



# Nasdaq Calypso

## Nostro Management

Version 18

Revision 11.0

April 2025

Approved

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## Document History

Revision	Published	Summary of Changes
1.0	February 2024	First revision for version 18.
2.0	March 2024	Updates for version 18 monthly release.
3.0	April 2024	Updates for version 18 monthly release.
4.0	May 2024	Updates for version 18 monthly release - Added environment property BO_POSITION_REPORT_PRELOAD_SECURITIES_IN_DATASERVER, BO_POSITION_REPORT_PRELOAD_SECURITIES_MIN_IN_DATASERVER and AGG_CONFIG_PLACEOFSAFEKEEPING.
5.0	June 2024	Updates for version 18 monthly release - Added account property Add PARTIAL_SETTLE to position.
6.0	August 2024	Updates for version 18 monthly release - Added Incl. Holiday for Daily Calc frequency in Account Interest Config Window.
7.0	September 2024	Updates for version 18 monthly release - Updated IgnoreDuplicateStatement.
8.0	November 2024	Updates for version 18 monthly release - Added field 'Calc Period End Date' and new variable 'CumulPos' in FeeConfig. Added message attribute Money Amount.
9.0	December 2024	Updates for version 18 monthly release - Added field 'split by security' to Billing Fee Config Calculator and attributes 'BillingFeeFullPeriod and MatchSecurity' in Fee Billing Rule.
10.0	February 2025	Updates for version 18 monthly release - Updated Viewing Trade Statement.
11.0	April 2025	Updates for version 18 monthly release - Added "Use Issuance Underlying" criteria to BO Position Reconciliation report.

**The nostro management capability allows the treasurer and settlements department to understand current and future cash requirements, thereby minimizing costs and maximizing profits by reducing payment defaults. The module provides the following functionality:**

- **Account maintenance for an Agent with a Processing Organization**
- **Standard Settlement Instruction maintenance**
- **Account Statement maintenance and generation**
- **Review and authorization of cash requirements (using the Inventory Position report), and capture of appropriate funding trades**
- **Automated generation of cash movements (principal exchanges, interest, management fees, upfront fees, termination fees, collateral, etc.)**
- **Payment default monitoring**
- **Automated cash sweeping between accounts**

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# 1. Overview

The nostro management capability is based on **SETTLE accounts**. A **SETTLE account** is associated with the agent that settles the trades of a processing organization.

**Inventory positions** are calculated by the Inventory engine based on transfers of cash and securities into SETTLE accounts. They can be monitored through the Inventory Position report which computes funding requirements over a user-defined period. Multiple types of positions are computed by the Inventory engine and viewed from the Inventory Position report.

Each position is calculated by trade date and by settlement date.

Account statement events are generated by the scheduled task ACCOUNT\_STATEMENT based on **inventory positions**, and **account statement configurations**. The Message engine subscribes to account statements events and generates **account statement messages** based on **statement message configurations**.

**Account interest trades** (interest bearing trades) are generated by the ACCOUNT\_INTEREST scheduled task based on **inventory positions** and **interest bearing rules**.

Account billing events are generated by the scheduled task ACCOUNT\_BILLING based on **inventory positions** and **account billing configurations**. The Billing engine subscribes to account billing events to generate **account management fees** (billing trades) based on **billing grids** and **fee billing rules**.

Billing trades and interest bearing trades are generated on the funding book of the processing organization.

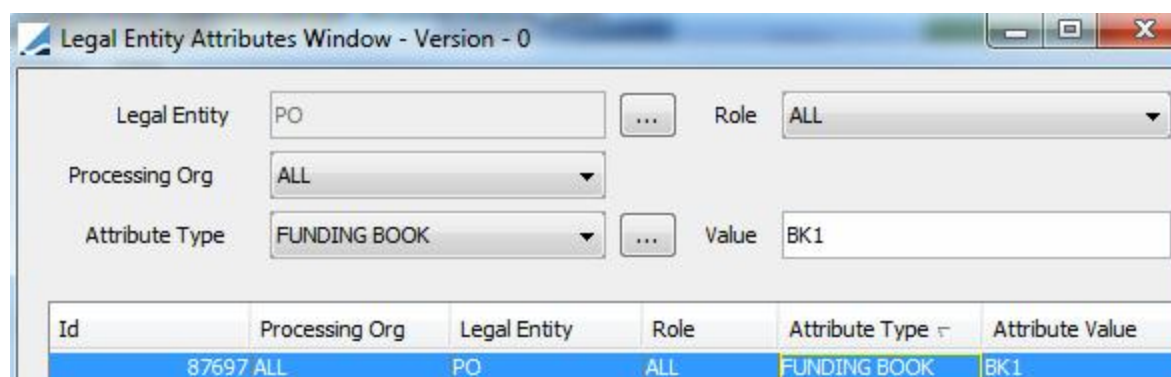
## 2. Configuration Requirements

### 2.1 Processing Organization Setup

Billing trades and Interest Bearing trades are generated on the funding book of the processing organization.

The funding book is set on the legal entity attribute "FUNDING BOOK".

From the Legal Entity window, load the processing organization, and click **Attributes**.



The screenshot shows the 'Legal Entity Attributes Window - Version - 0'. It contains the following fields and values:

- Legal Entity: PO
- Processing Org: ALL
- Attribute Type: FUNDING BOOK
- Role: ALL
- Value: BK1

Below the fields is a table with the following data:

Id	Processing Org	Legal Entity	Role	Attribute Type	Attribute Value
87697	ALL	PO	ALL	FUNDING BOOK	BK1

» Select the attribute "FUNDING BOOK" and enter the book name in the Value field. Then click **Save**.

If the attribute does not exist, click **...** next to the Attribute Type field and add it. Note that attribute types and values are case sensitive.

### 2.2 Settle Account Setup

A **settle account** is associated with the agent that settles the trades of the processing organization. You need to associate a settle account with each agent.

From the Legal Entity window, load an agent, click **Account** and select the Account panel.

Account Utilities Reports Process Help

Account Statements Attributes Interests Limits Consolidation Translation/Revaluation Clearing Browse

Account Name: AGENT ☐ Call Account

Processing Org: PO Ccy: ANY Id: 33206

Type: SETTLE SubType:  ☒ Auto/Template Acc

External Name:  Interface Rule: Aggregate

Description: Automatic Settle account

Legal Entity (F2): AGENT Role: Agent

Creation Date: 4/28/11 5:56:32 AM ☐ Create by Acc Engine only

Closing Account:  Last Closing Date:

Parent Account:  Parent Id: 0

External Settl.:  External Cash Account:

☐ Balance

Status:

Active From:

Active To:

☐ by Trade Date

Retroactivity:

☒ Interest Bearing ☐ Billing ☐ Is Proprietary

Proprietary Account:

Sub-Account Type:

Key	Value
AccountName	
AccountStructure	
AccountType	
CADefaultCurrency	
CATradeDDAInternal	
CCPOriginCode	
CFTCAccountNumber	
CFTCNetGrossReportingFlag	
CFTCSubAccount	

- » Enter the account name, and select the type SETTLE.
- » Enter the Processing Organization, the Legal Entity (the agent), the role Agent, and select the currency.  
The processing organization identifies the owner of the account, and the legal entity identifies the holder of the account.  
Please note that for a SETTLE account, you must specify a currency (USD in this example), and the role of the holder (Agent in this example).
- » You can also set the funding book at the account level in the account property "FUNDING BOOK". It takes precedence over the funding book set at the Processing Org attributes level.
- » Save this account.
- » You can choose [Help > Account configuration](#) for details.

