The EOD Valuation can be performed using [Main Entry > Trade Lifecycle > Portfolio Manager](#) (reporting.PortfolioManagerWindow) - Help is available from that window.

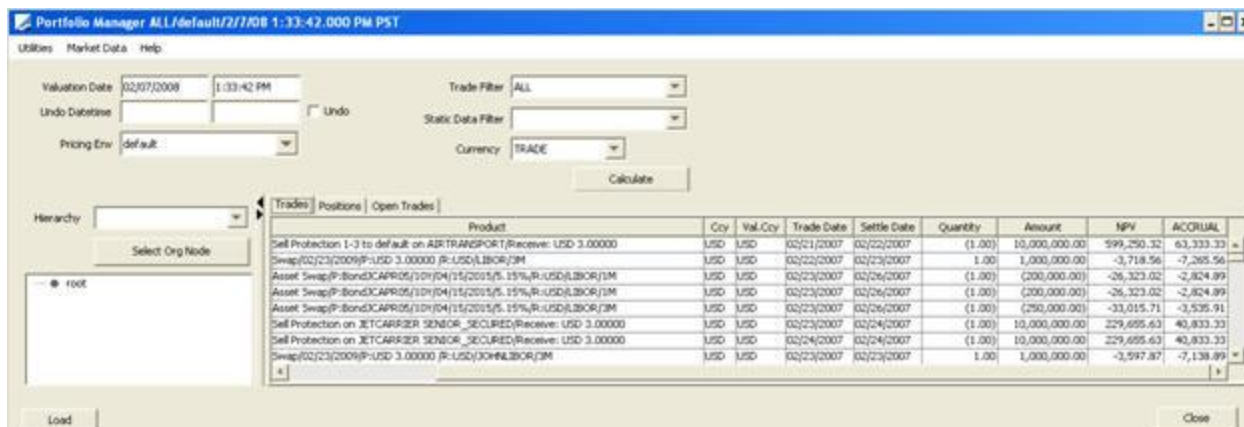
The Portfolio Manager allows performing a valuation on a portfolio of trades (using a Trade Filter), and publishing valuation events to generate valuation postings.

For position-based trades, the valuation is done by position, unless the trades are not settled, in which case the valuation is done on a trade-by-trade basis.

For non position-based trades, the valuation is done on a trade by trade basis.

[**NOTE:** Make sure that the Liquidation engine (position valuation) and Accounting engine (valuation postings) are running]

You can also use the scheduled tasks EOD\_TRADE\_VALUATION to perform trade valuation, and EOD\_POSITION\_VALUATION to perform position valuation. Scheduled Tasks are configured from [Main Entry > Configuration > Scheduled Tasks > Scheduled Tasks](#) - Help is available from that window.



» Choose [Help > Portfolio Manager Help](#) for complete details.

## 2. COMPUTING BALANCES

You can compute account balances at user-defined times using the BALANCE scheduled task, or in real-time using the Balance engine.

### 2.1 BALANCE SCHEDULED TASK

This generates the balance of all accounts that can generate a balance (Balance checkbox checked, and balance frequency specified). The task will take from the database all the postings that have not yet been processed, until the valuation date. It will calculate a new balance for each balance date and a new total of movements between 2 balance dates.

Choose [Main Entry > Configuration > Scheduled Tasks > Scheduled Tasks](#) (refdata.ScheduledTaskWindow), and select the type BALANCE.

The screenshot shows the 'Scheduled Task Window' for user '90600/release/calypso\_user'. The 'Definition' tab is active. The task type is set to 'BALANCE'. Other fields include 'Description', 'Process Org' (BRANCHE1), 'Trade Filter' (ALL), 'Pricing Env' (default), 'Risk Config', 'User' (calypso\_user), 'Filter Set', 'Next Id', 'Measures', 'Time Zone' (US/Pacific), 'Exec Time' (H M), 'Val Date Offset' (0), 'From Days' (To), 'Valuation Time' (12 H 00 M), 'Date Rule', 'Holidays', 'Undo Time' (H M), 'Skip Exec', 'CutOff' (0 Hour 0 Min), 'Private', 'DeActivated', 'Execute', 'Read Only Server', 'Publish', 'Send Email', 'Exec On Holidays', 'Attributes' table, and a 'Comment' field.

| Attribute      | Value           |
|----------------|-----------------|
| Reset Balances | ▼ true          |
| DateType       | ▼ EffectiveDate |
| SQL From       |                 |
| SQL Where      |                 |

- » Select True for the Reset Balances attribute to reset existing balances, or False otherwise.
- » Select the posting selection date in the DateType attribute: effective date or booking date.
- » You can enter additional tables for the from clause in the SQL From attribute (a String of comma-separated table names), or null. Note that the scheduled task will query the bo\_posting table by default.
- » You can enter a where clause (String) on the specified tables in the SQL Where attribute, for example "bo\_posting\_type = 'INTEREST'".

### 2.2 BALANCE ENGINE

The Balance engine subscribes to accounting events (PSAccountingEvent) and PSEventReprocessAccounting events, and generates account balances in real-time.

You need to set the event filter BalanceFilterEvent under [Main Entry > Configuration > System > Event](#).

The behavior of the Balance engine may be modified with the following engine parameters and environment properties.

Engine parameters are specified using Admin > Engine Thread. If a parameter is not available for setup, you can register it in the engineParam domain.

Environment properties are specified using User Env.

| Parameters and Properties | Description  |
|---------------------------|--|
| <b>BALANCE_MODE</b>       | <p><i><b>Specified in Admin &gt; Engine Thread.</b></i></p> <p>Set to ScheduledTask – This is case sensitive.<br/>This is currently the only supported balance mode.</p>   |
| <b>MAX_BATCH_EVENT</b>    | <p><i><b>Specified in Admin &gt; Engine Thread.</b></i></p> <p>Maximum number of persistent events loaded at one time by an engine in batch mode. The engine will load events in MAX_BATCH_EVENT chunks until all events are processed. Persistent events received after MAX_QUEUE_SIZE is reached will be processed in batch mode.<br/>Allows controlling engine memory usage, therefore improving the performance.</p>   |
| <b>MAX_QUEUE_SIZE</b>     | <p><i><b>Specified in Admin &gt; Engine Thread.</b></i></p> <p>Maximum number of events buffered on an engine event queue.<br/>When this number is exceeded, real time events are discarded and the engine restarts based on the restart timer (TIMEOUT_RESTART), in order to process the unprocessed persistent events using batch mode. This parameter can be useful for controlling the engine's memory usage. If not set, the default value for this parameter is no limit on queue size.<br/>Allows controlling engine memory usage, therefore improving the performance.</p> |
| <b>PricingEnv</b>         | <p><i><b>Specified in Admin &gt; Engine Thread.</b></i></p> <p>Pricing environment used by the engine. If not set, the default Pricing Environment of the user running the engine will be used.</p>  |
| <b>PROJECTED_DAYS</b>     | <p><i><b>Specified in Admin &gt; Engine Thread.</b></i></p> <p>Set to 0.</p>   |
| <b>THREAD_COUNT</b>       | <p><i><b>Specified in Admin &gt; Engine Thread.</b></i></p> <p>Number of concurrent threads used in an engine for processing. Increase the thread count for better performance.</p>  |
| <b>TIMEOUT_RESTART</b>    | <p><i><b>Specified in Admin &gt; Engine Thread.</b></i></p> <p>Number of seconds to wait before an engine restarts after MAX_QUEUE_SIZE has been reached. The default value is 3600 seconds (1 hour).</p>  |

The Balance engine can be started using the application `com.calypso.apps.startup.StartBalanceEngine`.

Postings are "ignored" if the booking date is in the future. This check uses the ACC\_BUSINESS\_DATE attribute on the LE of the book of the posting, or the system date if no attribute is found.

### 3. VIEWING BALANCES

You can view the results of balance computations using [Main Entry > Reports > Accounting Reports > Account Balance](#) (reporting.ReportWindow\$Balance).

The Account Balance report shows the account balances of accounts that allow balance generation ((Balance checkbox checked, and balance frequency specified).

Account balances are calculated using the BALANCE scheduled task based on the postings generated by the accounting engine, or using the Balance engine. See [Computing Balances](#) for details.

You can also view posting details between balances.using [Main Entry > Reports > Accounting Reports > Balance Activity](#) - See [Balance Activity Report](#) for details.

The date of the account balance will depend on the balance frequency.

#### 3.1 SAMPLE BALANCE REPORT

The screenshot shows the 'Balance Report' window with the following sections:

- Search Criteria:**
  - Start: [ ] - [ ]
  - End: [ ] - [ ]
  - Date: **EFFECTIVE\_DATE**
  - Base Currency: **USD**
  - ☐ Trial Balance ☐ Filter Zero Bal.
  - ☐ Reconcile with BO Position
- Accounts Criteria: Specific Accounts**
  - ProcessingOrg: [ ] ...
  - Currency: [ ] ...
  - LegalEntity: [ ] ...
  - Account Type: [ ] ...
  - Account Name: [ ]
  - Properties ...
  - CallAccount: **ALL**
- Table:**

| Currency      | Account Name                                 | Date       | Debit Balance | Credit Balance       |
|---------------|--|------------|---------------|----------------------|
| Currency: EUR | Account Name: CONTIGENT_LIABILITY_FX (13929) |            |               |                      |
| EUR           | CONTIGENT_LIABILITY_FX (13929)               | 09/14/2009 |               | 1,000,000.00         |
| EUR           | CONTIGENT_LIABILITY_FX (13929)               | 09/18/2009 |               | 5,045,465.86         |
| EUR           | CONTIGENT_LIABILITY_FX (13929)               | 09/28/2009 |               | 4,045,465.86         |
|               |  |            |               | <b>10,090,931.72</b> |
- Footer:**
  - Using Empty template
  - Pricing Details: 11/18/09 11:53:49 AM EST - default

[**NOTE:** the columns of this picture have been configured. Sort columns, subheadings and subtotals have to be explicitly specified. See [Help > Menu Items](#) for details]

» You can change the pricing details at the bottom of the window - By default, the pricing environment comes from the User Defaults, and the valuation date is the current date and time.

» Specify search criteria as applicable and click  to load the corresponding balances.

Date — The effective date corresponds to the effective date of the balance (based on the balance frequency), and the booking date correspond to the date when the Balance scheduled task was actually executed.

You can select specific accounts using the Specific Accounts panel.

| Account Id | Account Name | Account Type | Automatic                | Description     | External Name | LE Name | LE Role |
|------------|--------------|--------------|--------------------------|-----------------|---------------|---------|---------|
| 30         | ACCRUAL      | NORMAL       | <input type="checkbox"/> | Gain on Capital | 0000          |         | ALL     |

Id: 30

Add ...

Clear ...

- You can enter an account id, or click **Add** to display the Account report that allows you to load accounts based on user-defined criteria.
- You can select accounts based on account criteria using the Accounts Criteria panel. Note that when specific accounts are specified, account criteria will be ignored.

Processing... BRANCHE1

LegalEntity

Account Type STOCK

Currency

Properties ...

You can click **Properties** to specify search criteria on automatic account properties.

- Check the "Trial Balance" checkbox to only load the latest balance associated with the end date.
  - Check the "Filter Zero Bal" checkbox to hide zero balances.
- » You can uncheck the menu item [View > Criteria](#) to hide the search criteria (this menu item operates as a checkbox).
- » Click to print the report results.

## 3.2 ACCOUNT BALANCE REPORT RESULTS

You can click any column heading to sort the results based on that column.

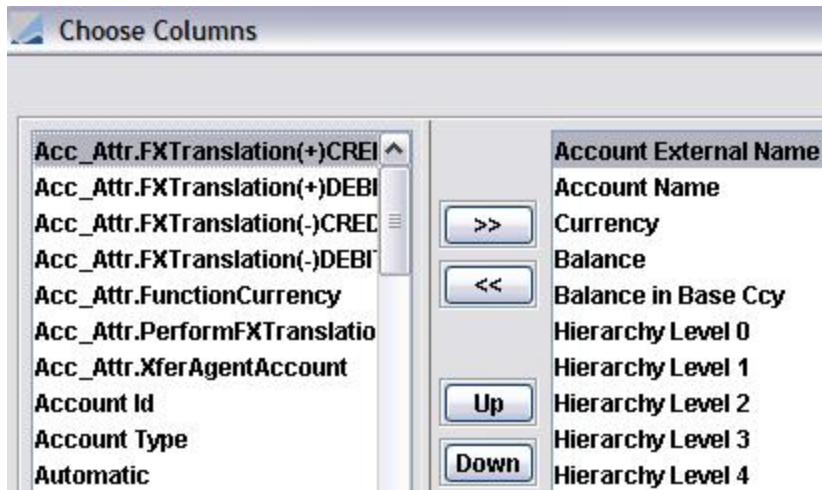
You can right-click any row to invoke the functions of the report menus. Choose [Help > Menu Items](#) for details.

In order to generate the following types of reports, you need to define a hierarchy of accounts. See [Accounting Setup for Account Balance](#) for details.

### 3.2.1 BALANCE SHEET

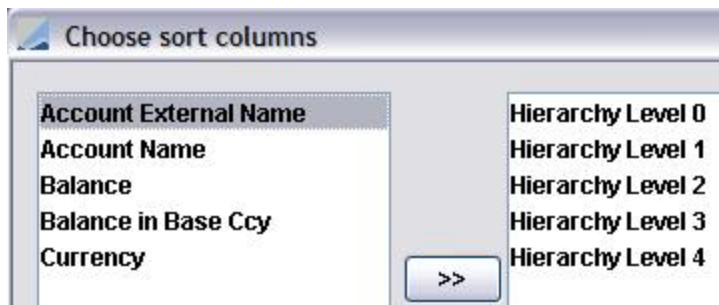
In order to view a Balance Sheet, the following configuration should be done.

1. Choose [Data > Configure Columns](#) and select the following columns.

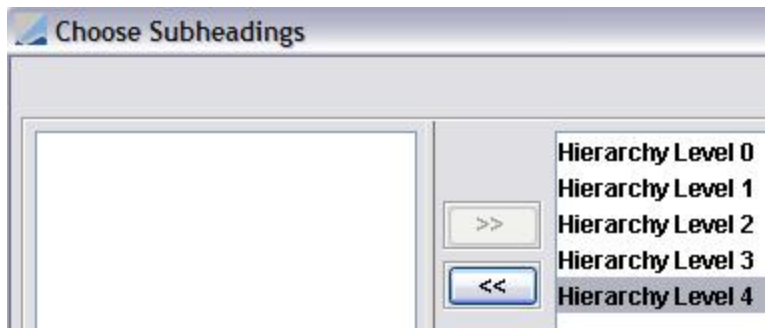


The hierarchy levels will reflect the account hierarchy that you have specified.

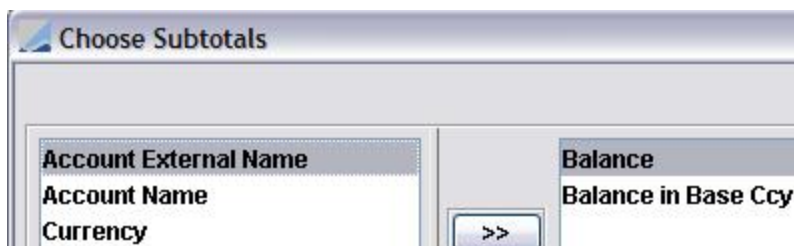
2. Choose [Data > Configure Sort](#) and select the following sort columns.



3. Choose [Data > Configure SubHeadings](#) and choose the following subheadings.



4. Choose [Data > Configure Subtotals](#) and choose the following subtotals.



5. You can also customize the column headings and the report title as applicable using [Data > Set Column Names](#) and [Data > Set Report Title](#).

6. Choose [View > Set Table > Aggregation](#) to enable the aggregation feature.

7. Choose **Report > Save As Template** to save the configuration as a template. You will be prompted to enter a template name.

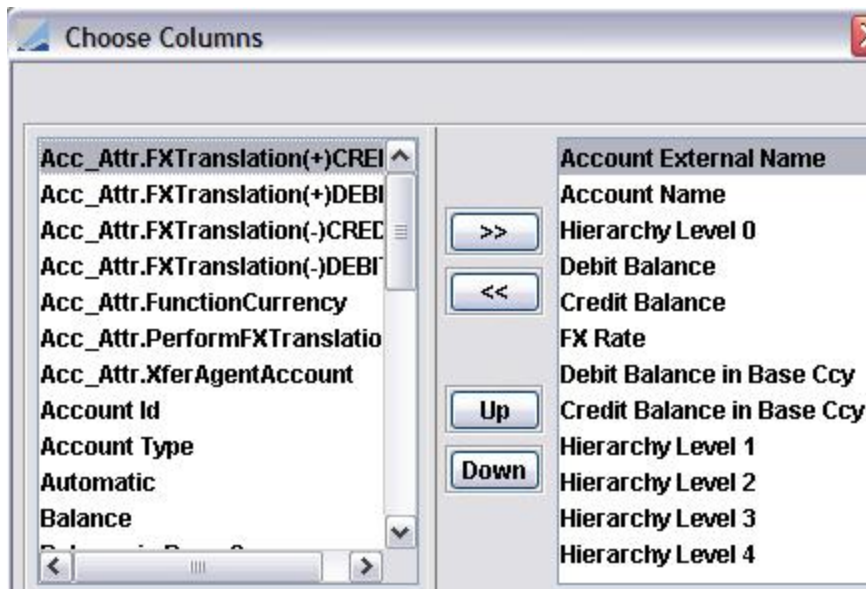
8. Run the report, it will appear as in the example shown below.

| AGGREGATION             | Account Number | Account Name     | Currency | Balance              | Balance in Base Ccy  |
|-------------------------|----------------|------------------|----------|----------------------|----------------------|
| Balance                 |                |                  |          |                      |                      |
| Totals - Asset          |                |                  |          | (26,969,662,643.41)  | (26,969,662,643.41)  |
| Traded Instruments      |                |                  |          | 90,385,649,495.87    | 90,385,649,495.87    |
| 11325/USD/EFFECTIVE_D12 |                | Traded Instru... | USD      | 7,051,214.51         | 7,051,214.51         |
| 11325/USD/EFFECTIVE_D12 |                | Traded Instru... | USD      | 7,145,770.05         | 7,145,770.05         |
| 11325/USD/EFFECTIVE_D12 |                | Traded Instru... | USD      | 7,168,520.04         | 7,168,520.04         |
| 11325/USD/EFFECTIVE_D12 |                | Traded Instru... | USD      | 8,784,528.35         | 8,784,528.35         |
| 11325/USD/EFFECTIVE_D12 |                | Traded Instru... | USD      | 8,832,264.45         | 8,832,264.45         |
| 11325/USD/EFFECTIVE_D12 |                | Traded Instru... | USD      | 8,873,324.43         | 8,873,324.43         |
| 11325/USD/EFFECTIVE_D12 |                | Traded Instru... | USD      | 9,343,491.09         | 9,343,491.09         |
| 11325/USD/EFFECTIVE_D12 |                | Traded Instru... | USD      | 9,414,774.42         | 9,414,774.42         |
| 11325/USD/EFFECTIVE_D12 |                | Traded Instru... | USD      | 9,445,107.76         | 9,445,107.76         |
| 11325/USD/EFFECTIVE_D12 |                | Traded Instru... | USD      | 9,521,774.43         | 9,521,774.43         |
| 11325/USD/EFFECTIVE_D12 |                | Traded Instru... | USD      | 9,526,885.54         | 9,526,885.54         |
| 11325/USD/EFFECTIVE_D12 |                | Traded Instru... | USD      | 9,549,007.76         | 9,549,007.76         |
| 11325/USD/EFFECTIVE_D12 |                | Traded Instru... | USD      | 9,552,329.98         | 9,552,329.98         |
| Loans                   |                |                  |          | 1,892,942.21         | 1,892,942.21         |
| Loans TRD               |                |                  |          | 1,892,942.21         | 1,892,942.21         |
| 1/USD/EFFECTIVE_1241    | 1241           | Loans TRD        | USD      | 1,892,942.21         | 1,892,942.21         |
| Equities                |                |                  |          | 90,269,547,560.85    | 90,269,547,560.85    |
| Accounts Receivable     |                |                  |          | (117,642,048,359.82) | (117,642,048,359.82) |

### 3.2.2 TRIAL BALANCE

In order to view a Trial Balance, the following configuration should be done.

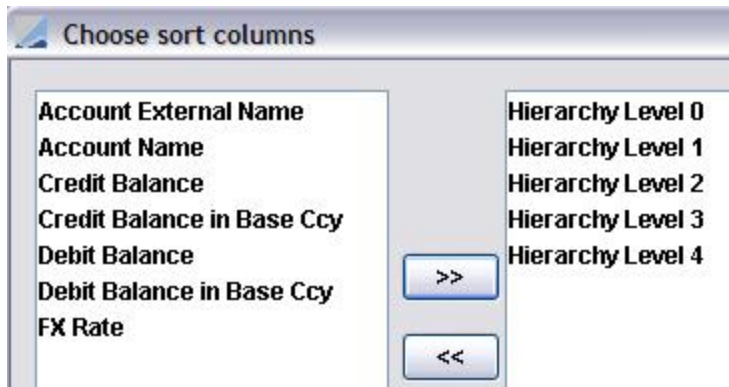
1. Choose **Data > Configure Columns** and select the following columns.



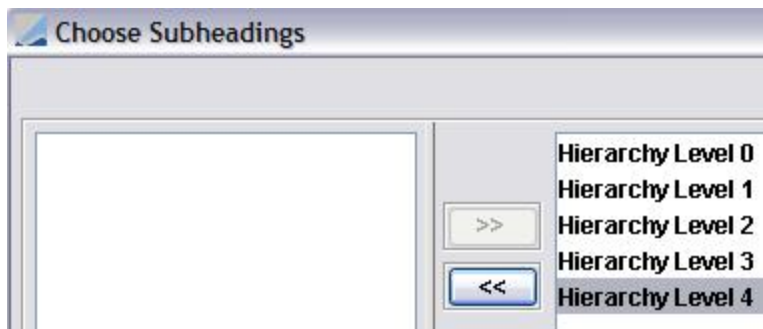
The hierarchy levels will reflect the account hierarchy that you have specified.

2. Choose **Data > Configure Sort** and select the following sort columns.

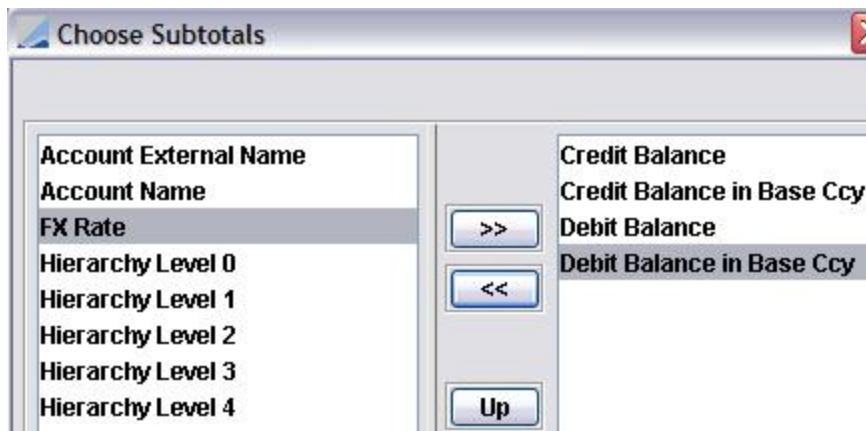




3. Choose [Data > Configure SubHeadings](#) and choose the following subheadings.



4. Choose [Data > Configure Subtotals](#) and choose the following subtotals.



5. You can also customize the column headings and the report title as applicable using [Data > Set Column Names](#) and [Data > Set Report Title](#).

6. Choose [View > Set Table > Aggregation](#) to enable the aggregation feature.

7. Choose [Report > Save As Template](#) to save the configuration as a template. You will be prompted to enter a template name.

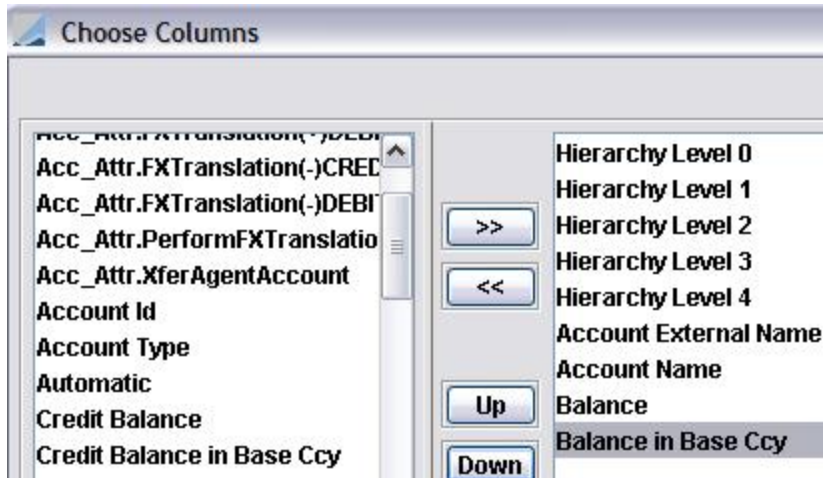
8. Run the report.

### 3.2.3 INCOME STATEMENT

In order to view an Income Statement, the following configuration should be done.

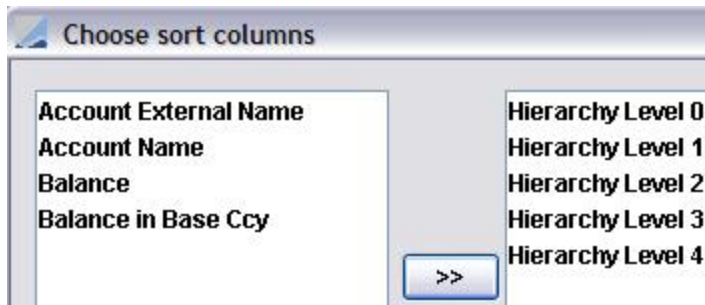
1. Choose [Data > Configure Columns](#) and select the following columns.



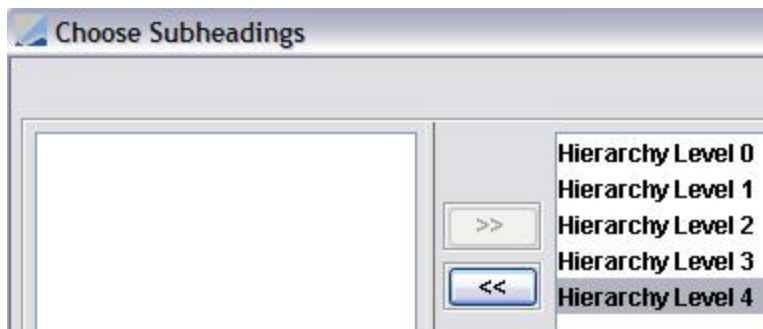


The hierarchy levels will reflect the account hierarchy that you have specified.

2. Choose [Data > Configure Sort](#) and select the following sort columns.



3. Choose [Data > Configure SubHeadings](#) and choose the following subheadings.



4. Choose [Data > Configure Subtotals](#) and choose the following subtotals.



5. You can also customize the column headings and the report title as applicable using [Data > Set Column Names](#) and [Data > Set Report Title](#).

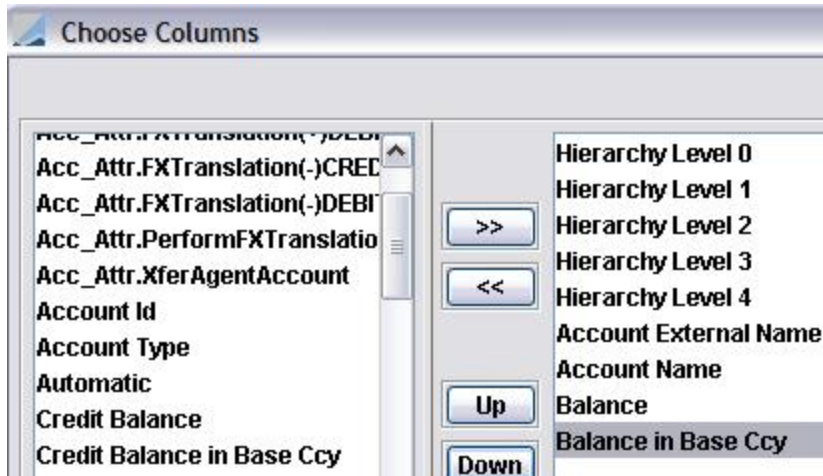
6. Choose [View > Set Table > Aggregation](#) to enable the aggregation feature.

7. Choose [Report > Save As Template](#) to save the configuration as a template. You will be prompted to enter a template name.
8. Run the report.

### 3.2.4 OFF BALANCE SHEET

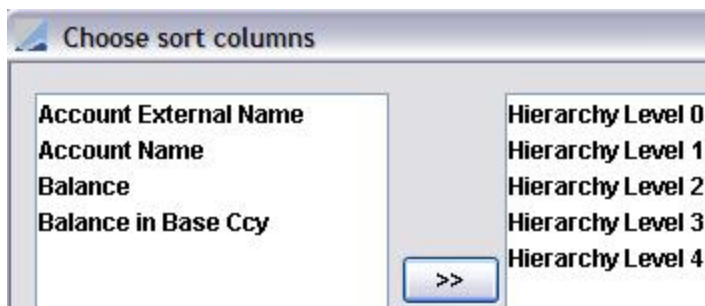
In order to view an Off Balance Sheet, the following configuration should be done.

1. Choose [Data > Configure Columns](#) and select the following columns.

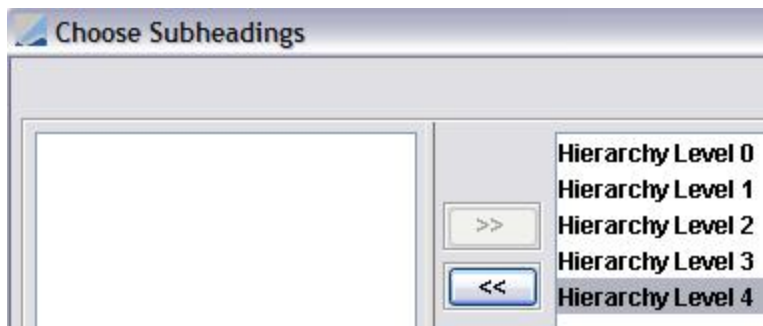


The hierarchy levels will reflect the account hierarchy that you have specified.

2. Choose [Data > Configure Sort](#) and select the following sort columns.



3. Choose [Data > Configure SubHeadings](#) and choose the following subheadings.



4. Choose [Data > Configure Subtotals](#) and choose the following subtotals.

5. You can also customize the column headings and the report title as applicable using [Data > Set Column Names](#) and [Data > Set Report Title](#).
6. Choose [View > Set Table > Aggregation](#) to enable the aggregation feature.
7. Choose [Report > Save As Template](#) to save the configuration as a template. You will be prompted to enter a template name.
8. Run the report.

### 3.3 ACCOUNTING SETUP FOR ACCOUNT BALANCE

Choose [Main Entry > Configuration > Accounting > Accounts](#) (refdata.AccountFrame) to setup the accounts as shown below.

- » Check the Balance checkbox, and select the balance frequency or click ... to select a date rule. Date rules are created using [Main Entry > Configuration > Definitions > Date Rule Definitions](#).
- » Also, to take advantage of the aggregation feature which allows generating reports such as Trial Balance, Balance Sheet, Income Statement, and Off-Balance Sheet, you can create a hierarchy of accounts using the Parent Account field.

For example, you can create a hierarchy such as:

Assets

- Short Term Assets
- Cash Nostro

- Cash Nostro Futures
- Traded Instruments
  - Equities Hedge Funds
  - Equities Hedge Funds MTM
- Accounts Receivable
  - Liability
- Traded Instruments Short
  - Bonds Short
  - Equities Short
  - Futures Short
- Account Payables

etc.

For this, create each individual account of the hierarchy (Assets, Short Term Assets, Cash Nostro, Cash Nostro Futures etc.) then setup the hierarchy using the parent account as follows:

The parent account of Cash Nostro is Short Term Assets, the parent account of Cash Nostro Futures is Short Term Assets, the parent account of Short Term Assets is Assets, etc.

Note that parent accounts do not need to generate balances, only the lowest accounts in the hierarchy.

The Account Balance report handles up to ten levels of hierarchy.

## 4. BALANCE ACTIVITY REPORT

You can view the posting details between balances using [Main Entry > Reports > Accounting Reports > Balance Activity](#) (reporting.ReportWindow\$BalanceActivity).

Account balances are calculated using the BALANCE scheduled task based on the postings generated by the accounting engine, or using the Balance engine. See [Computing Balances](#) for details.

The date of the account balance will depend on the balance frequency.


### 4.1 SAMPLE BALANCE ACTIVITY REPORT

The screenshot shows the 'BalanceActivity Report' window. It includes a menu bar (Report, Data, View, Export, Market Data, Utilities, Help) and a toolbar. The 'Accounts Criteria' tab is selected, showing fields for ProcessingOrg, Currency, LegalEntity, Account Type, and Account Name. The 'Start' date is 09/01/2009, 'End' date is 09/30/2009, and 'Date' is set to 'EFFECTIVE\_DATE'. The 'Base Currency' is USD. Checkboxes for 'Starting Bal.', 'Closing Bal.', 'Filter Zero Bal.', and 'Filter Zero Mvt.' are visible. The main table displays account activity with columns: Account Name, Posting Curre..., Event Type, Date, and Balance. The table shows data for 'CONTINGENT\_LIABILITY\_CDS (14974)' and 'CONTRA\_CDS (14975)' with starting, closing, and cot balances. At the bottom, there are buttons for 'Using Empty template' and 'Pricing Details: 11/18/09 12:06:00 PM EST - default'.

| Account Name                                   | Posting Curre... | Event Type       | Date       | Balance         |
|--|------------------|------------------|------------|-----------------|
| Account Name: CONTINGENT_LIABILITY_CDS (14974) |                  |                  |            |                 |
| CONTINGENT_LIABILITY_CDS (14974)               | USD              | STARTING BALANCE | 08/31/2009 | 10,000,000.00   |
| CONTINGENT_LIABILITY_CDS (14974)               | USD              | COT              | 09/23/2009 | 10,000,000.00   |
| CONTINGENT_LIABILITY_CDS (14974)               | USD              | CLOSING BALANCE  | 09/30/2009 | 20,000,000.00   |
| Account Name: CONTRA_CDS (14975)               |                  |                  |            |                 |
| CONTRA_CDS (14975)                             | USD              | STARTING BALANCE | 08/31/2009 | (10,000,000.00) |
| CONTRA_CDS (14975)                             | USD              | COT              | 09/23/2009 | (10,000,000.00) |
| CONTRA_CDS (14975)                             | USD              | CLOSING BALANCE  | 09/30/2009 | (20,000,000.00) |

[**NOTE:** the columns of this picture have been configured. Sort columns, subheadings and subtotals have to be explicitly specified. See [Help > Menu Items](#) for details]

» You can change the pricing details at the bottom of the window - By default, the pricing environment comes from the User Defaults, and the valuation date is the current date and time.