## 2.3 Settlement and Delivery Instructions (SDIs)

The link between a trade and a settle account is done through the SDIs of the processing organization.

In this example, SDIs are specified for the processing organization PO through the agent AGENT.

From the Calypso Navigator, navigate to [Configuration > Legal Data > Entities](#), open the Legal Entity window and load PO. Then click **SDI's** and select the Edit panel to enter the SDI details.

**Settlement Delivery Instructions [151009/REL1510/calypso\_user]**

Utilities Help

Edit Attributes & Notes Browse

**SDI Id** 33207

Reference 33207

Role ProcessingOrg

Beneficiary PO ...

Benef. Name

Ccy ANY ...

Pay/Rec BOTH

Description SWIFT/AGENT/0555-3480

☐ Link SDI

Method SWIFT Add

Identifier ...

Cash/Security BOTH

Contact Settlement

Processing Org ALL

Products ANY ...

SD Filter ...

Trade CounterParty ALL ...

☒ Preferred Priority 0

Effective From

Effective To

☐ by Trade Date

Agent: AGENT [intermediary] [intermediary2] Direct

Code AGENT ... A/C 0555-3480 ☒ Msg

Contact Settlement GL A/C AGENT ...

Name Sub A/C R-Ship

- » Select the role ProcessingOrg, and select the processing organization from the Beneficiary field.
- » Select the settlement method from the Method field.
- » If you want the SDIs to be automatically assigned to trades, check the Preferred checkbox.
- » Select all other criteria as needed.
- » In the Agent panel, click ... to select an agent in the code field.
- » In the A/C field, enter the account number of the processing organization at the agent.
- » In the GL A/C field, click ... to select the settle account that you have previously created (the agent's account at the processing organization).
- » Save the SDIs.

- » You can find details on how to setup SDIs in the Calypso Settlements documentation .

At this point, if you enter trades using these SDIs, the inventory position of account AGENT will be populated.

## 2.4 Workflow

You need to modify the transfer workflow so that once a statement is created, the transfers that were taken into account should not be amendable or cancelable.

- » Thus, a workflow rule can be added on the transitions for the CANCEL and AMEND actions in order to forbid any modifications on transfers: CheckStatementFlag. A message will alert the user when trying to apply those actions.



- » Another solution is to reverse the initial transfer in case of update or cancel. The engine parameter XFER\_USE\_REVERSE must be set to true using **Utilities > Maintenance > Monitoring > Engine Thread** from the Calypso Navigator.

The same condition applies in the case of back valued trades. The Real Settle date should be greater than the last Statement run date.

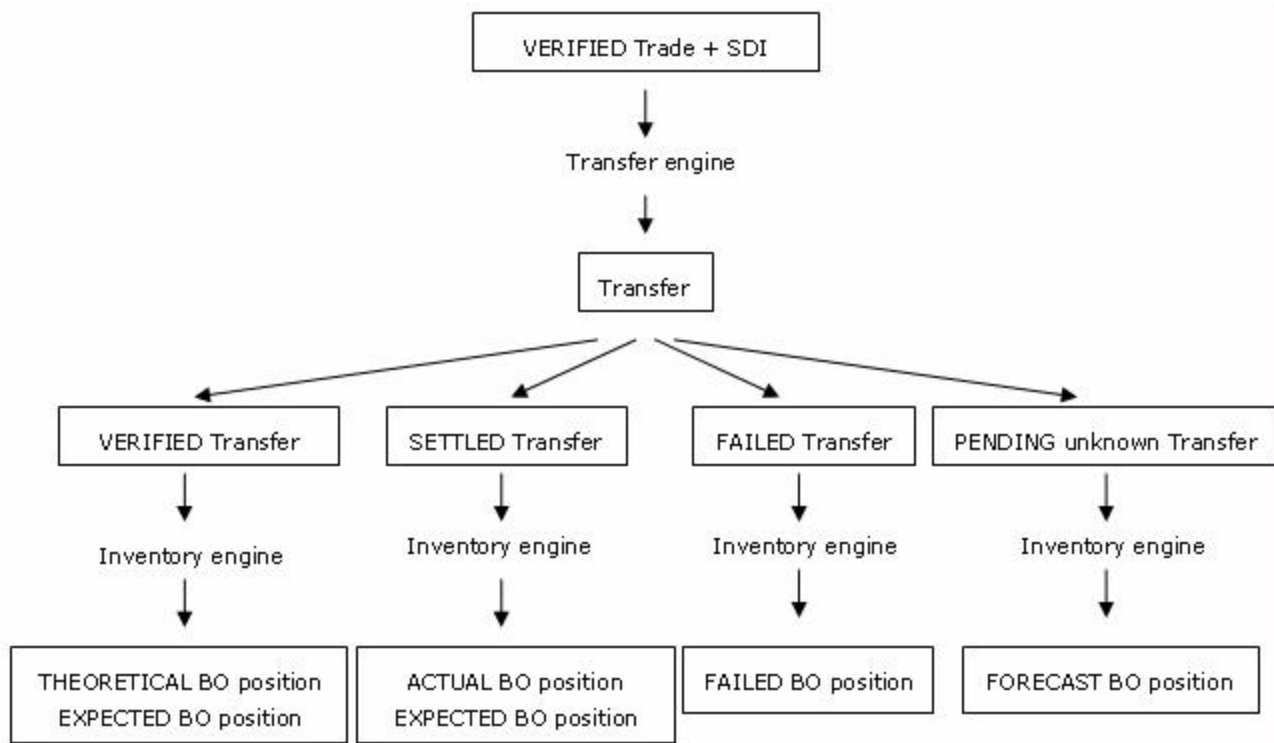
- » In this case, the workflow rule CheckSettleDate can be set on all transitions for which the resulting status is SETTLED.
- » Make sure that the CheckStatementFlag is in the "mandatoryTransferRule" domain.
- » Make sure that the Transfer engine uses the XFER\_USE\_REVERSE logic (engine parameter XFER\_USE\_REVERSE set to true using **Utilities > Maintenance > Monitoring > Engine Thread** from the Calypso Navigator.