» Specify search criteria as applicable and click  to load the corresponding balances.

Date — The effective date corresponds to the effective date of the balance (based on the balance frequency), and the booking date correspond to the date when the Balance scheduled task was actually executed.

You can select specific accounts using the Specific Accounts panel.

| Account Id | Account Name | Account Type | Automatic                | Description     | External Name | LE Name | LE Role |
|------------|--------------|--------------|--------------------------|-----------------|---------------|---------|---------|
| 30         | ACCRUAL      | NORMAL       | <input type="checkbox"/> | Gain on Capital | 0000          |         | ALL     |

Id: 30

Add ...

Clear ...

- You can enter an account id, or click **Add** to display the Account report that allows you to load accounts based on user-defined criteria.
- You can select accounts based on account criteria using the Accounts Criteria panel. Note that when specific accounts are specified, account criteria will be ignored.

Accounts Criteria | Specific Accounts

Processing... BRANCHE1 ...


LegalEntity ...

Account Type STOCK ...

Currency ...

Properties ...

You can click **Properties** to specify search criteria on automatic account properties.

- Check the "Starting Balance" checkbox to show the starting balance.
  - Check the "Filter Zero Bal" checkbox to hide zero balances.
- » You can uncheck the menu item **View > Criteria** to hide the search criteria (this menu item operates as a checkbox).
- » Click  to print the report results.

## 5. EOY ACCOUNT CLOSING

This process automatically closes inventory accounts at the end of the year via a closing account. You can close the accounts by account / currency (Aggregated method), or by trade / account / currency (Trade method).

### 5.1 SETUP

1. Choose [Main Entry > Configuration > Accounting > Accounts](#) (refdata.AccountFrame) and create a closing account. A closing account can be created as an automatic account or not.

Accounts Definition - Authorization mode OFF

Account Utilities Help

Account Statements Attributes Interests Limits Browse

Account Name Loss2001 Id 0

Processing Org ALL Ccy ANY

Type CLOSING ...

External Name

Auto/Template Acc

Interface Rule Aggregate

» Select the type CLOSING and the interface rule Aggregate.

2. Apply the closing account to the accounts you want to close through the field Closing Account.

Account Statements Attributes Interests Limits Browse

Account Name LOSS

Processing Org ALL Ccy

Type NORMAL ...

External Name 00002

Description Loss

Legal Entity ...

Creation Date

Closing Account Loss2001 ...

Parent Account ...

### 5.2 AGGREGATED CLOSING METHOD

Set-up the scheduled tasks using [Main Entry > Configuration > Scheduled Tasks > Scheduled Tasks](#) (refdata.ScheduledTaskWindow).

You need to setup the BALANCE scheduled task and the CLOSING scheduled task.



**Scheduled Task Window [63400/release/calypso\_user]**

Report Tools Help

Definition Report

Type: CLOSING Description: I Process Org: BRANCHE2

Trade Filter: ALL Pricing Env: default Risk Config:

User: calypso\_user Filter Set: Next Id:

Measures:

Time Zone: Europe/Paris Exec Time: H M Val Date Offset: 0

From Days: To: Valuation Time: 12 H 00 M Date Rule:

Holidays: TGT Undo Time: H M Private:

Attributes

| Attribute     | Value    |
|---------------|----------|
| POSITION DATE | 12/31/01 |
| ACCOUNT ID    |          |
| FILENAME      |          |
| SIMULATION    |          |

☒ Execute ☐ Execute In Server ☐ Read Only Server  
☒ Publish ☐ Send Email ☐ Exec On Holidays

Comment:

| Id   | Type    | Description | Pricing Env | Trade Filter | Filter Set | User         | TimeZone     | Time | FromDays | ToDays | Holidays | Measures | Publish                             | E |
|------|---------|-------------|-------------|--------------|------------|--------------|--------------|------|----------|--------|----------|----------|-------------------------------------|---|
| 1101 | BALANCE |             | default     | ALL          |            | calypso_user | Europe/Paris | -1   | 0        | 0      | TGT      |          | <input checked="" type="checkbox"/> |   |
| 1102 | CLOSING |             | default     | ALL          |            | calypso_user | Europe/Paris | -1   | 0        | 0      | TGT      |          | <input checked="" type="checkbox"/> |   |

Run the scheduled task CLOSING.

To check the results, run the BALANCE scheduled task, and open [Main Entry > Reports > Accounting Reports > Account Balance](#) (reporting.ReportWindow\$Balance).

### 5.3 TRADE CLOSING METHOD

Set-up the scheduled tasks using [Main Entry > Configuration > Scheduled Tasks > Scheduled Tasks](#) (refdata.ScheduledTaskWindow).

You need to setup the BALANCE scheduled task and the CLOSING\_TRADE scheduled task.

**Scheduled Task Window [63400/release/calypso\_user]**

Report Tools Help

Definition Report

Type:  Description:  Process Org:

Trade Filter:  Pricing Env:  Risk Config:

User:  Filter Set:  Next Id:

Measures:

Time Zone:  Exec Time:  H  M Val Date Offset:

From Days:  To:  Valuation Time:  H  M Date Rule:

Holidays:  Undo Time:  H  M ☐ Private

Attributes

Attribute Value

☒ Execute ☐ Execute In Server ☐ Read Only Server

☐ Publish ☐ Send Email ☐ Exec On Holidays

Comment

| Id   | Type          | Description   | Pricing Env | Trade Filter | Filter Set | User         | TimeZone      | Time | FromDays | ToDays | Holidays | Measures |
|------|---------------|---------------|-------------|--------------|------------|--------------|---------------|------|----------|--------|----------|----------|
| 1101 | BALANCE       |               | default     | ALL          |            | calypso_user | Europe/Berlin | -1   | 0        | 0      |          |          |
| 1103 | CLOSING_TRADE | Closing Trade | default     |              |            |              | Europe/Berlin | -1   | 0        | 0      |          |          |

**Scheduled Task Window [71400/release/calypso\_user]**

Report Tools Help

Definition Report

Type:  Description:  Process Org:

Trade Filter:  Pricing Env:  Risk Config:

User:  Filter Set:  Next Id:

Measures:

Time Zone:  Exec Time:  H  M Val Date Offset:

From Days:  To:  Valuation Time:  H  M Date Rule:

Holidays:  Undo Time:  H  M ☐ Private ☐ DeActivated

☐ Skip Exec Cutoff:  Hour  Min

Attributes

Attribute Value

CLOSING DATE: 11/20/2004

FROM DATE: 09/28/2004

ACCOUNT ID:

TRADE ID: 1002

FILENAME:

SIMULATION: ▼

☐ Execute ☐ Execute In Server ☐ Read Only Server

☐ Publish ☐ Send Email ☐ Exec On Holidays

Comment

| Id   | Type          | Description | Pricing Env | Trade Filter | Filter Set | User         | TimeZone      | Time | FromDays | ToDays | Holidays | Measures | Pu |
|------|---------------|-------------|-------------|--------------|------------|--------------|---------------|------|----------|--------|----------|----------|----|
| 1101 | CLOSING_TRADE |             |             | ALL          |            | calypso_user | Europe/Berlin | -1   | 0        | 0      |          |          |    |
| 1102 | BALANCE       |             |             | ALL          |            | calypso_user | Europe/Berlin | -1   | 0        | 0      |          |          |    |

To launch this scheduled task for the first time, the "FROM\_DATE" should be set to the first booking date. The "CLOSING\_DATE" can be for example the end of the month. The "Simulation" should be set to "FALSE". If the Simulation is set to true then the results will only be simulated and not actual. You can also launch the scheduled task "CLOSING\_TRADE" for just one Trade by entering the trade number in the Trade ID field.

The same can be done on an account by account basis. This is possible by entering an Account number in the Account ID field.

At the trade level, you will notice in the [BO Window > Postings](#) that closing postings have been generated.

To check the results, run the BALANCE scheduled task, and open [Main Entry > Reports > Accounting Reports > Account Balance](#) (reporting.ReportWindow\$Balance).

## 6. SETUP FOR SHORT AND LONG POSITIONS

The purpose of this function is to cover, from an accounting point of view, the registration of short and long traded positions.

The process described below, can be applied to cover the Trading activity on a dirty-price booking basis.

### Contents

- [Accounting Events Setup](#)
- [Accounts Setup](#)
- [Long and Short Reclassification](#)

### 6.1 ACCOUNTING EVENTS SETUP

In order to define the appropriate rule for the long / short positions booking process, suitable events should be first set-up.

**Note:** Trigger Events specified below are given as an example and depend on the events defined and used by the workflow.

#### 6.1.1 POSITION EVENTS

The first step is to check whether the events exist in the Database. To do so, go to [Main Entry > Configuration > Accounting > Accounting Events](#) (refdata.AccountingEventFrame). If the events described below do not exist, you can double-click the Accounting Event Type label to add them.

| Event Types         | Event Class | Trigger Events  | Pricing Measures | Description   |
|---------------------|-------------|---|------------------|---|
| COT                 | OFF         | Verified_Trade, Canceled_Trade, Matured_Trade   | None             | Off Balance Sheet (Contingent on Trade Date)                  |
| COT_REV             | OFF         | Verified_Trade, Canceled_Trade, Matured_Trade   | None             | Off Balance Sheet Reversal (Contingent Reversal)              |
| CST                 | Balance     | Verified_Payment, Verified_Receipt, Canceled_Payment, Canceled_Receipt, Canceled_Receipt, Split_Payment, Split_Receipt etc. | None             | Cash Settlement   |
| NOM_CLEAN_LONG      | Balance     | Verified_Trade, Canceled_Trade, Liquidated_Position, Unliquidated_Position, Terminated_Trade                                | None             | Asset Long-Nominal Clean (Net Nominal without Fees)           |
| NOM_CLEAN_LONG_REV  | Balance     | Canceled_Trade, Liquidated_Position, Unliquidated_Position, Terminated_Trade  | None             | Asset Long-Nominal Clean Reversal (Net Nominal without Fees)  |
| NOM_CLEAN_SHORT     | Balance     | Verified_Trade, Canceled_Trade, Liquidated_Position, Unliquidated_Position, Terminated_Trade                                | None             | Asset Short-Nominal Clean (Net Nominal without Fees)          |
| NOM_CLEAN_SHORT_REV | Balance     | Canceled_Trade, Liquidated_Position, Unliquidated_Position, Terminated_Trade  | None             | Asset Short-Nominal Clean Reversal (Net Nominal without Fees) |

NOM\_CLEAN\_LONG event:

|  |                         |                            |
|--|-------------------------|----------------------------|
| <b>Accounting Event Type</b>                         | NOM_CLEAN_LONG          | Help ...                   |
| <b>Product</b>                                       | Equity                  |                            |
| <b>Description</b>                                   | Equity Asset Long       |                            |
| <b>Retro-Activity</b>                                | FULL                    | <b>Event Class</b> BALANCE |
| <b>Booking Type</b>                                  | N/A                     | <b>Event Property</b> NONE |
| <input type="checkbox"/> Fee Related Event           |                         |                            |
| <b>Trigger Events</b>                                | <b>Pricing Measures</b> |                            |
| CANCELED_TRADE<br>TERMINATED_TRADE<br>VERIFIED_TRADE |                         |                            |

NOM\_CLEAN\_LONG\_REV event:

|  |                            |                            |
|--|----------------------------|----------------------------|
| <b>Accounting Event Type</b>                         | NOM_CLEAN_LONG_REV         | Help ...                   |
| <b>Product</b>                                       | Equity                     |                            |
| <b>Description</b>                                   | Equity Asset Long Reversal |                            |
| <b>Retro-Activity</b>                                | FULL                       | <b>Event Class</b> BALANCE |
| <b>Booking Type</b>                                  | N/A                        | <b>Event Property</b> NONE |
| <input type="checkbox"/> Fee Related Event           |                            |                            |
| <b>Trigger Events</b>                                | <b>Pricing Measures</b>    |                            |
| CANCELED_TRADE<br>TERMINATED_TRADE<br>VERIFIED_TRADE |                            |                            |

"NOM\_CLEAN\_SHORT" and "NOM\_CLEAN\_SHORT\_REV" events are defined in the same way as the events for the long position.

### 6.1.2 VALUATION EVENTS

Same process as for Position events.

Note that the events MTM\_FULL\_OFFLONG and MTM\_FULL\_OFFSHORT are used for contingent valuation if necessary. Moreover for valuation events, "Event Property" should be set-up with a value "BOOK\_ZERO".

| Event Types       | Event Class | Trigger Events   | Pricing Measures | Description               |
|-------------------|-------------|--|------------------|---------------------------|
| MTM_FULL_OFFLONG  | INVENTORY   | Verified_Trade, Canceled_Trade, Matured_Trade, Trade_Valuation | NPV              | Contingent Long Position  |
| MTM_FULL_OFFSHORT | INVENTORY   | Verified_Trade, Canceled_Trade, Matured_Trade, Trade_Valuation | NPV              | Contingent Short Position |

| Event Types      | Event Class | Trigger Events   | Pricing Measures | Description   |
|------------------|-------------|--|------------------|---|
| MTM_FULL_ONLONG  | INVENTORY   | Verified_Trade, Canceled_Trade, Matured_Trade, Trade_Valuation | NPV              | On balance sheet Long Position Dirty MTM Valuation  |
| MTM_FULL_ONSHORT | INVENTORY   | Verified_Trade, Canceled_Trade, Matured_Trade, Trade_Valuation | NPV              | On balance sheet Short Position Dirty MTM Valuation |
| REALIZED_PL      | REALIZED    | Canceled_Trade, Matured_Trade, Trade_Valuation                 | None             | Realized P & L                                      |

MTM\_FULL\_OFFLONG event:

**Accounting Event Type** MTM\_FULL\_OFFLONG Help ...

**Product** Equity

**Description** OBS Dirty MTM Long Pos

**Retro-Activity** ClosingPeriod ... **Event Class** INVENTORY ...

**Booking Type** Reversal ... **Event Property** BOOK\_ZERO ...

☐ Fee Related Event

**Trigger Events** ...

CANCELED\_TRADE  
TERMINATED\_TRADE  
VERIFIED\_TRADE

**Pricing Measures** ...

NPV

MTM\_FULL\_ONLONG event:

**Accounting Event Type** MTM\_FULL\_ONLONG Help ...

**Product** Equity

**Description** OBS Dirty MTM Long Pos

**Retro-Activity** ClosingPeriod ... **Event Class** INVENTORY ...

**Booking Type** Reversal ... **Event Property** BOOK\_ZERO ...

☐ Fee Related Event

**Trigger Events** ...

CANCELED\_TRADE  
TERMINATED\_TRADE  
VERIFIED\_TRADE

**Pricing Measures** ...

NPV

“MTM\_FULL\_OFFSHORT” and “MTM\_FULL\_ONSHORT” events are defined the same way as the events for the long position.

REALIZED\_PL event:

|  |                      |          |
|--|----------------------|----------|
| <b>Accounting Event Type</b> REALIZED_PL   |                      | Help ... |
| Product ALL                                |                      |          |
| Description Capital Gain/Loss              |                      |          |
| Retro-Activity FULL                        | Event Class REALIZED | ...      |
| Booking Type N/A                           | Event Property NONE  | ...      |
| <input type="checkbox"/> Fee Related Event |                      |          |
| Trigger Events                             | Pricing Measures     |          |
| LIQUIDATED_POSITION                        |                      |          |
| UNLIQUIDATED_POSITION                      |                      |          |

## 6.2 ACCOUNTS SETUP

Once the events have been defined, related account numbers should be created. Depending on the process chosen by the user it is possible to process the valuation in specific Unrealized P & L accounts, or directly in the asset (Long or Short) accounts.

To define the accounts, choose [Main Entry > Configuration > Accounting > Accounts](#) (refdata.AccountFrame).

Example of an Off Balance Sheet (contingent) account definition:

|                |                            |            |            |  |        |        |
|----------------|----------------------------|------------|------------|--|--------|--------|
| Account        |                            | Statements | Attributes | Interests                                  | Limits | Browse |
| Account Name   | 6. OBS Debits              |            |            |  | Id     | 20638  |
| Processing Org | ALL                        | Ccy        | ANY        |  |        |        |
| Type           | NORMAL                     |            |            | <input type="checkbox"/> Auto/Template Acc |        |        |
| External Name  |                            |            |            | Interface Rule                             | Detail |        |
| Description    | Off Balance Sheet - Debits |            |            |  |        |        |

An account number can be defined for one specific currency, or as in this case for all currencies (ANY selected in the Ccy field).

Example of an Asset Long position account definition:

|                |                                  |            |            |  |        |        |
|----------------|----------------------------------|------------|------------|--|--------|--------|
| Account        |                                  | Statements | Attributes | Interests                                  | Limits | Browse |
| Account Name   | 183. Investments - Equities Long |            |            |  | Id     | 16917  |
| Processing Org | ALL                              | Ccy        | ANY        |  |        |        |
| Type           | NORMAL                           |            |            | <input type="checkbox"/> Auto/Template Acc |        |        |
| External Name  |                                  |            |            | Interface Rule                             | Detail |        |
| Description    | Investments - Equities Long      |            |            |  |        |        |

Example of an Asset Short Position account definition:



The screenshot shows the 'Account' tab of a form. The 'Account Name' field contains '232. Investments - Equities Short' and the 'Id' field contains '12428'. The 'Processing Org' dropdown is set to 'ALL' and the 'Ccy' dropdown is set to 'ANY'. The 'Type' dropdown is set to 'NORMAL'. The 'Auto/Template Acc' checkbox is unchecked. The 'External Name' field is empty. The 'Interface Rule' dropdown is set to 'Detail'. The 'Description' field contains 'Investments - Equities Short'.

Example of a cash (nostro) account definition:

The screenshot shows the 'Account' tab of a form. The 'Account Name' field contains '112. Nostro' and the 'Id' field contains '12111'. The 'Processing Org' dropdown is set to 'AUTO' and the 'Ccy' dropdown is set to 'AUTO'. The 'Type' dropdown is set to 'SETTLE'. The 'Auto/Template Acc' checkbox is checked. The 'External Name' field is empty. The 'Interface Rule' dropdown is set to 'Detail'. The 'Description' field contains 'Nostro Account'.

Nostro accounts type must be defined as "Settle" account type.

Example of an Unrealized account definition:

The screenshot shows the 'Account' tab of a form. The 'Account Name' field contains '45. Unrealized Gains/Losses' and the 'Id' field contains '12558'. The 'Processing Org' dropdown is set to 'ALL' and the 'Ccy' dropdown is set to 'ANY'. The 'Type' dropdown is set to 'NORMAL'. The 'Auto/Template Acc' checkbox is unchecked. The 'External Name' field is empty. The 'Interface Rule' dropdown is set to 'Detail'. The 'Description' field contains 'Unrealized Gains/Losses'.

### 6.2.1 RULES SETUP

Once the events and account have been defined, the accounting rule, which can be defined per product type or not and per Processing Organization, can be set-up. To define the rule, go to [Main Entry > Configuration > Accounting > Accounting Rules](#) (refdata.AccountingRuleFrame).

## Definition

The screenshot shows the 'Accounting Rule' window with the 'Definition' tab selected. The window has a title bar with standard Windows controls. Below the title bar are three tabs: 'Definition', 'Configuration', and 'Book Link'. The 'Definition' tab contains the following fields and controls:

- Rule Name:** A text field containing 'CALHKSHARES'.
- Acc Rule Type:** A dropdown menu currently showing 'NORMAL'. A mouse cursor is hovering over it, and a list of options is visible: 'ACC\_ENR', 'CONVERSION', 'NORMAL' (highlighted), 'STOCK', and 'STOCK\_FV'.
- Processing Org:** A text field containing 'CALHK'.
- Currency Rule:** A dropdown menu showing 'TRADE'.
- Calendar:** A text field showing 'EUR' with a small '...' button to its right.
- Reversal Rule:** A dropdown menu showing 'NID'.
- Last Run:** A text field showing '10/11/2'.
- Pricing Env.:** A dropdown menu showing 'default'.
- Check Valuation PricingEnv:** A checkbox that is currently unchecked.
- Closing Rule:** A section with a blue header containing:
  - ☒ **Daily Closing**
  - ☐ **Accrual First Rule**
  - Adjust. Days:** A text field containing '0'.

## Configuration

When the general definition is saved, you can build the rule in the Configuration panel. At this level, accounts to be used and method of booking (Debit/Credit) are specified per accounting events.

The screenshot shows the 'Accounting Rule' window with the 'Definition' tab selected. The tree view on the left lists several accounting events, including 'CREDIT: UNREALIZED P&L(NORMAL)' which is highlighted. The 'Configuration' tab is also visible, showing the 'Accounting Event' dropdown set to 'MTM\_FULL\_ONSHORT', the 'Sign' dropdown set to '+', and the 'Debit' and 'Credit' fields set to 'NORMAL'. The 'Name' field is set to 'CALHKSHARES'. The 'Show Table' button is visible, and the 'Expand All' checkbox is checked. The 'Load', 'Clear', 'Save', 'Save As', and 'Close' buttons are also present.

The impact on the accounts is specified event by event according to the amount. E.g. in that case, for a positive valuation amount, the rule mentions a Debit on the Asset Short Position and a Credit on the Unrealized P & L account. The button **Show Table** allows the user to have a global view on the rule (next screen shot).

| Accounting Rule Config (CALHKSHARES) |                |                     |      |                    |                    |                     |                     |
|--------------------------------------|----------------|---------------------|------|--------------------|--------------------|---------------------|---------------------|
| Id                                   | AccountingRule | EventType           | Sign | Debit Account Type | Debit Account Name | Credit Account Type | Credit Account Name |
| 5701                                 | CALHKSHARES    | COT                 | -1   | NORMAL             | OBS                | NORMAL              | OBS OFFSET          |
| 5702                                 | CALHKSHARES    | COT                 | 1    | NORMAL             | OBS OFFSET         | NORMAL              | OBS                 |
| 5703                                 | CALHKSHARES    | COT_REV             | -1   | NORMAL             | OBS OFFSET         | NORMAL              | OBS                 |
| 5704                                 | CALHKSHARES    | COT_REV             | 1    | NORMAL             | OBS                | NORMAL              | OBS OFFSET          |
| 5705                                 | CALHKSHARES    | CST                 | 1    | SETTLE             |                    |                     |                     |
| 5706                                 | CALHKSHARES    | CST                 | -1   |                    |                    | SETTLE              |                     |
| 5707                                 | CALHKSHARES    | NOM_CLEAN_LONG      | -1   | NORMAL             | LONG EQUITY ASSET  |                     |                     |
| 5708                                 | CALHKSHARES    | NOM_CLEAN_LONG      | 1    |                    |                    | NORMAL              | LONG EQUITY ASSET   |
| 5709                                 | CALHKSHARES    | NOM_CLEAN_LONG_REV  | 1    |                    |                    | NORMAL              | LONG EQUITY ASSET   |
| 5710                                 | CALHKSHARES    | NOM_CLEAN_LONG_REV  | -1   | NORMAL             | LONG EQUITY ASSET  |                     |                     |
| 5711                                 | CALHKSHARES    | NOM_CLEAN_SHORT     | 1    |                    |                    | NORMAL              | SHORT EQUITY ASSET  |
| 5712                                 | CALHKSHARES    | NOM_CLEAN_SHORT     | -1   | NORMAL             | SHORT EQUITY ASSET |                     |                     |
| 5713                                 | CALHKSHARES    | NOM_CLEAN_SHORT_REV | -1   | NORMAL             | SHORT EQUITY ASSET |                     |                     |
| 5714                                 | CALHKSHARES    | NOM_CLEAN_SHORT_REV | 1    |                    |                    | NORMAL              | SHORT EQUITY ASSET  |
| 5715                                 | CALHKSHARES    | REALIZED_PL         | 1    |                    |                    | NORMAL              | REALIZED P&L        |
| 5716                                 | CALHKSHARES    | REALIZED_PL         | -1   | NORMAL             | REALIZED P&L       |                     |                     |
| 5717                                 | CALHKSHARES    | MTM_FULL_ONLONG     | 1    | NORMAL             | LONG EQUITY ASSET  | NORMAL              | UNREALIZED P&L      |
| 5718                                 | CALHKSHARES    | MTM_FULL_ONLONG     | -1   | NORMAL             | UNREALIZED P&L     | NORMAL              | LONG EQUITY ASSET   |
| 5719                                 | CALHKSHARES    | MTM_FULL_ONSHORT    | -1   | NORMAL             | UNREALIZED P&L     | NORMAL              | SHORT EQUITY ASSET  |
| 5720                                 | CALHKSHARES    | MTM_FULL_ONSHORT    | 1    | NORMAL             | SHORT EQUITY ASSET | NORMAL              | UNREALIZED P&L      |
| 5721                                 | CALHKSHARES    | MTM_FULL_OFFSHORT   | 1    | NORMAL             | OBS                | NORMAL              | OBS OFFSET          |
| 5722                                 | CALHKSHARES    | MTM_FULL_OFFSHORT   | -1   | NORMAL             | OBS OFFSET         | NORMAL              | OBS                 |
| 5723                                 | CALHKSHARES    | MTM_FULL_OFFLONG    | -1   | NORMAL             | OBS OFFSET         | NORMAL              | OBS                 |
| 5724                                 | CALHKSHARES    | MTM_FULL_OFFLONG    | 1    | NORMAL             | OBS                | NORMAL              | OBS OFFSET          |

HTML ... Excel ... Print ... Refresh

Close

### Book Link

When all the cases are defined, and the rule is saved, it has to be linked with the books to which it will be applied. Go to the Book Link panel to link your rule to the correct Accounting Book and Product.

## 6.3 LONG AND SHORT RECLASSIFICATION

For security trading activity, it is possible to publish events of position reclassification. The main goal is to allow the banks to re-classify their assets or liabilities properly on a regular and user-defined basis.

### 6.3.1 EVENTS SETUP

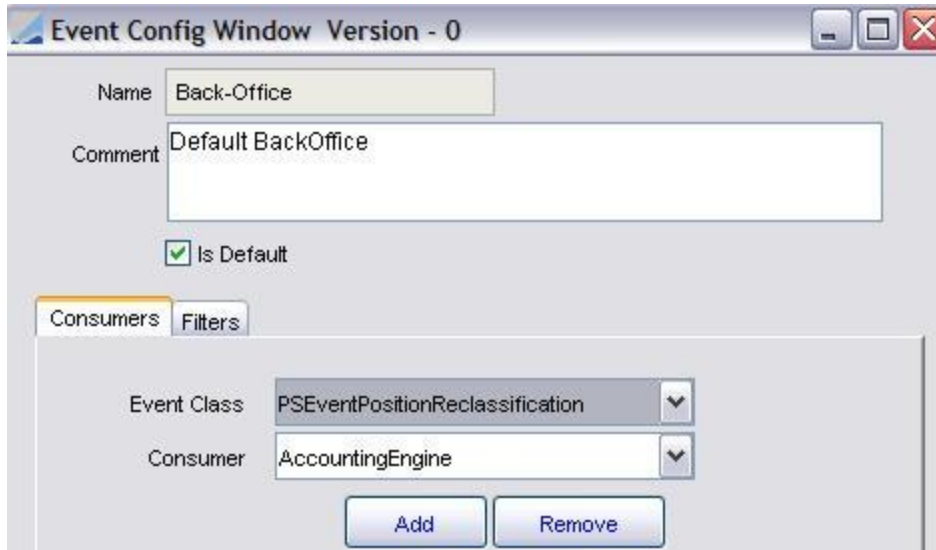
Do the following for setting up the event.

Add PSEventPositionReclassification to the eventClass domain.

Add POSITION\_RECLASSIFICATION to the eventType domain.

Then you need to define persistent subscription to the new event by the appropriate engines. In this example, we define the Accounting engine with a persistent subscription to this event in order to be able to generate reclassification postings.

To define persistent subscription for the engine, go to [Main Entry > Configuration > System > Event Configuration](#) (util.EventConfigWindow).



Event Config Window Version - 0

Name: Back-Office

Comment: Default BackOffice

☒ Is Default

Consumers Filters

Event Class: PSEventPositionReclassification

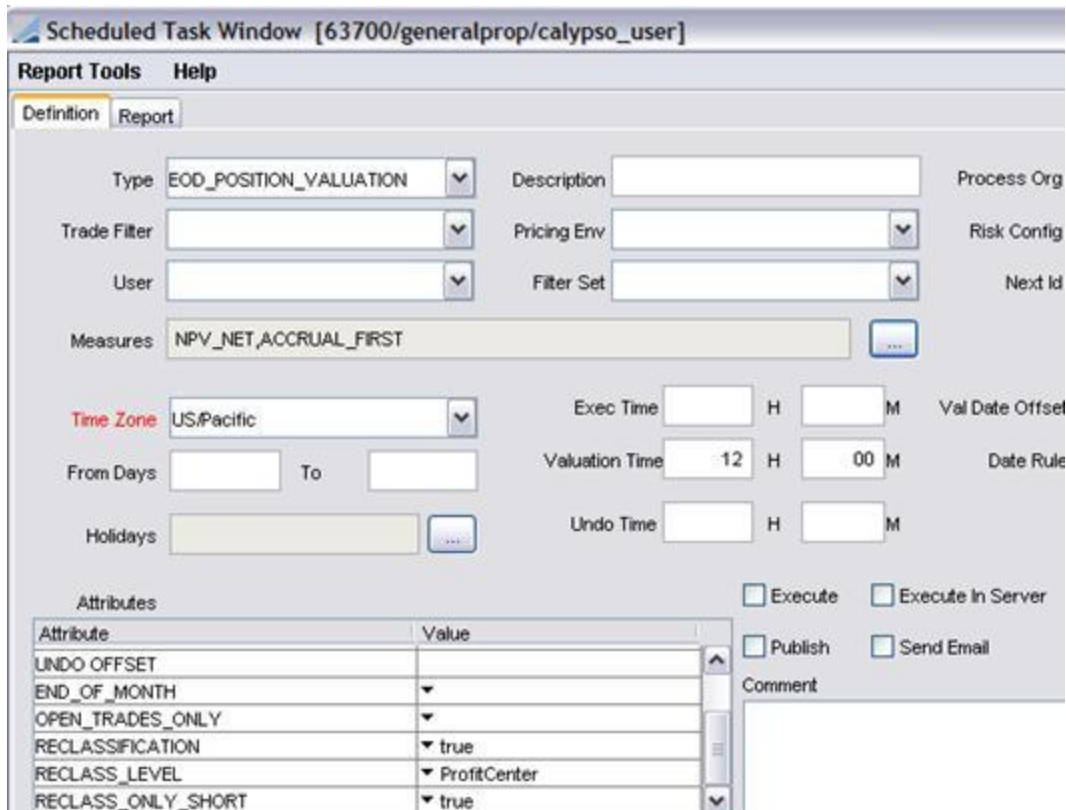
Consumer: AccountingEngine

Add Remove

## 6.4 SCHEDULED TASK POSITION\_RECLASSIFICATION

Each time you want to publish the new event POSITION\_RECLASSIFICATION, you will run the scheduled task EOD\_POSITION\_VALUATION.

Choose [Main Entry > Configuration > Scheduled Tasks > Scheduled Tasks](#) (refdata.ScheduledTaskWindow) to specify the EOD\_POSITION\_VALUATION scheduled task.



Scheduled Task Window [63700/generalprop/calypso\_user]

Report Tools Help

Definition Report

Type: EOD\_POSITION\_VALUATION Description: Process Org

Trade Filter: Pricing Env: Risk Config

User: Filter Set: Next Id

Measures: NPV\_NET,ACCRUAL\_FIRST

Time Zone: US/Pacific Exec Time: H M Val Date Offset

From Days: To: Valuation Time: 12 H 00 M Date Rule

Holidays: Undo Time: H M

Attributes

| Attribute          | Value        |
|--------------------|--------------|
| UNDO OFFSET        |              |
| END_OF_MONTH       |              |
| OPEN_TRADES_ONLY   |              |
| RECLASSIFICATION   | true         |
| RECLASS_LEVEL      | ProfitCenter |
| RECLASS_ONLY_SHORT | true         |

☐ Execute ☐ Execute In Server

☐ Publish ☐ Send Email

Comment

- » Select the desired MTM measures and accrual measures from the Measures field.
- » Specify the attributes as applicable. The attributes related to reclassification are described below.

| Attributes                | Description   |
|---------------------------|---|
| <b>RECLASSIFICATION</b>   | Set to true to run in reclassification mode: the scheduled task will publish reclassification events as well as standard position valuation events.   |
| <b>RECLASS_LEVEL</b>      | Choose amongst all the book attributes, the level of aggregation you need.<br>If you choose Desk, the system will calculate the position (and therefore will deduce whether it is a long or short position) based on the Desk and CUSIP levels. |
| <b>RECLASS_ONLY_SHORT</b> | Set to true to publish reclassification events only in case of a short position.<br>Set to false to publish for both long and short positions.  |

### 6.4.1 ACCOUNTING SETUP

You have the ability to generate postings or CREs in order to book those events of reclassification. This is not mandatory.

To do so, add the following accounting event types to the accEventType domain.