## 3. Generating Inventory Positions

**Inventory positions** are computed by the Inventory engine based on transfers of cash and securities. They can be monitored through the Inventory Position report which reports funding requirements over a user-defined period.

### *Inventory Position Flow*



### 3.1 Inventory Engine Configuration

The Inventory engine is configured in the Engine Manager of Web Admin: event subscription and engine parameters.

The Inventory engine can subscribe to the following events:

- PSEventTransfer
- PSEventProcessTransfer

The Inventory engine uses the following engine filter:

- InventoryEventFilter. It only accepts known transfers related to a processing organization.

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

If a parameter is not available for setup, you can register it in the "engineParam" domain.

Environment properties are specified in your Environment.

Parameters and Properties	Description
EXCLUDE_STATUS	<b>Engine Parameter</b> Comma-separated list of status codes that are included in the "failed position".
INIT_DATE	No longer used as of version 14.1.
INV_MAX_POSITION	<b>Engine Parameter</b> Number of positions that will be kept in memory by the Inventory engine. For example, a value of 10000 will allow a maximum of 10000 cash positions and 10000 security positions to be kept in the Inventory Engine memory. The default value of 0 means no limit.
INVENTORY_LOAD_TRADE	<b>Environment Property</b> True or False. When false, trades are not loaded in the inventory engine. Default is True.
MAX_BATCH_EVENT	<b>Engine Parameter</b> 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. Allows controlling engine memory usage, therefore improving the performance.
MAX_QUEUE_SIZE	<b>Engine Parameter</b> Maximum number of events buffered on an engine event queue. 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. Allows controlling engine memory usage, therefore improving the performance.
ORACLE12_BATCH_MODE	<b>Environment Property</b> True or false. Default is true. When true, and database is Oracle 12 (or greater), the saving of inventory positions is optimized by using batch mode for events processing and engine_process table.
POSITION_FILTER	<b>Engine Parameter</b> If value equals CASH the inventory engine calculates only cash positions, if value equals SECURITY it calculates only security positions, otherwise it calculates both. Default is empty.

Parameters and Properties	Description
PricingEnv	<b>Engine Parameter</b> Pricing environment used by the engine. If not set, the default Pricing Environment of the user running the engine will be used.
PROJECTED_DAYS	No longer used as of version 14.1.
TIMEOUT_RESTART	<b>Engine Parameter</b> Number of seconds to wait before an engine restarts after MAX_QUEUE_SIZE has been reached. The default value is 3600 seconds (1 hour).
TWO_PHASE_ENGINE_NUMBER_OF_RETRY	<b>Environment Property</b> Number of times the engine will retry to process the list of events in the TwoPhaseEngine used by Inventory engine, Margin Call Position engine and Position engine. Default value is 3.

## 3.2 Starting the Inventory Engine

The Inventory engine can be started from the Engine Manager in Web Admin.

The Inventory engine publishes the following events:

- PSEventInventoryCashPosition
- PSEventInventorySecurityPosition

► Please refer to Calypso Web Admin documentation for complete details.

### 3.2.1 Inventory Positions Definition

Inventory positions are computed based on transfers of cash and securities.

Multiple types of positions are computed by the inventory engine and viewed from the Inventory Position report.

#### Actual Position

The actual position contains transfers that have settled.

#### Bank Confirmed Position

The "bank confirmed" position is the cash position confirmed by bank statements MT940/950.

#### Failed Position

The failed position contains transfers for which the settlement has failed. Status codes corresponding to failed transfers should be set in the domain "transferFailedStatus".

You can also use domains "transferSettledStatus" and "transferCashSettledStatus" (for cash transfers only) as described below.

If domain "transferFailedStatus" is not empty, then the failed position is determined based on the status codes in that domain. The other status codes populate the actual position.

If domain "transferFailedStatus" is empty, the system considers domain "transferCashSettledStatus" instead.

- If domain "transferCashSettledStatus" is not empty, the status codes in that domain populate the actual cash position, and the status codes in domain "transferSettledStatus" populate the actual security position. The other status codes populate the failed position.
- If domain "transferCashSettledStatus" is empty, the status codes in domain "transferSettledStatus" populate the actual cash and security positions. The other status codes populate the failed position.

Note that the transfer status codes set in the engine parameter EXCLUDE\_STATUS are also added to the failed position.

### Theoretical Position

The theoretical position contains all transfers regardless of their status (except status codes set in engine parameter EXCLUDE\_STATUS).

### Forecast Position

The forecast position shows the position of forecasted unknown transfers.

### Expected Position

The expected position shows the positions based on the Available Date of the transfers when not settled, else it is based on the Real Settle Date. However, if Available Date < Settle Date, the expected position is still based on Available Date when the transfer is settled.

By default, the Available Date is set to the Trade Date.

You can set it to Value Date + number of days using domain "XferAvailableDate". Add a value that gives the number of days for a given static data filter in the following way: "<Number of Days>.<Static Data Filter>".

For example: "1.MyEquityFilter", and "2.MyBondFilter".

If the transfer is accepted by MyEquityFilter, "1" business day is added to the Value Date using the Book holidays of the transfer to compute the Available Date.

For MyBondFilter, it would be 2 business days.

You can also add the number of days to the Trade Date, if you set the Comment to "TradeDate".

For example, if you set: Value = "1.MyFilter" and Comment = "TradeDate", then the Available Date is Trade Date + 1 business day.

**[NOTE: As soon as this domain contains 1 value, the Available Date defaults to the Value Date. Make sure that you configure ALL your transfers accordingly]**

You can add Value = SetDefault to the "XferAvailableDate" domain.

If Comment = true, the XferAvailableDate is defaulted based on the configuration when a transfer is modified (default behavior).

If Comment = false, the XferAvailableDate is not defaulted when a transfer is modified.

## Statement Position

The statement position shows back-value movements and back-value failed movements (transfer value date is before transfer settlement date).

► See [Back-dated Movements](#) for setup details.

## Position Calculation

Each position is calculated by book / agent / agent account, and for the following dates:

- trade date
- settlement date
- available date (for client positions only). Client positions are calculated on transfers with a given legal entity, for which the processing org and the agent are the same.
- settlement frozen date, allows simulating a snapshot

► [Settlement Frozen Date](#) for setup details

All inventory positions to be monitored by the Inventory engine are stored in the domain "InventoryPositions" in the form "<position class>-<position type>-<position date>". For example, "INTERNAL-ACTUAL-SETTLE".

### 3.2.2 Processing Transfers

If the transfer is a new transfer or is in CANCELED status, the THEORETICAL positions by SETTLE date and TRADE date are updated.

If the transfer has a status of SETTLED or the transfer is in CANCELED status and was previously in SETTLED status, the ACTUAL position by SETTLE date is updated.

You can define the list of transfer status codes to be considered as CANCELED in the domain "transferCanceledStatus".