For generating events only when the positions are short:

- **RECLASS\_ACCRUAL\_SHORT** — allows the reclassification of interest bought/sold + all the accruals generated since inception in case of short position.
  - » You can also use **RECLASS\_ACCRUAL\_SHORT\_ON** for a settled short position, and **RECLASS\_ACCRUAL\_SHORT\_OFF** for a short position that has not settled.
- **RECLASS\_INITPD\_SHORT** — To book the initial amount of accrued premium / discount on a short position.
  - » You can also use **RECLASS\_INITPD\_SHORT\_OFF** for a settled short position, and **RECLASS\_INITPD\_SHORT\_OFF** for a short position that has not settled.
- **RECLASS\_POSITION\_SHORT** — allows the reclassifications of all the defined pricer measures in case of short position.
  - » You can also use **RECLASS\_POSITION\_SHORT\_ON** for a settled short position, and **RECLASS\_POSITION\_SHORT\_OFF** for a short position that has not settled.
- **RECLASS\_NOMINAL\_SHORT** — allows the reclassifications of the nominal amount of the position in case of short position.
  - » You can also use **RECLASS\_NOMINAL\_SHORT\_ON** for a settled short position, and **RECLASS\_NOMINAL\_SHORT\_OFF** for a short position that has not settled.
- **RECLASS\_PREMDISC\_SHORT** — allows the reclassifications of the premium-discount amounts in case of short position.
  - » You can also use **RECLASS\_PREMDISC\_SHORT\_ON** for a settled short position, and **RECLASS\_PREMDISC\_SHORT\_OFF** for a short position that has not settled.

For generating events for long positions:

- **RECLASS\_ACCRUAL\_LONG** — allows the reclassification of interest bought/sold + all the accruals generated since inception in case of long position
  - » You can also use **RECLASS\_ACCRUAL\_LONG\_ON** for a settled long position, and **RECLASS\_ACCRUAL\_LONG\_OFF** for a long position that has not settled.
- **RECLASS\_INITPD\_LONG** — To book the initial amount of accrued premium / discount on a long position.
  - » You can also use **RECLASS\_INITPD\_LONG\_OFF** for a settled long position, and **RECLASS\_INITPD\_LONG\_OFF** for a long position that has not settled.
- **RECLASS\_POSITION\_LONG** — allows the reclassifications of all the defined pricer measures in case of long position.
  - » You can also use **RECLASS\_POSITION\_LONG\_ON** for a settled long position, and **RECLASS\_POSITION\_LONG\_OFF** for a long position that has not settled.
- **RECLASS\_NOMINAL\_LONG** — allows the reclassifications of the nominal amount of the position in case of long position.
  - » You can also use **RECLASS\_NOMINAL\_LONG\_ON** for a settled long position, and **RECLASS\_NOMINAL\_LONG\_OFF** for a long position that has not settled.

- RECLASS\_PREMDISC\_LONG — allows the reclassifications of the premium-discount amounts in case of long position.
  - » Uses linear or constant yield amortization depending on the Pricing Measure selected in the scheduled task EOD\_POSITION\_VALUATION.
  - » You can also use RECLASS\_PREMDISC\_LONG\_ON for a settled long position, and RECLASS\_PREMDISC\_LONG\_OFF for a long position that has not settled.

Then, define the events using [Main Entry > Configuration > Accounting > Accounting Events](#) (refdata.AccountingEventFrame).

All of these events have the following characteristics:

- Product — All
- Triggering Event — POSITION\_RECLASSIFICATION
- Retroactivity — ClosingPeriod
- Booking Type — Reversal
- Event Class — INVENTORY
- Event Property — NONE

Example:

The screenshot shows the 'Accounting Event Config' window. The 'Accounting Event Type' is set to 'RECLASS\_ACCRUAL\_LONG' and the 'Product' is 'ALL'. The 'Description' is 'Reclassification Interest B/S + Accruals for Long Position'. The 'Retro-Activity' is 'ClosingPeriod', 'Event Class' is 'INVENTORY', 'Booking Type' is 'Reversal', and 'Event Property' is 'NONE'. The 'Trigger Events' list contains 'POSITION\_RECLASSIFICATION'. The 'Pricing Measures' list is empty. On the right, a table lists various event types and their descriptions.

| Id   | Event Type             | Product Type | Description               |
|------|------------------------|--------------|---------------------------|
| 5401 | INDEMNITY              | ALL          | Repo Coupon Indemnity     |
| 5410 | ACCRUAL                | Bond         | Accrual First - Purchaser |
| 5501 | NOMINAL_LONG           | ALL          | Nominal for Buy           |
| 5502 | NOMINAL_LONG_REV       | ALL          | Reversal of Nominal for   |
| 5605 | REALIZED_BV_PL         | ALL          | Gain/Loss with using E    |
| 5608 | PREM_DISC_REV          | ALL          | Reversal of the Prem D    |
| 6006 | ACCRUAL_LONG           | ALL          | Long Position Accrued     |
| 6107 | ACCRUAL_BS_LONG        | ALL          | Purchased/Sold Interest   |
| 6108 | ACCRUAL_BS_SHORT       | ALL          | Purchased/Sold Interest   |
| 6109 | ACCRUAL_BS_LONG_REV    | ALL          | Purchased/Sold Interest   |
| 6110 | ACCRUAL_BS_SHORT_REV   | ALL          | Purchased/Sold Interest   |
| 6111 | ACCRUAL_SHORT          | ALL          | Short Position Accrued    |
| 6112 | MTM_NET_ONLONG         | ALL          | Clean MTM (Clean Val      |
| 6113 | MTM_NET_ONSHORT        | ALL          | Clean MTM (Clean Val      |
| 6160 | NOMINAL_SHORT          | ALL          | Nominal for Short Posi    |
| 6201 | COUPON_CLIP            | ALL          | Coupon Amount on Co       |
| 6302 | FEE-VAT                | ALL          | FEE VAT                   |
| 6501 | RECLASS_ACCRUAL_LONG   | ALL          | Reclassification Interest |
| 6502 | RECLASS_ACCRUAL_SHORT  | ALL          | Reclassification Accrual  |
| 6503 | RECLASS_NOMINAL_LONG   | ALL          | Reclassification Nominal  |
| 6504 | RECLASS_NOMINAL_SHORT  | ALL          | Reclassification Nominal  |
| 6505 | RECLASS_POSITION_LONG  | ALL          | Reclassification Price    |
| 6506 | RECLASS_POSITION_SHORT | ALL          | Reclassification Price    |
| 6507 | RECLASS_PREMDISC_LONG  | ALL          | Reclassification Premi    |
| 6508 | RECLASS_PREMDISC_SHORT | ALL          | Reclassification Premi    |

Then define the accounting rules for those events using [Main Entry > Configuration > Accounting > Accounting Rules](#) (refdata.AccountingRuleFrame).

For example:



**Accounting Rule**

Definition Configuration Book Link

Rule Name: RECLASSIFICATION Acc Rule Type: NORMAL

Processing Org: ALL

Currency Rule: TRADE Last Run: 04/07/2004

Calendar: Pricing Env.: default

Reversal Rule: ND ☐ Check Valuation PricingEnv

**Closing Rule**

☒ Daily Closing

☒ Accrual First Rule

Adjust. Days: 0

Load New Delete Save Show Pending Authorizations

**Accounting Rule**

Definition Configuration Book Link

RECLASSIFICATION

- Event Type: RECLASS\_ACCRUAL\_SHORT
- Event Type: RECLASS\_NOMINAL\_SHORT
- Event Type: RECLASS\_POSITION\_SHORT
- Event Type: RECLASS\_PREMDISC\_SHORT

Accounting Event: RECLASS\_PREMDISC\_SHORT

Sign: -

Debit ☒ No Debit

Credit: NORMAL ☐ No Credit

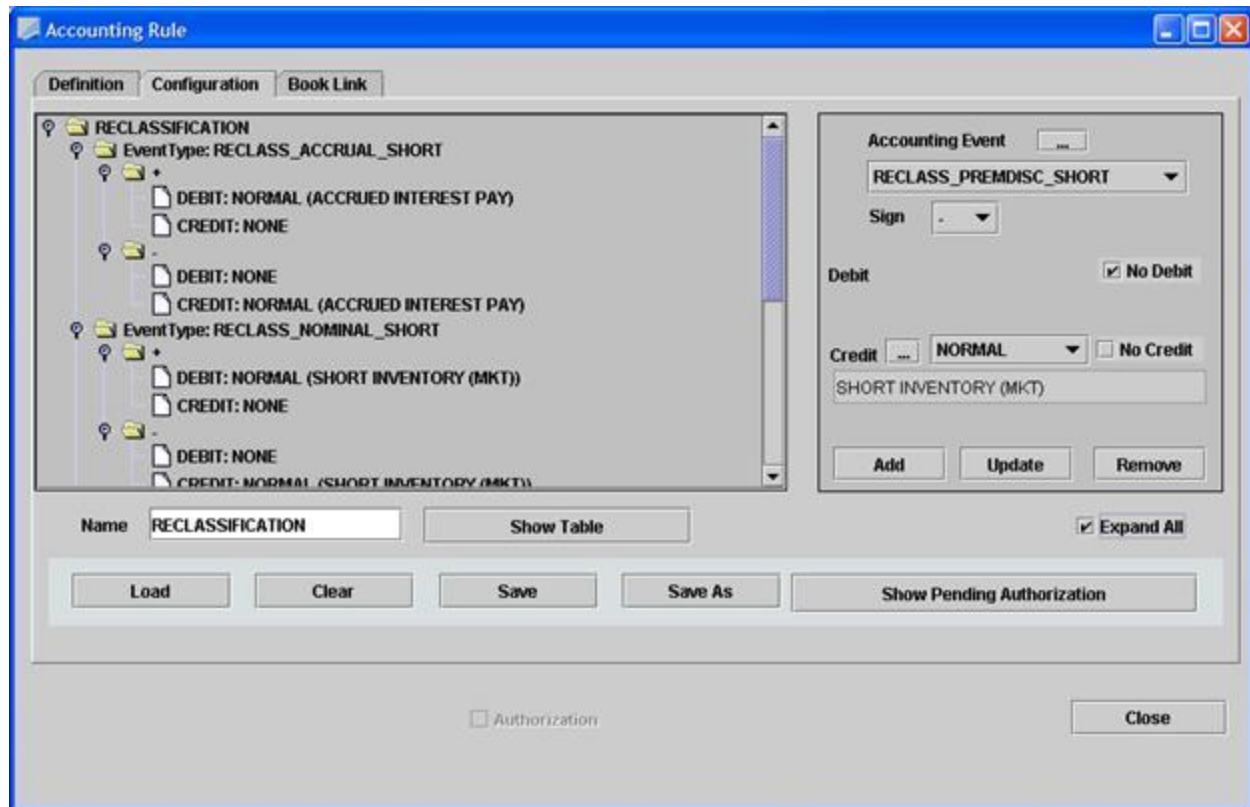
SHORT INVENTORY (MKT)

Add Update Remove

Name: RECLASSIFICATION Show Table ☐ Expand All

Load Clear Save Save As Show Pending Authorization

☐ Authorization Close



### 6.4.2 RECLASSIFICATION PROCESS

#### Example

We have 2 securities: CUSIP ABC and CUSIP DEF.

We have 2 books: SGNY-TRD and SGNY-TRD2 that both belong to the Desk Trading.



Book Window - Version -3 [63500/release/calypso\_user]

Book Id: 6518

Name: SGNY-TRG2

Activity: TRADING

Accounting Book: SGNY-TRD

Legal Entity: SGNY

Location: Europe/Paris

End Of Day: 18 Hour 30 Min

Base Ccy: USD

Holidays: NYC

Attributes: ...

| Name         | Value   |
|--------------|---------|
| Desk         | Trading |
| ProfitCenter |         |

| Id   | Name      | Legal Entity | Location     | Activity          | Ac |
|------|-----------|--------------|--------------|-------------------|----|
| 1136 | SGNY-HTM  | SGNY         | Europe/Paris | HTM               | SG |
| 1137 | SGNY-TRG  | SGNY         | Europe/Paris | TRADING           | SG |
| 1139 | SGNY-FIN  | SGNY         | Europe/Paris | FINANCING         | SG |
| 1914 | RUBICON   | RUBICON      | Europe/Paris |                   | TR |
| 2707 | TEST-DAP  | TEST-DAP-PO  | Europe/Paris | TEST-DAP          | IN |
| 2921 | BERNIE    | SGNY         | Europe/Paris | TRADING           | RE |
| 5929 | SGNY-HTM2 | SGNY         | Europe/Paris | HTM               | SG |
| 6518 | SGNY-TRG2 | SGNY         | Europe/Paris | TRADING           | SG |
| 6601 | Trading   | SGNY         | Europe/Paris | Desk Trading SGNY | SG |

Load New Delete Save SaveAsNew Close

Show Pendin...

We currently have the following positions at book/CUSIP level:

Position Keeper Window

Tools Market Data

Val Date: 04/07/2004 4:32:05 PM Product: Hierarchy: SGNV

Trade Filter: ALL Pricing Env: default Aggregation: BookName

LegalEntity.SGNV

- BookName.SGNV-FIN
- BookName.SGNV-HTM
- Desk.Trading

| Aggregation | CUSIP       | Product Id | Description                             | Nominal       | Currency | Amount          | Quantity   |
|-------------|-------------|------------|---|---------------|----------|-----------------|------------|
| SGNV-TRG    |             | 11401      | BondAMORTIZING/5Y/04/03/2007/8%         | 700,000.00    | USD      | -693,000.00     | 1,000,000  |
| SGNV-TRG    |             | 11002      | BondCOUPON-CLIP-2-/10Y/03/20/2013/4%    | 1,000,000.00  | USD      | -990,000.00     | 1,000,000  |
| SGNV-TRG    |             | 3902       | FXEUR/USD                               | 500.00        | USD      | -1,000.00       | 500        |
| SGNV-TRG    | 36225CkM7   | 4503       | BondFN ARM 000251/45Y/04/01/2028/6.049% | 2,400,000.00  | USD      | -458,119,472.72 | 3,000,000  |
| SGNV-TRG    | 912810FF04  | 12         | BondUST/30Y/11/15/2028/5.25%            | -2,000,000.00 | USD      | 2,060,000.00    | -2,000,000 |
| SGNV-TRG    | 91282274V18 | 11         | BondUST/10Y/11/15/2008/4.75%            | -500,000.00   | USD      | 515,000.00      | -500,000   |
| SGNV-TRG2   | ABC         | 11801      | BondCUSIP-ABC/10Y/01/02/2013/8%         | -2,000,000.00 | USD      | 1,960,000.00    | -2,000,000 |
| SGNV-TRG    | ABC         | 11801      | BondCUSIP-ABC/10Y/01/02/2013/8%         | 1,000,000.00  | USD      | -990,000.00     | 1,000,000  |

Update Freq: 100 seconds ☐ Quote ☐ Market data

☒ Real Time ☒ Connected Load Clear Print Close

And the following positions at Desk/CUSIP level:

Position Keeper Window

Tools Market Data

Val Date: 04/07/2004 4:33:14 PM Product: Hierarchy: SGNV

Trade Filter: ALL Pricing Env: default Aggregation: Desk

LegalEntity.SGNV

- BookName.SGNV-FIN
- BookName.SGNV-HTM
- Desk.Trading

| Aggregation | CUSIP       | Product Id | Description                             | Nominal       | Currency | Amount          | Quantity   |
|-------------|-------------|------------|---|---------------|----------|-----------------|------------|
| Trading     | ABC         | 11801      | BondCUSIP-ABC/10Y/01/02/2013/8%         | -1,000,000.00 | USD      | 970,000.00      | -1,000,000 |
| Trading     | 91282274V18 | 11         | BondUST/10Y/11/15/2008/4.75%            | -500,000.00   | USD      | 515,000.00      | -500,000   |
| Trading     | 912810FF04  | 12         | BondUST/30Y/11/15/2028/5.25%            | -2,000,000.00 | USD      | 2,060,000.00    | -2,000,000 |
| Trading     | 36225CkM7   | 4503       | BondFN ARM 000251/45Y/04/01/2028/6.049% | 2,400,000.00  | USD      | -458,119,472.72 | 3,000,000  |
| Trading     |             | 11002      | BondCOUPON-CLIP-2-/10Y/03/20/2013/4%    | 1,000,000.00  | USD      | -990,000.00     | 1,000,000  |
| Trading     |             | 3902       | FXEUR/USD                               | 500.00        | USD      | -1,000.00       | 500        |
| Trading     |             | 11401      | BondAMORTIZING/5Y/04/03/2007/8%         | 700,000.00    | USD      | -693,000.00     | 1,000,000  |

Update Freq: 100 seconds ☐ Quote ☐ Market data

☒ Real Time ☒ Connected Load Clear Print Close

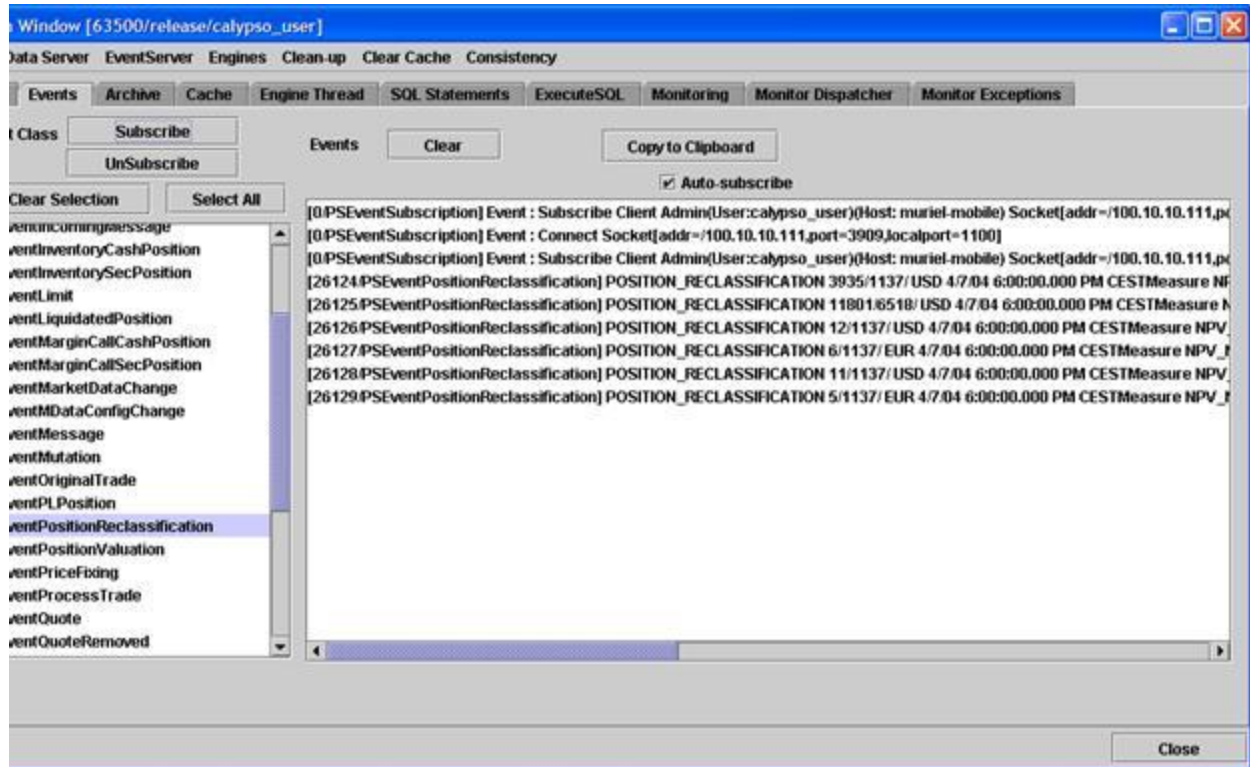
Therefore, we are short for the Bond CUSIP ABC for Desk Trading.