If the transfer is in status FAILED or is in another status but was previously in a FAILED status (or any status in the "transferFailedStatus" domain), the FAILED position by SETTLE date is updated.

As described above, you can also define a domain "transferSettledStatus" that contains all settled status codes, and remove the domain "transferFailedStatus". All status codes not in "transferSettledStatus" will be considered not settled.

The failed position is updated by checking the value date and the settle date of the transfers. To update the settle date on a failed transfer, you can run the scheduled task FAILED\_TRANSFERS and it will modify the settle date of failed transfers to the following day.

If a failed transfer is later settled, it will then appear in the ACTUAL position.

### 3.2.3 Updating Positions

The positions corresponding to the SETTLE DATE or TRADE DATE of the transfer are retrieved.

If no position exists for the given transfer, a new position is created by duplicating the latest known position before that date. If no position existed before, a new position is created.

If the transfer is in CANCELED status (or any status in the domain "transferCanceledStatus"), amounts are removed from the positions. Otherwise, the amounts are added to the positions.

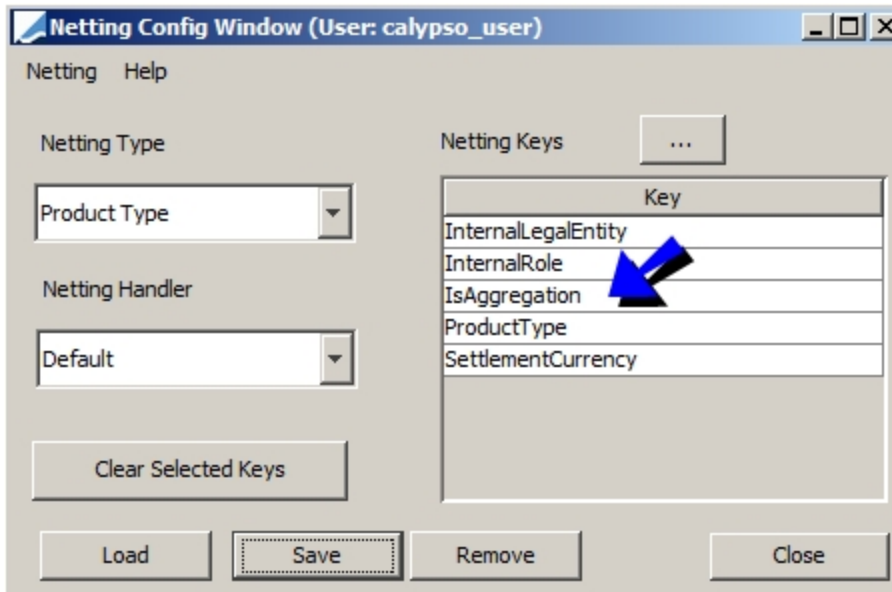
When the positions are updated, all future positions which may depend on the updated position are updated.

### 3.2.4 Computing Custom Positions

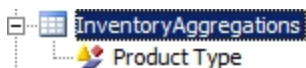
In addition to computing positions by Book / Agent / Agent Account, you can add custom criteria to compute and display the positions. For example, Book / Agent / Agent Account / Product Type.

For this, you need to define the custom criteria using a Netting Config that contains the IsAggregation criteria. From the Calypso Navigator, navigate to **Configuration > Settlements > Netting**.

Sample setup for computing positions by Product Type: You need to define a netting config with keys "IsAggregation" and "ProductType".

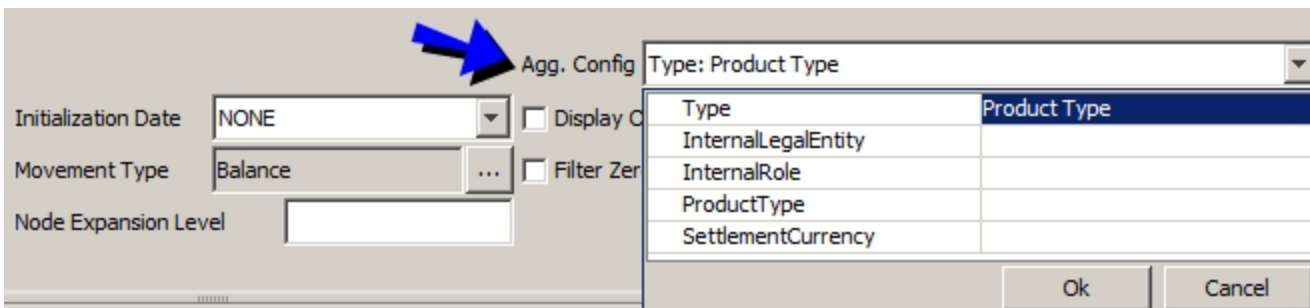


Then add the netting config to the domain "InventoryAggregations".



Then restart the Inventory engine.

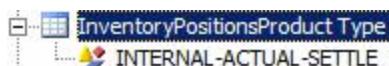
In the Inventory Position report, select the aggregation type "Agg. Config = Product Type" (the netting config you have created) to view the positions by product type.



You can also configure aggregation related columns using [Data > Configure Columns](#).

You can define which positions are computed for a given aggregation using the domain "InventoryPositions<aggregation name>", for example "InventoryPositionsProduct Type". Then you can define the positions in the form "<position class>-<position type>-<position date>". For example, "INTERNAL-ACTUAL-SETTLE".

Create a domain for the "InventoryPositions<aggregation name>", then add the positions you want to compute as values.



In that case, it will only compute that position. If the "<aggregation name>" domain is not defined, it will compute all positions.

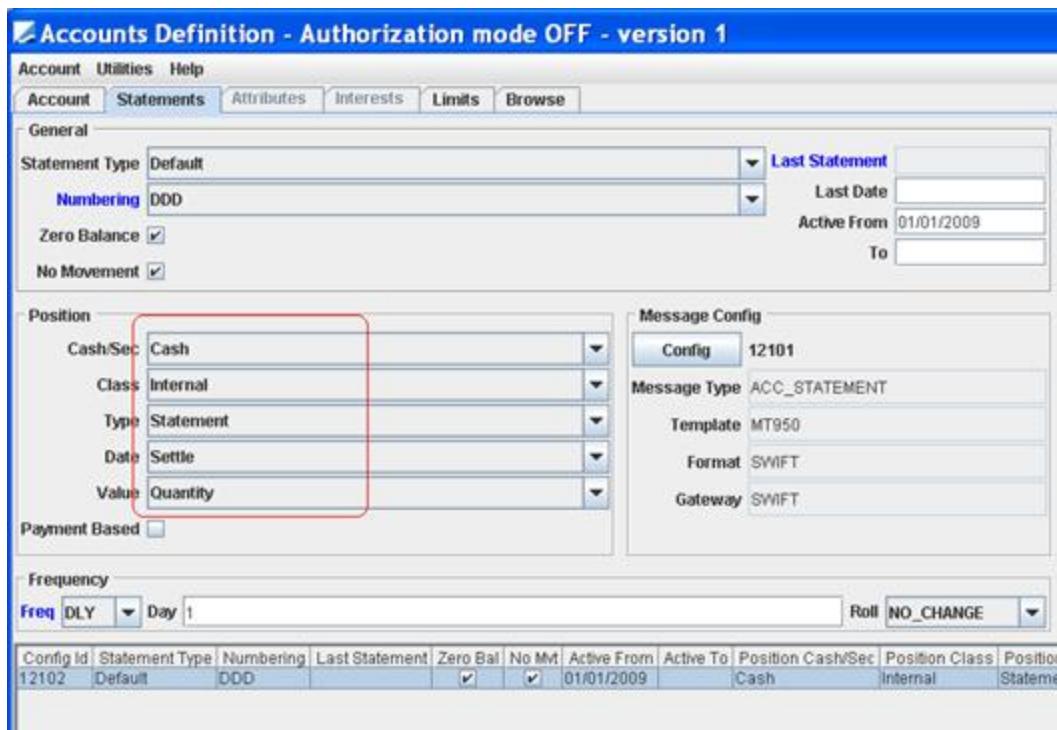
### 3.2.5 Back-dated Movements

In order to monitor back-value movements in statements, a STATEMENT position has been added. You need to add "INTERNAL-STATEMENT-SETTLE" to the domain "InventoryPositions".

The domain "transferStatementStatus" has also been added – It should contain the transfer status codes that populate the position "INTERNAL-STATEMENT-SETTLE": FAILED – SETTLED – VERIFIED.

The environment property XFER\_BV\_REAL\_SETTLE\_DATE must be set to true.

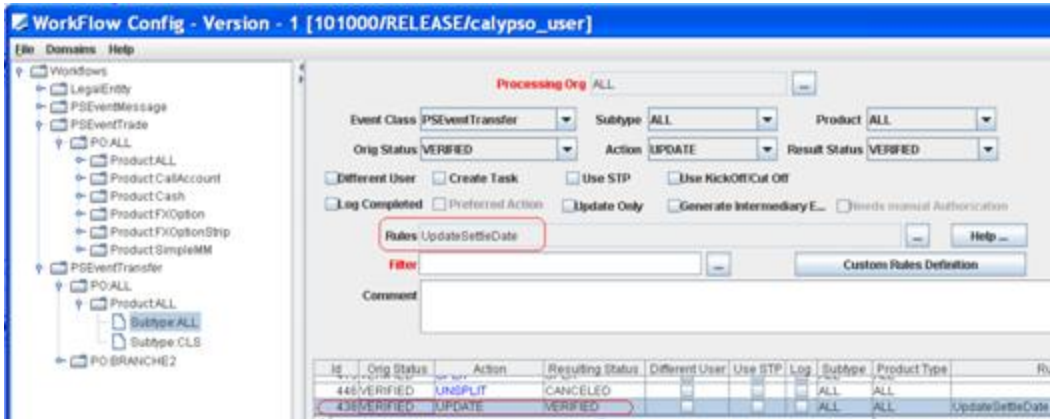
The statement account can be triggered for this type of position:



Config Id	Statement Type	Numbering	Last Statement	Zero Bal	No Mvt	Active From	Active To	Position	Cash/Sec	Position Class	Position
12102	Default	DDD		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	01/01/2009		Cash	Internal	Stateme	

The following rule must be added to the transfer workflow:





In case the Statement Config is NOT based on Payment, iterator MT950NonPaymentIterator should be used instead of MT950Iterator in the MT950 XML template - MT950NonPaymentIterator iterates over the netted transfers rather than the Underlying Transfer.

```
<SwiftField name="Opening Balance" tag=":60a:" value="OPENING_BALANCE" modes="M"
  <SwiftFieldOption letter="F" format="1!a6!n3!a15d" />
  <SwiftFieldOption letter="M" format="1!a6!n3!a15d" />
</SwiftField>
<SwiftSequence name="StatementLine" modes="M" iterator="MT950NonPayment">
  <SwiftField name="Statement Line" tag=":61:" format="6!n[4!n]2a[1!a]15d1!a3!c:
  </SwiftSequence>
<SwiftField name="Closing Balance (Booked Funds)" tag=":62a:" value="CLOSING_B.
  <SwiftFieldOption letter="F" format="1!a6!n3!a15d" />
  <SwiftFieldOption letter="M" format="1!a6!n3!a15d" />
```

### 3.2.6 Settlement Frozen Date

In order to activate this position you need to:

- Add INTERNAL-THEORETICAL-SETTLE(FROZEN) to the domain "InventoryPositions".
- Add the rule CheckAllowCancel to the domain "mandatoryTransferRule".

The rule ensures that the transfer is not UPDATED or ends up in a Canceled status once it is part of the Frozen position. It is possible to CANCEL a future transfer up to the value date of the transfer.

This position is using the transfer settlement amount and the position date as follows:

- Settlement Frozen Date = Booking Date of the transfer when Booking Date > Value Date
- Settlement Frozen Date = Value date of the transfer otherwise.

## 3.3 Inventory Snapshots

The INVENTORY\_SNAPSHOT scheduled task allows freezing an inventory position at any time. You can run the Inventory Position report and BO Position Reconciliation report on inventory snapshots.

► Please refer to Calypso Scheduled Tasks documentation for details.

## 3.4 Inventory Position Check

This function allows checking the inventory position before accepting a trade. The inventory position is checked by the LifeCycle engine based on Inventory Check configurations. The Inventory Check configuration allows selecting the workflow transition where the check should be performed and the nature of the check. If the Inventory Check configuration is satisfied, the action of the selected workflow transition is applied, otherwise the action is not applied and the LifeCycle engine generates an EX\_INVENTORY\_CHECK exception task.

### 3.4.1 Setup Requirements

#### Domains

Domain name = lifeCycleEntityType, Value = InventoryCheck

Domain name = exceptionType, Value = INVENTORY\_CHECK

Domain name = eventType, Value = EX\_INVENTORY\_CHECK, Comment = "Exception generated by Inventory Check"

Domain name = groupStaticDataFilter, value = BOPosition

#### LifeCycle Engine

Please make sure you have started the LifeCycle engine as it is not started by default.

The LifeCycle engine must be subscribing to PSEventTrade and use the event filter LifeCycleEngineEventFilter.

**Engine Configuration**

Unable to edit a running engine. Displaying in read-only mode.