Then, we run the EOD\_POSITION\_VALUATION scheduled task for reclassification.

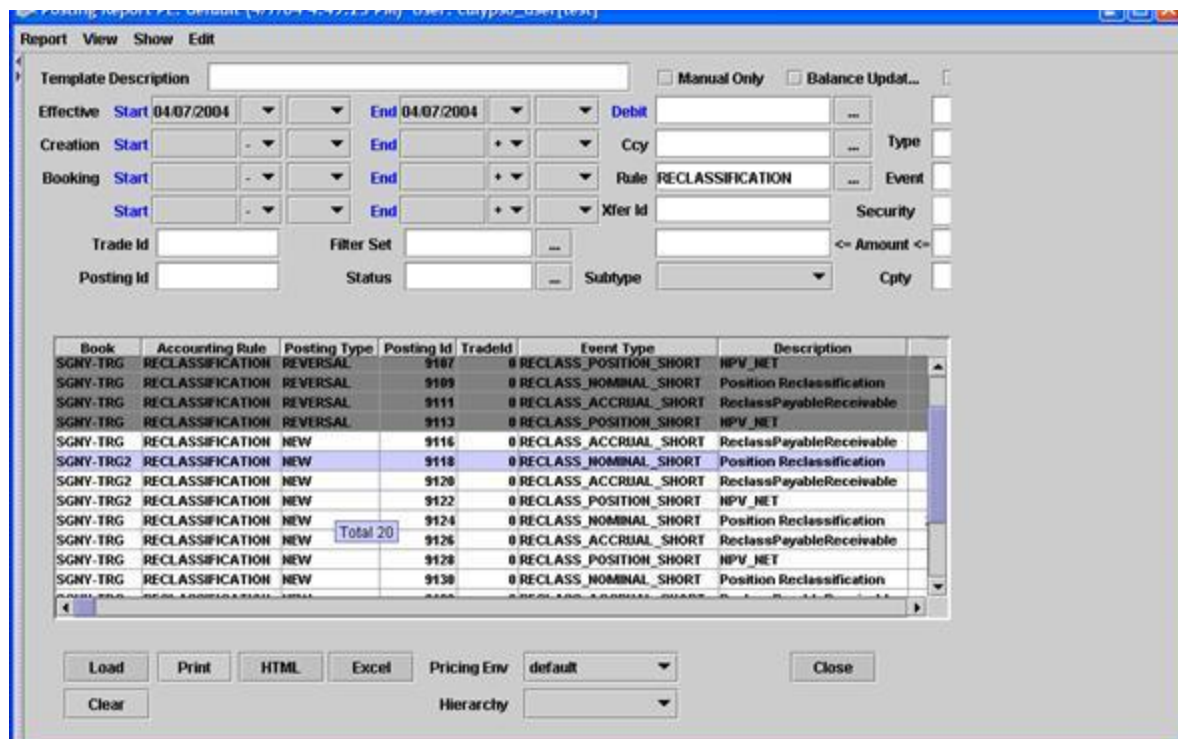
Note that we will publish events of reclassification only when the settle date is reached.

To see the events that are published, go to [Admin > Events](#) and subscribe to the event PSEventPositionReclassification.

After running the scheduled task for the 04/07/2004, we have the following results:



In our configuration, we also generated accounting postings for the reclassification, therefore, we can see the following postings:





## 7. STOCK LEDGER

Note that the Accounting Engine should be running.

Calypso handles physical accounting. Postings are linked to the generation of security transfers. As for the other rules, you must first define your Accounts, Events and Rule links.

### 7.1 ACCOUNTS SETUP

Choose [Main Entry > Configuration > Accounting > Accounts](#) (refdata.AccountFrame) to define STOCK accounts.

In the example below, we have set-up automatic accounts with:

- Constant
- ProcessingOrg
- ProductCode.ISIN
- TransferAccount

The screenshot shows the 'Accounts Definition' window with the 'Account' tab selected. The account is named 'Lent Security' with ID 61. It is a 'STOCK' type, marked as an 'Auto/Template Acc', and has an 'Interface Rule' of 'Aggregate'. The description is 'Physical Accounting: Lent Security'. The 'Processing Org' is set to 'ALL' and the 'Ccy' is 'ANY'. The 'Legal Entity' is empty, and the 'Role' is 'ALL'. The 'Creation Date' is empty, and the 'Create by Acc Engine only' checkbox is unchecked. The 'Closing Account' is empty, and the 'Last Closing Date' is empty. The 'Parent Account' is empty, and the 'Parent Id' is 0. The 'Statement' checkbox is unchecked. The 'Attributes' table at the bottom lists four attributes: Constant (Value: 161), ProcessingOrg, ProductCode.ISIN, and XferAccount.

| Order | Attribute        | Value |
|-------|------------------|-------|
| 1     | Constant         | 161   |
| 2     | ProcessingOrg    |       |
| 3     | ProductCode.ISIN |       |
| 4     | XferAccount      |       |

### 7.2 EVENTS SETUP

The events should contain the exact name of the security transfer's status.

For repo and security lending you need to know if the transfer appears at return or at beginning of the trade. The events with SEC\_<Status> are triggered by the beginning events and the events with SEC\_REV\_<Status> are triggered by the end events.

There are five events:

| Events                  | Description  |
|-------------------------|--|
| <b>CON_SEC_VERIFIED</b> | This event will appear in trade date when your transfer status is Verified.  |
| <b>SEC_SETTLED</b>      | This event will appear in settle date when your transfer is Settled.   |
| <b>SEC_REV_SETTLED</b>  | This event will appear in settle date when your transfer is settled and appears at the end of the trade for repo and security lending.   |
| <b>SEC_S_FAILED</b>     | This event will appear in theoretical settle date when the transfer's status is FAILED. The postings will be automatically reversed when the transfer will be settled. The concerned transfer is the transfer at the beginning of the trade (in case of repo and security lending) |
| <b>SEC_S_REV_FAILED</b> | Same as SEC_FAILED but when the transfer appears at the end of the trade (in case of repo and security lending).   |

All those events should also be triggered by CANCELED events in order to have reverse postings in case of cancellation.

You can add other events if needed, to divide postings depending on different status codes (pending, matched, etc).

## 7.3 RULES SETUP

### 7.3.1 DEFINITION

When you define the rule for Stock Postings, you can define whether you will book the Quantity or the Nominal of the security.

If you need to book the Quantity, use the Accounting Rule type = STOCK.

If you need to book the Nominal (Qty \* Face Value of the Bond), use the Rule Type = STOCK\_FV.

If STOCK\_FV does not exist by default in the system, you can add it to the accRuleType domain.

### 7.3.2 CONFIGURATION

The screenshot shows the 'SEC PHYSICAL' configuration window with three tabs: 'Definition', 'Configuration', and 'Book Link'. The 'Configuration' tab is active, displaying a tree view on the left and a configuration panel on the right.

**Left Panel (Tree View):**

- SEC PHYSICAL
  - EventType: CON\_SEC\_VERIFIED
    - DEBIT: Security to Receive(ST)
    - CREDIT: Ordinary Account(ST)
  - EventType: SEC\_SETTLED
    - DEBIT: Ordinary Account(STO)
    - CREDIT: Deliverable Security(S)
  - EventType: SEC\_S\_FAILED
    - DEBIT: Received/Delivered Sec
    - CREDIT: Security to Receive(S)

**Right Panel (Configuration):**

Accounting Event: ACCRUAL

Sign: +

Debit: LINK (selected), No Debit (unchecked)

Credit: LINK (selected), No Credit (unchecked)

Buttons: Add, Remove

Bottom: Name: SEC PHYSICAL, Show Table, Expand All (checked)



## 8. BOND HTM ACCOUNTING

### 8.1 HTM ON A YIELD BASIS

The Premium/Discount is amortized/accrued on a Yield basis, and the accrual is done in incremental mode.

#### 8.1.1 RULE DEFINITION

Choose [Main Entry > Configuration > Accounting > Accounting Rules](#) (refdata.AccountingRuleFrame) to define the HTM YIELD rule.

Definition Configuration Book Link

Rule Name: SGNY-HTM-YIELD Acc Rule Type: NORMAL

Processing Org: ALL

Currency Rule: TRADE Last Run:

Calendar: PAR Pricing Env.: default

Reversal Rule: ND ☐ Check Valuation PricingEnv

Closing Rule

☒ Daily Closing

☒ Accrual First Rule

Adjust. Days: 0

Definition Configuration Book Link

SGNY-HTM-YIELD

- EventType: ACCRUAL
- EventType: ACCRUAL\_BS
- EventType: ACCRUAL\_BS\_REAL
- EventType: CST
- EventType: INTEREST
- EventType: NOMINAL\_LONG
- EventType: NOMINAL\_LONG\_REV
- EventType: PREM\_DISC
- EventType: PREM\_DISC\_YIELD
- EventType: PREM\_DISC\_YIELD\_REAL
- EventType: REALIZED\_CLEAN\_PL

Accounting Event: ACCRUAL

Sign: +

Debit: LINK ☐ No Debit

Credit: LINK ☐ No Credit

Add Remove

Name: SGNY-HTM-YIELD

Show Table ☐ Expand All

| Event Types          | Sign | Debit Account Type | Debit Account Name                | Credit Account Type | Credit Account Name               |
|----------------------|------|--------------------|-----------------------------------|---------------------|-----------------------------------|
| PREM_DISC_YIELD_REAL | -1   | NORMAL             | Interest Income                   | NORMAL              | Realized Loss                     |
| PREM_DISC_YIELD_REAL | 1    | NORMAL             | Realized Gain                     | NORMAL              | Interest Income                   |
| PREM_DISC_YIELD      | -1   | NORMAL             | Interest Income                   | NORMAL              | Un-accrued Discount on Securities |
| PREM_DISC_YIELD      | 1    | NORMAL             | Un-accrued Discount on Securities | NORMAL              | Interest Income                   |
| CST                  | 1    | SETTLE             | DDA Clearing                      | NORMAL              | DDA Clearing                      |
| CST                  | -1   | NORMAL             | DDA Clearing                      | SETTLE              |                                   |
| PREM_DISC            | 1    | NORMAL             | Contra B/S                        | NORMAL              | Un-accrued Discount on Securities |
| PREM_DISC            | -1   | NORMAL             | Un-accrued Discount on Securities | NORMAL              | Contra B/S                        |
| ACCRUAL              | 1    | NORMAL             | Accrued Interest Receivable       | NORMAL              | Interest Income                   |
| ACCRUAL              | -1   | NORMAL             | Interest Income                   | NORMAL              | Accrued Interest Receivable       |
| NOMINAL_LONG         | -1   | NORMAL             | Inventory                         | NORMAL              | Contra B/S                        |
| NOMINAL_LONG         | 1    | NORMAL             | Contra B/S                        | NORMAL              | Inventory                         |
| ACCRUAL_BS_REAL      | 1    | NORMAL             | Realized Gain                     | NORMAL              | Accrued Interest Receivable       |
| ACCRUAL_BS_REAL      | -1   | NORMAL             | Accrued Interest Receivable       | NORMAL              | Realized Loss                     |
| INTEREST             | 1    | NORMAL             | Realized Gain                     | NORMAL              | Accrued Interest Receivable       |
| INTEREST             | -1   | NORMAL             | Accrued Interest Receivable       | NORMAL              | Realized Loss                     |
| ACCRUAL_BS           | -1   | NORMAL             | Accrued Interest Receivable       | NORMAL              | Contra B/S                        |
| NOMINAL_LONG_REV     | 1    | NORMAL             | Contra B/S                        | NORMAL              | Inventory                         |
| NOMINAL_LONG_REV     | -1   | NORMAL             | Inventory                         | NORMAL              | Contra B/S                        |
| REALIZED_CLEAN_PL    | 1    | NORMAL             | Realized Gain                     | NORMAL              | Un-accrued Discount on Securities |
| REALIZED_CLEAN_PL    | -1   | NORMAL             | Un-accrued Discount on Securities | NORMAL              | Realized Loss                     |
| ACCRUAL_BS           | 1    | NORMAL             | Contra B/S                        | NORMAL              | Accrued Interest Receivable       |

Then, link the rule with your Accounting Book and the product Bond in the Tab Link.

Note that in this rule, there is no off-balance sheet events. If you need off-balance sheet events, use the usual COT and COT\_REV events.

### 8.1.2 EVENT DEFINITION

Choose [Main Entry > Configuration > Accounting > Accounting Events](#) (refdata.AccountingEventFrame) to define the events as shown below.

The event **ACCRUAL** allows the booking of the interest accrual. Because of the use of the Pricer Measure ACCRUAL\_SETTLE\_DATE, we are booking:

- between trade date and first coupon date = ACCRUAL\_FIRST - Purchased Interest
- after the first coupon date = ACCRUAL\_FIRST

| Retroactivity  | Booking Type | Event Class | Event Property | Trigger Events                                     | Pricer Measures     |
|----------------|--------------|-------------|----------------|--|---------------------|
| Closing Period | Incremental  | INVENTORY   | NONE           | TRADE_VALUATION<br>CANCELED_TRADE<br>MATURED TRADE | ACCRUAL_SETTLE_DATE |

The event **INTEREST** is used to book the coupon amount.

| Retroactivity | Booking Type | Event Class | Event Property | Trigger Events                          | Pricer Measures |
|---------------|--------------|-------------|----------------|---|-----------------|
| FULL          | N/A          | REALIZED    | NONE           | LIQUIDATED_POSITION<br>UNLIQUIDATED_POS |                 |

The event **NOMINAL\_LONG** is used to book the Nominal amount on Buy trade.

| Retroactivity | Booking Type | Event Class | Event Property | Trigger Events                   | Pricer Measures |
|---------------|--------------|-------------|----------------|----------------------------------|-----------------|
| FULL          | N/A          | BALANCE     | NONE           | VERIFIED_TRADE<br>CANCELED_TRADE |                 |

The event **ACCRUAL\_BS** is used to book the purchased (or sold) interest amount. It will be booked on both Buy and Sell trades.

| Retroactivity | Booking Type | Event Class | Event Property | Trigger Events                   | Pricer Measures |
|---------------|--------------|-------------|----------------|----------------------------------|-----------------|
| FULL          | N/A          | BALANCE     | NONE           | VERIFIED_TRADE<br>CANCELED_TRADE |                 |

The event **PREM\_DISC** is used to book the bought or sold premium discount. This event is generated for both buy and sell trades.

| Retroactivity | Booking Type | Event Class | Event Property | Trigger Events                   | Pricer Measures |
|---------------|--------------|-------------|----------------|----------------------------------|-----------------|
| FULL          | N/A          | BALANCE     | NONE           | VERIFIED_TRADE<br>CANCELED_TRADE |                 |

The event **ACCRUAL\_BS\_REAL** is used to book, once liquidation occurs between the Buy trade date and the coupon date, the amount of purchased interest in a realized account.