Engine Name: LifeCycleEngine	Engine ID: 421010	Max Queue Size: 1	Max Batch Size: 1																																
Engine Class: com.calypso.engine.lifecycle.LifeCycleEngine	Number of Threads: 1	Event Pool Policy: 1																																	
Display Name: LifeCycle Engine	Application Type: EngineServer	Pricing Environment: 1																																	
Description:	Save settle position changes: 1																																		
Persisted Event Configuration: PSEventAccountBilling PSEventLifeCycle PSEventTrade PSEventTransfer	Event Filters: AllTransfersKnownEventFilter LifeCycleEngineEventFilter	Configuration attributes	<table border="1"> <thead> <tr> <th>Attribute Name</th> <th>Attribute Value</th> </tr> </thead> <tbody> <tr><td>BALANCE_MODE</td><td></td></tr> <tr><td>CLASS_NAME</td><td></td></tr> <tr><td>DISPLAY_NAME</td><td></td></tr> <tr><td>DateType</td><td></td></tr> <tr><td>EVENT_ORDER</td><td></td></tr> <tr><td>EXCLUDE_STATUS</td><td></td></tr> <tr><td>IGNORE_ACTION</td><td></td></tr> <tr><td>INSTANCE_NAME</td><td></td></tr> <tr><td>INV_MAX_POSITION</td><td></td></tr> <tr><td>LIQUIDATION_TIMEOUT</td><td></td></tr> <tr><td>MAX_TIMER_POSITION</td><td></td></tr> <tr><td>MCC_DATE_KEYWORD</td><td></td></tr> <tr><td>MCC_FEED_NAME</td><td></td></tr> <tr><td>MCC_IGNORE_CONFIG_CHANGES</td><td></td></tr> <tr><td>MCC_INTRA_DELAY</td><td></td></tr> </tbody> </table>	Attribute Name	Attribute Value	BALANCE_MODE		CLASS_NAME		DISPLAY_NAME		DateType		EVENT_ORDER		EXCLUDE_STATUS		IGNORE_ACTION		INSTANCE_NAME		INV_MAX_POSITION		LIQUIDATION_TIMEOUT		MAX_TIMER_POSITION		MCC_DATE_KEYWORD		MCC_FEED_NAME		MCC_IGNORE_CONFIG_CHANGES		MCC_INTRA_DELAY	
Attribute Name	Attribute Value																																		
BALANCE_MODE																																			
CLASS_NAME																																			
DISPLAY_NAME																																			
DateType																																			
EVENT_ORDER																																			
EXCLUDE_STATUS																																			
IGNORE_ACTION																																			
INSTANCE_NAME																																			
INV_MAX_POSITION																																			
LIQUIDATION_TIMEOUT																																			
MAX_TIMER_POSITION																																			
MCC_DATE_KEYWORD																																			
MCC_FEED_NAME																																			
MCC_IGNORE_CONFIG_CHANGES																																			
MCC_INTRA_DELAY																																			
Engine Manager Configuration: engineserver	Start on Startup: <input type="checkbox"/>	Go Back																																	

### 3.4.2 Inventory Check Configuration

Bring up the Inventory Check Configuration window using menu action `refdata.inventory.InventoryCheckConfigWindow`.

- » Click **New** to create a configuration and enter the fields described below as needed.
- » Click **Save** to save the configuration.

Fields	Description
Config ID	Given by the system upon saving.
Is Security Check	Check to check security positions, or clear to check cash positions.
Treat mirror as one	Check to check that both the trade and the mirror trade (if any) satisfy the configuration, or clear to ignore the mirror trade (if any).
Task Comment	Enter a comment as needed.
SDFilter	Mandatory.  Select a static data filter to restrict the trades to which the check is applied.  Example: For Bond Buy trades you want to check that the Cash Position is sufficient, and for Bond Sell trades you want to check that the Security Position is sufficient.
Workflow	Mandatory.

Fields	Description
Transition	Select the Trade workflow transition to which the check applies. If the configuration is satisfied, the action of the selected transition is applied, otherwise the action is not applied and an EX_INVENTORY_CHECK exception task is generated.
Inventory Template	<p>Mandatory.</p> <p>Select an Inventory Position report template to determine which position needs to be checked.</p> <p>The system only uses the template to get the class/type/date, the movement type and the aggregation. Please make sure that the Inventory Aggregation in your template if applicable, matches the other criteria in the Inventory Check Configuration.</p>
Operator	<p>Mandatory.</p> <p>Select an operator to check the position. The trade quantity (for security positions) / settlement amount (for cash positions) is added to / subtracted from the position (depending on the trade direction) and compared to 0 using the operator.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>If you select <b>Greater (&gt;)</b>, the check is <b>Trade Quantity/Settlement Amount +/- Position &gt; 0</b></li> <li>If you select <b>Less or Equal (&lt;=)</b>, the check is <b>Trade Quantity/Settlement Amount +/- Position &lt;= 0</b></li> </ul>
Account check	<p>Mandatory.</p> <p>Select the aggregation level to be checked.</p> <p><i>Make sure that the selection matches the criteria of the Inventory Position report template.</i></p> <ul style="list-style-type: none"> <li><b>Book/Agent/Account</b> - Check is done at Book/Agent/Account level.</li> <li><b>Book</b> - Check is done at book level.</li> <li><b>GL Account (from XferRule)</b> - Check is done at Agent/Account level on PO Accounts</li> <li><b>ClientAccount</b> - Check is done at Agent/Account level on trades with trade keyword ClientAccount</li> <li><b>Payer Pledge Account</b> - Check is done at Agent/Account level. When selected, for margin calls and simple transfers with POPledgeSDI non null or PledgeSDI=true: <ul style="list-style-type: none"> <li>If the transfer rule direction is Pay, check the PO GL Account.</li> <li>If the transfer rule direction is Receive, check the Cpty Intermediary Account.</li> </ul> </li> </ul>
Reference Date check	<p>Select SettleDate or TradeDate - The date on the trade to use as a reference date for the inventory check.</p> <p>Default is SettleDate.</p>
Period check	<p>Select 0D, 1D, 2D, TradeDuration.</p> <p>This defines the Period End Date to check the position.</p> <p>Default is TradeDuration.</p> <p>The system checks positions from Period Start Date until Period End Date with:</p>

Fields	Description
	<p>Period Start Date = Reference Date check</p> <p>Period End Date = Trade End Date if Period check=TradeDuration, Period Start Date + 0D/1D/2D Cal or Bus if Period check=xD</p> <p>For Repo/SecLending trades, you need to set Period check = 0D so that securities are not checked after substitution.</p> <p>For an OPEN Repo, Trade End Date = Current date + Notice days.</p>
Is Bus. Day	<p>Only applies if Period check is 0D, 1D or 2D.</p> <p>Check to indicate that the days are business days, or calendars otherwise.</p>
Holidays	<p>Only applies if Is Bus. Day is checked.</p> <p>Holiday calendar to determine the business days.</p>

## 3.5 Custom Position Type

You can setup the computation of a custom position based on a custom transfer attribute. Custom position types can be defined for Internal positions and Client positions.

### 3.5.1 Configuration Requirements

Example with "Disbursed" position.

In the domain "cashInventoryCustomPositionType", add Value = Disbursed.

In the domain "InventoryCashBucketFactory", add Value = CustomBucketInventoryCash.

In the domain "cashInventoryCustomPositionType.Disbursed", add the transfer status codes eligible for this position:

Value = ALLOCATED

Value = SETTLED

In the domain cashInventoryCustomBucket, add the buckets. You can define up to 10 buckets (from Bucket0 to Bucket9).

Example:

Value = Bucket0

Value = Bucket1

etc.

In the domain "cashInventoryCustomBucket.Bucket#", define the actual name of the buckets:

Example:

Domain = cashInventoryCustomBucket.Bucket0

Value = Capital Retain

Domain = cashInventoryCustomBucket.Bucket1

Value = Treasury

etc.

In order for the Inventory engine to populate those buckets, the transfer attribute "Custom Bucket" must contain the bucket name.

Example: Custom Bucket = Capital Retain

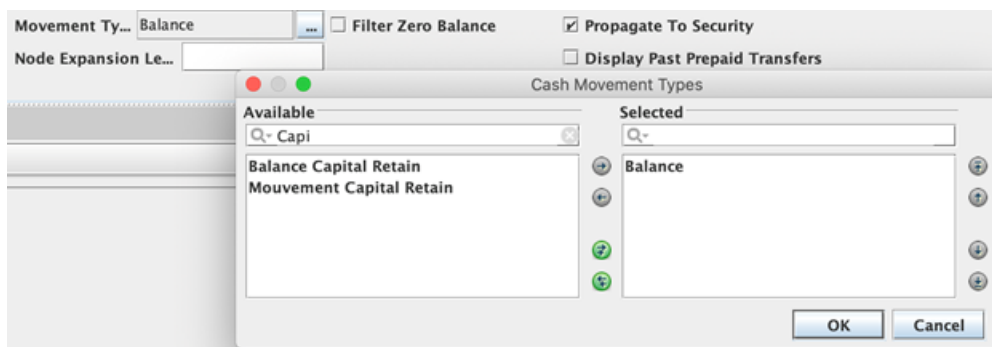
You can add "Custom Bucket" to the "XferAttributes.UPDATE\_XFER\_ATTR.Editable" domain so that you can set the value of the attribute when applying action UPDATE\_XFER\_ATTR to a transfer.

This way, the Inventory engine will create a bucket named "Capital Retain" for the Disbursed position type and the transfers with Custom Bucket = Capital Retain.

### 3.5.2 Inventory Report

Select the cash movement types: Balance <bucket name> and Movement <bucket name> as needed.

Example:



Report Data View Export Mark

Financing

Criteria

Book Hierarchy

Class	Type	Date
Internal	Disbursed	Settle

Cash							
ProcessingOrg	Book	Currency	Agent	Account	Position Type	Movement Type	14 juin 2021
MYPO	Book: MYBOOK	EUR	MYAGENT	MySettleAccount	DISBURSED	Balance Capital Retain	-1 000,00
MYPO	MYBOOK	EUR	MYAGENT	MySettleAccount	DISBURSED	Movements Capital Retain	-1 000,00

## 4. Viewing Inventory Positions

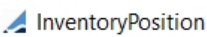
From the Calypso Navigator, navigate to **Reports > Nostro/Custodian Positions > Inventory Position** (menu action `reporting.ReportWindow$BOPosition`) to review the inventory positions.

You can display real-time Inventory positions computed by the Inventory engine (nostro positions), or inventory snapshots generated by the INVENTORY\_SNAPSHOT scheduled task.

- Transfer and Inventory engines should be running to compute inventory positions.
  - Liquidation engine should be running to perform Positions reconciliation.
  - Margin Call engine should be running for collateral positions.
- Refer to *Calypso Cash Management documentation* for details on generating inventory positions.
- Refer to *Calypso Collateral Management documentation* for information on generating margin call positions.

Menus common to all reports are described under [Help > Menu Items](#).

### 4.1 Report Example

 InventoryPosition

Report Data View Export Market Data Process Utilities Help

Financing

Criteria

Start: 04/29/2022 End: 05/02/2022 Use Tenor Template De

Class Type Date  
Internal Theoretical Settle

Aggregation Book/Agent/Account

Agent Account Id

Position Value Quantity Custom Filter

Position Dire... All Offset... Cash/Sec Both

Closing ...

Books Currencies

Account Template Include SubAccount Display Only Multiple A

Movement Type Balance Filter Zero Balance

Node Expansion Level

Cash

Account	Currency	Apr 29, 2022	Apr 30, 2022
Account: PO@NOSTRO_AGENT_USD			
PO@NOSTRO_AGENT_USD	USD	-254,166.67	-254,166.67
PO@NOSTRO_AGENT_USD	USD	-6,330,845.91	-6,330,845.91
PO@NOSTRO_AGENT_USD	USD	-717,789.68	-717,789.68
PO@NOSTRO_AGENT_USD	USD	-37,315,680.57	-37,315,680.57
PO@NOSTRO_AGENT_USD	USD	-11,801,936.00	-11,801,936.00

Security





ProcessingOrg	Book	Product Id	PRODUCT_CODE.ISIN
INTCP	IntBook	4134	US-700-900
PO	Global	6803	US912810EX29
PO	Book01	4103	US-200-300
PO	Book01	6804	US912810QC53



### Partial picture of Inventory Position report

The report shows two panels: Cash for cash positions, and Security for security positions.


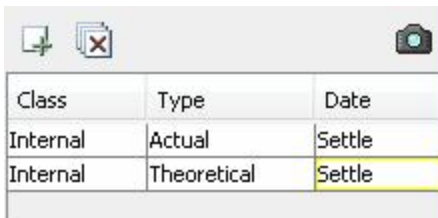
Use one of the following methods to run the report:


- » You can check / uncheck **View > Show Frame > Criteria** to display / hide the search criteria.
- » Enter selection criteria at the top of the report window and click  to load both cash and security positions. The selection criteria are described below.  
When you select the Cash panel, you can view selection criteria specific to cash positions only.  
When you select the Security panel, you can view selection criteria specific to security positions only.  
You can also click  in each panel to only load the corresponding positions.  
You can configure the columns of the report. See **Help > Menu Items** for details.
- » You can also choose **Report > Load Template**, select a template then click **Load**.
- » You can select a template and click  to display the number of objects that will be loaded from the database before loading the report.
- » You can click  to print the report results.

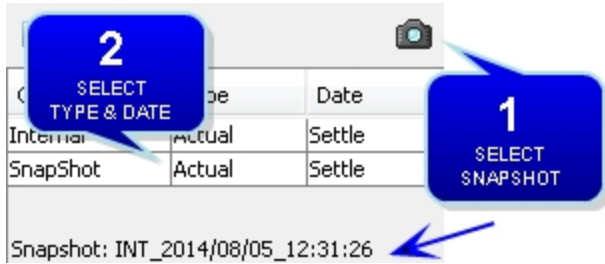


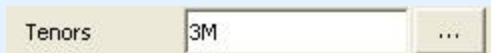
Note that for the Pivot view and the Aggregation view, the print icon is disabled.