If the liquidation occurs after the coupon date, this event is not generated.

| Retroactivity | Booking Type | Event Class | Event Property | Trigger Events                               | Pricer Measures |
|---------------|--------------|-------------|----------------|--|-----------------|
| FULL          | N/A          | REALIZED    | NONE           | LIQUIDATED_POSITION<br>UNLIQUIDATED_POSITION |                 |

The event **PREM\_DISC\_YIELD** is used to book the premium discount amortization/accretion on a yield basis. In fact, it books the amount calculated by the pricer measure PREM\_DISC\_YIELD.

| Retroactivity  | Booking Type | Event Class | Event Property | Trigger Events                                     | Pricer Measures |
|----------------|--------------|-------------|----------------|--|-----------------|
| Closing Period | Reversal     | INVENTORY   | NONE           | TRADE_VALUATION<br>CANCELED_TRADE<br>MATURED_TRADE | PREM_DISC_YIELD |

The event **PREM\_DISC\_YIELD\_REAL** occurs in case of liquidation (trade sold or partially redeem) and books the amortized amount of premium discount on liquidation date.

| Retroactivity | Booking Type | Event Class | Event Property | Trigger Events                               | Pricer Measures |
|---------------|--------------|-------------|----------------|--|-----------------|
| FULL          | N/A          | REALIZED    | NONE           | LIQUIDATED_POSITION<br>UNLIQUIDATED_POSITION |                 |

The event **REALIZED\_CLEAN\_PL** is used to book the clean PL once liquidation occurs. It corresponds into the difference of clean prices \* liquidated quantity.

| Retroactivity | Booking Type | Event Class | Event Property | Trigger Events                               | Pricer Measures |
|---------------|--------------|-------------|----------------|--|-----------------|
| FULL          | N/A          | REALIZED    | NONE           | LIQUIDATED_POSITION<br>UNLIQUIDATED_POSITION |                 |

The **NOMINAL\_LONG\_REV** event is used to reverse the NOMINAL event booked on the buy trade once a liquidation occurs (because of a sell or a redemption).

| Retroactivity | Booking Type | Event Class | Event Property | Trigger Events                               | Pricer Measures |
|---------------|--------------|-------------|----------------|--|-----------------|
| FULL          | N/A          | REALIZED    | NONE           | LIQUIDATED_POSITION<br>UNLIQUIDATED_POSITION |                 |

### Sample Bond Trades

Example 1 — Buy a Bond Trade in HTM strategy (this could be AFS as well), and run valuation until the coupon date.

| Trade             | Details                             | Cashflows     | Fees            |
|-------------------|-------------------------------------|---------------|-----------------|
| Cpty              | CITIBANK NY                         | CounterParty  | Book SGNV-HTM   |
|                   |                                     | Status        | VERIFIED        |
|                   |                                     | Id            | 9101            |
| Citibank New York |                                     |               |                 |
| Bond Class        | Bond                                | Bond Type     | UST             |
| Product           | BondTEST-SGVN-HTM/10Y/12/23/2011/8% |               |                 |
| Security Id Type  | CUSIP                               | Value         |                 |
| Trade Currency    | USD                                 | Market Type   | NONE            |
| Buy               | Price                               | Quantity      | Settle Date     |
|                   | 99.00000000                         | 1,000,000.00  | 12/19/2003      |
|                   | Yield                               | Trade Amt     | Settle Currency |
|                   | 8.17227000                          | 1,000,000.00  | USD             |
|                   | Dirty Price                         | Accrual(%)    | Accrual         |
|                   | 102.91257000                        | 3.91257       | 39,125,70       |
|                   |                                     | Next Coupon   | 12/23/2003      |
|                   |                                     | Coupon Amount | 40,000          |
|                   |                                     | Prem/Disc     | 10,000          |

Postings generated:

| Event Type | Evt Sign | Amount | Debit Account    | Credit Account      | Other Amount | Effective Date | Booking Date | Accounting Rule |
|------------|----------|--------|------------------|---------------------|--------------|----------------|--------------|-----------------|
| ACCRUAL_   | -        | 39     | Accrued Interest | Contra B/S          | -39          | 12/19/2003     | 01/16/2004   | SGNY-HTM-YIELD  |
| BS         |          | 125,70 | Receivable       |                     | 125,70       |                |              |                 |
| NOMINAL_   | -        | 1 000  | Inventory        | Contra B/S          | -1 000       | 12/19/2003     | 01/16/2004   | SGNY-HTM-YIELD  |
| LONG       |          | 000,00 |                  |                     | 000,00       |                |              |                 |
| PREM_      | +        | 10     | Contra B/S       | Un-accrued Discount | 10           | 12/19/2003     | 01/16/2004   | SGNY-HTM-YIELD  |
| DISC       |          | 000,00 |                  | on Securities       | 000,00       |                |              |                 |
| CST        | -        | 1 029  | DDA Clearing     | BONYACCOUNT         | -1 029       | 12/19/2003     | 01/16/2004   | SGNY-HTM-YIELD  |
|            |          | 125,70 |                  |                     | 125,70       |                |              |                 |

Then, the valuation is run everyday until the coupon date (12/23/2004):

| Event Type | Evt Sign | Amount | Debit Account    | Credit Account  | Other Amount | Effective Date | Booking Date | Accounting Rule |
|------------|----------|--------|------------------|-----------------|--------------|----------------|--------------|-----------------|
| ACCRUAL_   | -        | 39     | Accrued Interest | Contra B/S      | -39          | 12/19/2003     | 01/16/2004   | SGNY-HTM-YIELD  |
| BS         |          | 125,70 | Receivable       |                 | 125,70       |                |              |                 |
| NOMINAL_   | -        | 1 000  | Inventory        | Contra B/S      | -1 000       | 12/19/2003     | 01/16/2004   | SGNY-HTM-YIELD  |
| LONG       |          | 000,00 |                  |                 | 000,00       |                |              |                 |
| PREM_      | +        | 10     | Contra B/S       | Un-accrued      | 10           | 12/19/2003     | 01/16/2004   | SGNY-HTM-YIELD  |
| DISC       |          | 000,00 |                  | Discount on     | 000,00       |                |              |                 |
|            |          |        |                  | Securities      |              |                |              |                 |
| CST        | -        | 1 029  | DDA Clearing     | BONYACCOUNT     | -1 029       | 12/19/2003     | 01/16/2004   | SGNY-HTM-YIELD  |
|            |          | 125,70 |                  |                 | 125,70       |                |              |                 |
| ACCRUAL    | +        | 218,60 | Accrued Interest | Interest Income | 218,60       | 12/19/2003     | 12/19/2003   | SGNY-HTM-YIELD  |
|            |          |        | Receivable       |                 |              |                |              |                 |
| PREM_      | -        | 6,40   | Interest Income  | Un-accrued      | 6,40         | 12/20/2003     | 12/19/2003   | SGNY-HTM-YIELD  |
| DISC_      |          |        |                  | Discount on     |              |                |              |                 |
| YIELD      |          |        |                  | Securities      |              |                |              |                 |
| PREM_      | +        | 6,40   | Un-accrued       | Interest Income | 6,40         | 12/19/2003     | 12/19/2003   | SGNY-HTM-YIELD  |
| DISC_      |          |        | Discount on      |                 |              |                |              |                 |
| YIELD      |          |        | Securities       |                 |              |                |              |                 |
| ACCRUAL    | +        | 655,70 | Accrued Interest | Interest Income | 874,30       | 12/22/2003     | 12/22/2003   | SGNY-HTM-YIELD  |
|            |          |        | Receivable       |                 |              |                |              |                 |
| PREM_      | -        | 26,80  | Interest Income  | Un-accrued      | 26,80        | 12/23/2003     | 12/22/2003   | SGNY-HTM-YIELD  |
| DISC_      |          |        |                  | Discount on     |              |                |              |                 |
| YIELD      |          |        |                  | Securities      |              |                |              |                 |

| Event Type   | Evt Sign | Amount       | Debit Account                           | Credit Account                          | Other Amount | Effective Date | Booking Date | Accounting Rule    |
|--|----------|--------------|---|---|--------------|----------------|--------------|--------------------|
| PREM_<br>DISC_<br>YIELD<br>ACCRUAL                             | +        | 26,80        | Un-accrued<br>Discount on<br>Securities | Interest Income                         | 26,80        | 12/22/2003     | 12/22/2003   | SGNY-<br>HTM-YIELD |
|  | -        | 655,70       | Interest Income                         | Accrued Interest<br>Receivable          | 218,60       | 12/23/2003     | 12/23/2003   | SGNY-<br>HTM-YIELD |
| PREM_<br>DISC_<br>YIELD<br>PREM_<br>DISC_<br>YIELD<br>INTEREST | -        | 24,90        | Interest Income                         | Un-accrued<br>Discount on<br>Securities | 24,90        | 12/24/2003     | 12/23/2003   | SGNY-<br>HTM-YIELD |
|  | +        | 24,90        | Un-accrued<br>Discount on<br>Securities | Interest Income                         | 24,90        | 12/23/2003     | 12/23/2003   | SGNY-<br>HTM-YIELD |
|  | +        | 40<br>000,00 | Realized Gain                           | Accrued Interest<br>Receivable          | 40<br>000,00 | 12/23/2003     | 01/16/2004   | SGNY-<br>HTM-YIELD |

Example 2 – Buy and Sell a trade before the coupon date.

**Trade** | Details | Cashflows | Fees

Cpty **CITIBANK NY** CounterParty **SGNY-HTM2** Status **VERIFIED** Id **9106**

Citibank New York

Bond Class **Bond** Bond Type **UST**

Product **BondTEST-SGNY-HTM/10Y/12/23/2011/8%** Show...

Security Id Type **CUSIP** Value

Trade Currency **USD** Market Type **NONE**

Buy Price **99.00000000** Quantity **1,000,000.00** Settle Date **12/19/2003**

Yield **8.17227000** Trade Amt **1,000,000.00** Settle Currency **USD**

Dirty Price **102.91257000** Accrual(%) **3.91257** Accrual **39,125.70**

Next Coupon **12/23/2003**

Coupon Amount **40,000**

Prem/Disc **10,000**

Postings generated:

| Event Type              | Evt Sign | Amount          | Debit Account                           | Credit Account                          | Other Amount     | Effective Date | Booking Date | Accounting Rule    |
|-------------------------|----------|-----------------|---|---|------------------|----------------|--------------|--------------------|
| ACCRUAL_<br>BS          | -        | 39<br>125,70    | Accrued Interest<br>Receivable          | Contra B/S                              | -39<br>125,70    | 12/19/2003     | 01/16/2004   | SGNY-<br>HTM-YIELD |
| NOMINAL_<br>LONG        | -        | 1 000<br>000,00 | Inventory                               | Contra B/S                              | -1 000<br>000,00 | 12/19/2003     | 01/16/2004   | SGNY-<br>HTM-YIELD |
| PREM_<br>DISC           | +        | 10<br>000,00    | Contra B/S                              | Un-accrued<br>Discount on<br>Securities | 10<br>000,00     | 12/19/2003     | 01/16/2004   | SGNY-<br>HTM-YIELD |
| CST                     | -        | 1 029<br>125,70 | DDA Clearing                            | BONYACCOUNT                             | -1 029<br>125,70 | 12/19/2003     | 01/16/2004   | SGNY-<br>HTM-YIELD |
| ACCRUAL                 | +        | 218,60          | Accrued Interest<br>Receivable          | Interest Income                         | 218,60           | 12/19/2003     | 12/19/2003   | SGNY-<br>HTM-YIELD |
| PREM_<br>DISC_<br>YIELD | -        | 6,40            | Interest Income                         | Un-accrued<br>Discount on<br>Securities | 6,40             | 12/20/2003     | 12/19/2003   | SGNY-<br>HTM-YIELD |
| PREM_<br>DISC_<br>YIELD | +        | 6,40            | Un-accrued<br>Discount on<br>Securities | Interest Income                         | 6,40             | 12/19/2003     | 12/19/2003   | SGNY-<br>HTM-YIELD |

The position in sold on 12/22/2003:

| Trade             | Details   | Cashflows     | Fees            |
|-------------------|---|---------------|-----------------|
| Cpty              | CITIBANK NY                                     | CounterParty  | Book SGNY-HTM2  |
|                   |   | Status        | VERIFIED        |
|                   |   | Id            | 9107            |
| Citibank New York |   |               |                 |
| Bond Class        | Bond  | Bond Type     | UST             |
| Product           | BondTEST-SGNY-HTM/10Y/12/23/2011/8% ... Show... |               |                 |
| Security Id Type  | CUSIP   | Value         |                 |
| Trade Currency    | USD   | Market Type   | NONE            |
| Sell              | Price   | Quantity      | Settle Date     |
|                   | 97.00000000                                     | 1,000,000.00  | 12/22/2003      |
|                   | Yield   | Trade Amt     | Settle Currency |
|                   | 8.52473000                                      | 1,000,000.00  | USD             |
|                   | Dirty Price                                     | Accrual(%)    | Accrual         |
|                   | 100.97814000                                    | 3.97814       | -39,781.40      |
|                   |   | Next Coupon   | 12/23/2003      |
|                   |   | Coupon Amount | 40,000          |
|                   |   | Prem/Disc     | 10,000          |

The accounting on the sell trade is:

| Event Type | Evt Sign | Amount | Debit Account       | Credit Account   | Other Amount | Effective Date | Booking Date | Accounting Rule |
|------------|----------|--------|---------------------|------------------|--------------|----------------|--------------|-----------------|
| ACCRUAL_   |          | 39     |                     | Accrued Interest | 39           |                |              | SGNY-           |
| BS         | +        | 781,40 | Contra B/S          | Receivable       | 781,40       | 12/22/2003     | 01/16/2004   | HTM-YIELD       |
| PREM_      |          | 30     | Un-accrued Discount |                  | -30          |                |              | SGNY-           |
| DISC       | -        | 000,00 | on Securities       | Contra B/S       | 000,00       | 12/22/2003     | 01/16/2004   | HTM-YIELD       |
|            |          | 1 009  |                     |                  | 1 009        |                |              | SGNY-           |
| CST        | +        | 781,40 | BONYACCOUNT         | DDA Clearing     | 781,40       | 12/22/2003     | 01/16/2004   | HTM-YIELD       |

The accounting on the buy after the sell is:

| Event Type  | Evt Sign | Amount | Debit Account | Credit Account   | Other Amount | Effective Date | Booking Date | Accounting Rule |
|-------------|----------|--------|---------------|------------------|--------------|----------------|--------------|-----------------|
| REALIZED_   |          | 20     | Un-accrued    |                  | -20          |                |              | SGNY-           |
| CLEAN_PL    | -        | 000,00 | Discount on   | Realized Loss    | 000,00       | 12/22/2003     | 01/16/2004   | HTM-YIELD       |
| NOMINAL_    |          | 1 000  | Securities    |                  | 1 000        |                |              | SGNY-           |
| LONG_REV    | +        | 000,00 | Contra B/S    | Inventory        | 000,00       | 12/22/2003     | 01/16/2004   | HTM-YIELD       |
| ACCRUAL_BS_ |          | 39     |               | Accrued Interest | 39           |                |              | SGNY-           |
| REAL        | +        | 125,70 | Realized Gain | Receivable       | 125,70       | 12/22/2003     | 01/16/2004   | HTM-YIELD       |
| PREM_DISC_  |          |        |               |                  |              |                |              | SGNY-           |
| YIELD_REAL  | +        | 20,00  | Realized Gain | Interest Income  | 20,00        | 12/22/2003     | 01/16/2004   | HTM-YIELD       |

## 8.2 HTM ON A LINEAR BASIS

The Premium/Discount is amortized/accrued on a linear basis.

Same set-up as the one previously described, except that you should replace the events:

- PREM\_DISC\_YIELD with PREM\_DISC\_AM
- PREM\_DISC\_YIELD\_REAL with PREM\_DISC\_REAL

## 9. FX REVALUATION AND TRANSLATION

These processes can be run simultaneously for any product.

### Contents

- [Accounts Setup](#)
- [Generating Postings](#)
- [FX Revaluation Process](#)
- [FX Translation Process](#)

### 9.1 ACCOUNTS SETUP

Note that the same accounts can be setup for FX revaluation and for FX translation. Note however that FX Translation accounts must be defined as automatic accounts.

You should add the FX\_TRANSLATION and FX\_REVALUATION values to the accEventType domain.

#### 9.1.1 FX REVALUATION

Choose [Main Entry > Configuration > Accounting > Accounts](#) (refdata.AccountFrame) to setup the accounts for FX revaluation.

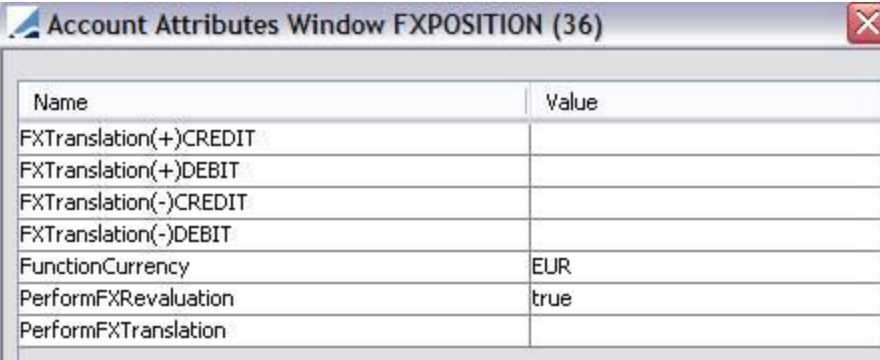
Each account to be revalued should be set as follows:

The screenshot shows the 'Accounts Definition' window with the following fields and values:


- Account Name: FXPOSITION
- Id: 36
- Processing Org: ALL
- Ccy: ANY
- Type: NORMAL
- External Name: 00003
- Description: Position
- Legal Entity: (empty)
- Role: ALL
- Creation Date: (empty)
- Closing Account: (empty)
- Parent Account: (empty)
- Interface Rule: Detail
- Last Closing Date: (empty)
- Parent Id: 0

» Click **Properties/Attributes** and specify the following attributes:





| Name                   | Value |
|------------------------|-------|
| FXTranslation(+)CREDIT |       |
| FXTranslation(+)DEBIT  |       |
| FXTranslation(-)CREDIT |       |
| FXTranslation(-)DEBIT  |       |
| FunctionCurrency       | EUR   |
| PerformFXRevaluation   | true  |
| PerformFXTranslation   |       |

Click  to add the attributes if they are not available. NOTE that the attribute names and attribute values are case-sensitive. They should be created exactly as shown above.

Double-click an attribute name to enter a value for the attribute:

- FunctionCurrency — Enter the currency in which you want to revalue the account.
- PerformFXRevaluation — Enter "true".

Then click **Apply**.

» Click **Save** to save your changes.

### 9.1.2 FX TRANSLATION

Choose [Main Entry > Configuration > Accounting > Accounts](#) (refdata.AccountFrame) to setup the accounts for FX conversion.

Each account to be converted must be an automatic account, with balance generation, and should be set as follows.

Note that if you want to use the same account for FX Revaluation and FX Conversion, then the account must be an automatic account.

**Accounts Definition - Authorization mode OFF - version 0**

Account Utilities Help

Account Statements Attributes Interests Limits Browse

Account Name: CONTINGENT Id: 4

Processing Org: ALL Ccy: ANY

Type: NORMAL ... ☒ Auto/Template Acc

External Name: 00004 Interface Rule: Detail

Description: Contingent

Legal Entity: ... Role: ALL

Creation Date: ... ☐ Create by Acc Engine only Properties/Attributes...

Closing Account: ... Last Closing Date: ...

Parent Account: ... Parent Id: 0

☒ Balance Freq: DLY Day: 1 Rule: ... Roll: PRECEDING

- » Check the Balance checkbox and select the DLY frequency.
- » Click **Properties/Attributes** and specify the following attributes.

**Account Attributes Window CONTINGENT (4)**

| Name                    | Value      |
|-------------------------|------------|
| FXTranslation(+)-CREDIT | CONVERSION |
| FXTranslation(+)-DEBIT  | CONTRA     |
| FXTranslation(-)-CREDIT | CONVERSION |
| FXTranslation(-)-DEBIT  | CONTRA     |
| FunctionCurrency        | EUR        |
| PerformFXRevaluation    |            |
| PerformFXTranslation    | true       |

Click ... to add the attributes if they are not available. NOTE that the attribute names and attribute values are case-sensitive. They should be created exactly as shown above.

Double-click an attribute name to enter a value for the attribute:

- FunctionCurrency — Enter the currency in which you want to convert the account.
- FXTranslation(+/-)-CREDIT/DEBIT — Enter the accounts that should be credited / debited with the conversion amount.
- PerformFXTranslation — Enter "true".

If the attribute "Propagate" is set to true, we will look at the attributes that exist on this account and based on those attributes generate an auto account (sub account) where the postings will be held. The sub account will automatically adopt the properties that exist in the Main account, including the FX Translation account

names and will update the relevant property with the attribute configured in the main account which was used as the basis to generate the sub account.

Example: If the main accounts attributes is constant and trader, then the sub account will be generated using the trader's name on the trade. The Sub Account's properties will also have the trader's name against property 'Trader'.

Once the Balance Scheduled Task is run the balance will be done on the Sub Account. The Account Conversion Scheduled task will use this balance amount to do the FX Translation. Postings from the FX Translation hit the auto FX Translation accounts derived from the main FX Translation accounts listed as part of the properties on the Sub Account. The names given to the FX Translation auto accounts will be dependent on what the attributes are on the main FX Translation accounts.

Then click **Apply**.

- » Select the Attributes panel to specify the automatic account attributes. In order to save the book and product id for FX Translation postings, the account should be defined with the attributes book and product id, as in the example shown below – This is optional.

| Order | Attribute | Value |
|-------|-----------|-------|
| 1     | Book      |       |
| 2     | Constant  | -     |
| 3     | ProductId |       |

Make sure to use a constant in between the attributes.

- » Click **Save** to save your changes.

## 9.2 GENERATING POSTINGS

Make sure that the Transfer engine and Accounting engine are running and enter trades for generating the corresponding postings as shown in the example below.

- » Choose **Back Office > BO Window**, and select the Postings panel to display the postings as shown below.

| Postings   |            |                |              |              |          |               |               |                  |
|------------|------------|----------------|--------------|--------------|----------|---------------|---------------|------------------|
| Posting Id | Event Type | Effective Date | Posting Type | Amount       | Currency | DebitAccount  | CreditAccount | Original Event   |
| 1518       | COT        | 09/01/2004     | NEW          | 1,000,000.00 | EUR      | CONTINGENT    | FXPOSITION    | VERIFIED_TRADE   |
| 1519       | COT        | 09/01/2004     | NEW          | 1,212,000.00 | USD      | FXPOSITION    | CONTINGENT    | VERIFIED_TRADE   |
| 1520       | CST        | 09/03/2004     | NEW          | 1,212,000.00 | USD      |               | SETTLEACCOUNT | VERIFIED_PAYMENT |
| 1521       | CST        | 09/03/2004     | NEW          | 1,000,000.00 | EUR      | SETTLEACCOUNT |               | VERIFIED_RECEIPT |

### 9.3 FX REVALUATION PROCESS

The FX revaluation process requires current FX rates for the currencies to be revalued. They can be specified using the [Main Entry > Market Data > Market Quotes > Quotes](#).

The quote name is FX.<base currency>.<quoting currency> of your currency pairs.

For a cross currency trade such as USD/CHF for example, that you want to revalue to Euro, you would enter quotes for CHF/EUR and EUR/USD.

The FX revaluation is done using the ACCOUNTING\_CONVERSION scheduled task.

Choose [Main Entry > Configuration > Scheduled Tasks > Scheduled Tasks](#) (refdata.ScheduledTaskWindow) as shown below.

**Scheduled Task Window [100100/release/calyppo\_user]**

Report Tools Help

Definition Report

Type: ACCOUNTING\_CONVERSION Description: Process Org: BRANCHE1

Trade Filter: FXTrades Pricing Env: default Risk Config:

User: calypso\_user Filter Set: Next Id: ...

Ext Ref:

Measures: ...

Time Zone: US/Pacific Exec Time: H M Val Date Offset: 0

From Days: To: Valuation Time: 12 H 00 M Date Rule: ...

Holidays: ... Undo Time: H M

☐ Skip Exec Cutoff: 0 Hour 0 Min ☐ Private ☐ DeActivated

Attributes

| Attribute              | Value         |
|------------------------|---------------|
| FX Revaluation         | True          |
| FX Translation         | False         |
| Reverse FX Revaluation | False         |
| DateType               | EffectiveDate |

☐ Execute ☐ Publish ☐ Send Email ☐ Exec On Holidays

Comment:

- » Select the ACCOUNTING\_CONVERSION type, and set the "FX Revaluation" attribute to True.
- » Select a Pricing Env and a Trade Filter as applicable.
- » Then execute the scheduled task on the current date.

You can see the FX\_REVALUATION posting on the trade, as shown below. The posting type is set to FX\_CONVERSION.

| Postings   |            |                |               |              |          |               |               |                  |
|------------|------------|----------------|---------------|--------------|----------|---------------|---------------|------------------|
| Posting Id | Event Type | Effective Date | Posting Type  | Amount       | Currency | DebitAccount  | CreditAccount | Original Event   |
| 1518       | COT        | 09.01/2004     | NEW           | 1,000,000.00 | EUR      | CONTINGENT    | FXPOSITION    | VERIFIED_TRADE   |
| 1519       | COT        | 09.01/2004     | NEW           | 1,212,000.00 | USD      | FXPOSITION    | CONTINGENT    | VERIFIED_TRADE   |
| 1520       | CST        | 09.03/2004     | NEW           | 1,212,000.00 | USD      |               | SETTLEACCOUNT | VERIFIED_PAYMENT |
| 1521       | CST        | 09.03/2004     | NEW           | 1,000,000.00 | EUR      | SETTLEACCOUNT |               | VERIFIED_RECEIPT |
| 1522       | COT        | 09.01/2004     | FX_CONVERSION | 998,763.91   | EUR      | FXPOSITION    | CONTINGENT    | FX_REVALUATION   |

The Linked Id contains the id of the posting that has been revalued.

The FX Revaluation process takes all the current day's postings in foreign currency and creates duplicate postings in base currency.

#### 9.3.1 REVERSAL PROCESS

The system automatically handles the reversal of FX Revaluation postings if past trades are modified, and new FX Revaluation postings are created when the scheduled task for FX Revaluation is run again.

If market data change in the past but the trades are not modified, you need to run the scheduled task ACCOUNTING\_CONVERSION on the day the market data was modified, with the attribute Reverse FX Revaluation set to true.

Choose **Main Entry > Configuration > Scheduled Tasks > Scheduled Tasks** (refdata.ScheduledTaskWindow) as shown below.

| Attribute              | Value       |
|------------------------|-------------|
| FX Revaluation         | False       |
| FX Translation         | False       |
| Reverse FX Revaluation | True        |
| DateType               | BookingDate |

- » Select the ACCOUNTING\_CONVERSION type, and set the "Reverse FX Revaluation" attribute to True.
- » Select a Pricing Env and a Trade Filter as applicable.
- » Then execute the scheduled task on the date the market data was modified.

FX Revaluation postings of type REVERSAL will be created to cancel previous FX Revaluation postings and new ones of type FX\_CONVERSION will be created.

The scheduled task uses the book's holiday to check if the posting's date is a business day or not.

## 9.4 FX TRANSLATION PROCESS

The FX translation process is a two-step process:

- Computing balances in foreign currencies
- Converting the balances in base currency

### 9.4.1 COMPUTING FX BALANCES

The BALANCE scheduled task will take care of computing the balances to be converted on the current date.

Choose **Main Entry > Configuration > Scheduled Tasks > Scheduled Tasks** (refdata.ScheduledTaskWindow) to run the BALANCE scheduled task as shown below.

Scheduled Task Window [71100/generalprop/calypso\_user]

Report Tools Help

Definition Report

Type: BALANCE Description: Process Org: BRANCHE1

Trade Filter: FX Pricing Env: default Risk Config:

User: calypso\_user Filter Set: Next Id: 0

Measures:

Time Zone: America/Los\_Angeles Exec Time: H M Val Date Offset: 0

From Days: 0 To: 0 Valuation Time: 12 H 0 M Date Rule:

Holidays:

Undo Time: H M

☐ Skip Exec CutOff: 0 Hour 0 Min

☒ Execute ☐ Execute in Server ☐ Read Only Server

☐ Publish ☐ Send Email ☐ Exec On Holidays

Attributes

| Attribute | Value |
|-----------|-------|
|           |       |

Comment

| Id   | Type    | Description | Pricing Env | Trade Filter | Filter Set | User         | Time Zone           | Time | From Days | To Days | Holidays | Measures |
|------|---------|-------------|-------------|--------------|------------|--------------|---------------------|------|-----------|---------|----------|----------|
| 1401 | BALANCE |             | default     | FX           |            | calypso_user | America/Los_Angeles | -1   | 0         | 0       |          |          |

- » Select the BALANCE type.
- » Select a Pricing Env and a Trade Filter as applicable.

- » Then execute the scheduled task.

The BALANCE scheduled task will create FX balance positions in a date range spanning a week behind.

### 9.4.2 GENERATING CONVERTED POSTINGS

The FX translation process requires current FX rates for the currencies to be converted, as well as FX rates in a date range spanning a week behind (because of the balance calculations). They can be specified using the [Main Entry > Market Data > Market Quotes > Quotes](#).

The quote name is FX.<base currency>.<quoting currency> of your currency pairs.

For a cross currency balances such as USD/CHF for example, that you want to convert to Euro, you would enter quotes for CHF/EUR and EUR/USD.

The FX translation is done using the ACCOUNTING\_CONVERSION scheduled task.

Choose [Main Entry > Configuration > Scheduled Tasks > Scheduled Tasks](#) (refdata.ScheduledTaskWindow) as shown below, and select the ACCOUNTING\_CONVERSION scheduled task.

| Attribute              | Value         |
|------------------------|---------------|
| FX Revaluation         | False         |
| FX Translation         | True          |
| Reverse FX Revaluation | False         |
| DateType               | EffectiveDate |
| Trade Id               |               |
| Account Id             |               |

- » Set the "FX Translation" attribute to True.

You can run the scheduled task for a single trade and/or a single account.

You can set "FX Translation Back-Value" to false to only generate postings for valuation date. Otherwise, all postings are generated.

- » Select a Pricing Env.

- » Then execute the scheduled task on the current date.

You can view the FX\_TRANSLATION postings using the Posting Report as shown below. The posting type is set to FX\_CONVERSION.

| Posting Id | Trade Id | Event Type     | Booking Date | Description     | Amount       | Currency | Posting Type  | Original Event        |
|------------|----------|----------------|--------------|-----------------|--------------|----------|---------------|-----------------------|
| 1524       | 0        | FX_TRANSLATION | 09/15/2004   | 4USD/09/14/2004 | 4,205,454.19 | EUR      | FX_CONVERSION | ACCOUNTING_CONVERSION |
| 1525       | 0        | FX_TRANSLATION | 09/14/2004   | 4USD/09/13/2004 | 732,551.68   | EUR      | FX_CONVERSION | ACCOUNTING_CONVERSION |
| 1526       | 0        | FX_TRANSLATION | 09/13/2004   | 4USD/09/12/2004 | 26,257.90    | EUR      | FX_CONVERSION | ACCOUNTING_CONVERSION |
| 1527       | 0        | FX_TRANSLATION | 09/12/2004   | 4USD/09/11/2004 | 94,428.60    | EUR      | FX_CONVERSION | ACCOUNTING_CONVERSION |
| 1528       | 0        | FX_TRANSLATION | 09/11/2004   | 4USD/09/10/2004 | 286,037.13   | EUR      | FX_CONVERSION | ACCOUNTING_CONVERSION |
| 1529       | 0        | FX_TRANSLATION | 09/10/2004   | 4USD/09/09/2004 | 34,705.28    | EUR      | FX_CONVERSION | ACCOUNTING_CONVERSION |

The FX Translation process takes the previous day's balance in foreign currency and computes the difference between yesterday's FX rate, and the current FX rate. The posting reflects that FX profit and loss. The Trade Id is null because the posting is related to a balance and not a trade.

### 9.4.3 REVERSAL PROCESS

The system handles the reversal of FX Translation postings. If the balances in the past are changed due to a back-valued trade, or amending of an old trade, the scheduled task BALANCE correctly calculates the old balances and updates their amounts.

In that case, we find all the FX Translation postings that were posted for the old balances and reverse them. After reversing the old FX Translation postings we create new FX Translation postings with the new balance amounts.

- Reversal and new FX Translation postings that are created for old balances have their effective date in the past, and their booking date set to the valuation date of the scheduled task.

- Reversal amounts are the same as the old FX Translation postings, and the new amounts are calculated with the updated balance amount.
- If the balance is changed on the current date and we had already created an FX Translation posting, we will delete the current date posting instead of reversing it. The BALANCE scheduled task will only reverse the old FX Translation postings. To delete the current FX Translation postings and create new ones, you will have to run the ACCOUNTING\_CONVERSION scheduled task. That should delete all the current FX Translation postings that were created during the same day, and create new ones with the latest balance.

#### 9.4.4 SPECIAL LOGIC

A special logic can be triggered for product types defined in domain FXConversionSpecial (for example: FX,Forward,FXNDF,FXSwap), and accounting events defined in domain FXConversionEvents (for example: COT,COT\_REV,NOM\_FULL,CST).

If the account attribute FunctionCurrency is part of the FX trade, then for the accounting events defined in FXConversionEvents, FX Revaluation postings use the trade rate and NOT end of day market quotes.

For the currency that is set as the PL Display Ccy (in the Currency pair definition), always take the end of day market quote. For the other Ccy, always duplicate the amount retrieved for the PL Display Ccy.

If the accounting event contains the suffix "\_REV", it applies the special reversal logic consisting in using the same conversion amounts as the initial posting. To do so, we search for the initial postings (for example for COT\_REV, we would look for COT and then for the related conversion posting). If none is found, we issue an error.