You can use [Ctrl+P] or [Ctrl+L] to print the report, or you can export the report to Excel and print it from there.




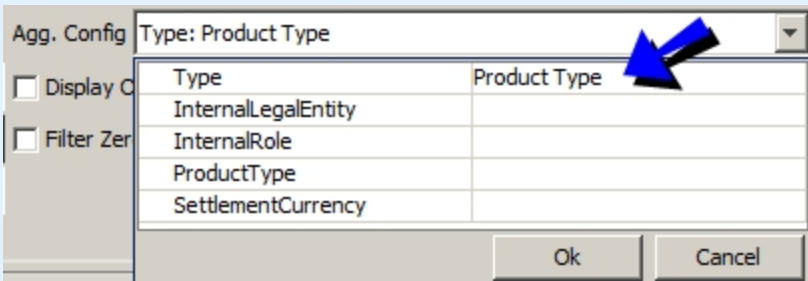
### Criteria Details

Criteria	Description									
Class Type Date	<p>Click  to add a combination of position class, type, and date.</p> <div data-bbox="357 1323 792 1539"><p>The image shows a UI for selecting criteria. It has three icons at the top: a green plus icon, a red X icon, and a camera icon. Below them is a table with three columns: Class, Type, and Date. The table has two rows of data. The first row has 'Internal', 'Actual', and 'Settle'. The second row has 'Internal', 'Theoretical', and 'Settle'. The 'Settle' cell in the second row is highlighted with a yellow border.</p><table><tr><th>Class</th><th>Type</th><th>Date</th></tr><tr><td>Internal</td><td>Actual</td><td>Settle</td></tr><tr><td>Internal</td><td>Theoretical</td><td>Settle</td></tr></table></div> <p>You can select a combination of Internal, External and SnapShot positions (see Snapshot below for details on selecting snapshots).</p> <p>You can also select Client positions or Margin_Call positions. These positions cannot be combined with other positions as the display fields are not compatible.</p> <p><b>Position Class</b></p> <p>The following values are available:</p> <ul style="list-style-type: none"><li>External – View positions imported into the system from external sources.</li></ul>	Class	Type	Date	Internal	Actual	Settle	Internal	Theoretical	Settle
Class	Type	Date								
Internal	Actual	Settle								
Internal	Theoretical	Settle								


Criteria	Description
	<ul style="list-style-type: none"> <li>Internal – View positions calculated by the Inventory Engine.</li> <li>Client – View client positions calculated by the Inventory Engine.</li> <li>Margin_Call – View margin call positions calculated by the Margin Call Engine.</li> <li>SnapShot – View positions from an inventory snapshot, provided you have selected an inventory snapshot.</li> </ul> <p><b>Position Type</b></p> <p>Click  to select a position type. The following values are available:</p> <ul style="list-style-type: none"> <li>Actual – View the position of settled transfers, based on the real settlement date and real settlement amount.</li> <li>Bank Confirmed – Cash position confirmed by bank statements MT940/MT950.</li> <li>Expected – View the positions based on the Available Date of the transfers when not settled, else it is based on the Real Settle Date. <ul style="list-style-type: none"> <li>▶ Refer to <i>Calypso Cash Management documentation</i> for details on the Available Date.</li> </ul> </li> <li>Forecast – View the forecasted position of unknown transfers.</li> <li>Theoretical – View the positions of any transfers, based on the expected settlement date and expected settlement amount.</li> <li>Not settled – View the positions of unsettled /failed transfers. <ul style="list-style-type: none"> <li>▶ Refer to <i>Calypso Cash Management documentation</i> for details on failed transfers.</li> </ul> <p>You can set the environment property <code>KEEP_OPPOSITE_XFER_FROM_INVENTORY_DETAIL</code> to true to display both legs of a repo when both the start and end legs are failed. Only one failed transfer is displayed otherwise.</p> <p>Default is False.</p> </li> <li>Statement – View the position of back-value movements and back-value failed movements (transfer value date is before transfer settlement date).</li> <li>Rolled_Interest – Only applies to margin call interests rolled into "Margin_Call" positions. <ul style="list-style-type: none"> <li>▶ Refer to <i>Collateral Management documentation</i> for details.</li> </ul> </li> </ul> <p><b>Position Date</b></p> <p>Select a position date. The following values are available:</p> <ul style="list-style-type: none"> <li>Trade – To load the position by trade date.</li> <li>Settle – To load the position by settlement date.</li> <li>Available – To load the position by available date. The available date applies to client positions only. It defaults to the trade date but can be customized.</li> </ul> <p><b>Snapshot</b></p>

Criteria	Description																								
	<p>To select an inventory snapshot:</p> <div></div> <p>1. Click . You will be prompted to select a snapshot generated by the scheduled task INVENTORY_SNAPSHOT.</p> <div></div> <p>2. Then select the Type and Date of the snapshot.</p> <p>▶ Please refer to Calypso Scheduled Tasks documentation for details on generating inventory snapshots.</p>																								
Start Date	Enter the start date from which you want to see the positions. You may input a date in the past or in the future.																								
End Date	<p>Enter the end date for the positions.</p> <p>When holiday calendars are selected under Data &gt; Configure Holidays:</p> <ul style="list-style-type: none"><li>If Data &gt; Calendar &gt; Calendar is checked, the dates that correspond to business days appear with a red background in the report results</li></ul> <table><tr><th>Sep 30, 2021</th><th>Oct 1, 2021</th><th>Oct 2, 2021</th><th>Oct 3, 2021</th><th>Oct 4, 2021</th></tr><tr><td>999,711.72</td><td>999,711.72</td><td>999,711.72</td><td>999,711.72</td><td>999,711.72</td></tr><tr><td>600,000.00</td><td>600,000.00</td><td>600,000.00</td><td>600,000.00</td><td>600,000.00</td></tr></table> <ul style="list-style-type: none"><li>If Data &gt; Calendar &gt; Business is checked, the dates that correspond to business days are removed from the report results</li></ul> <table><tr><th>Sep 30, 2021</th><th>Oct 1, 2021</th><th>Oct 4, 2021</th></tr><tr><td>999,711.72</td><td>999,711.72</td><td>999,711.72</td></tr><tr><td>600,000.00</td><td>600,000.00</td><td>600,000.00</td></tr></table>	Sep 30, 2021	Oct 1, 2021	Oct 2, 2021	Oct 3, 2021	Oct 4, 2021	999,711.72	999,711.72	999,711.72	999,711.72	999,711.72	600,000.00	600,000.00	600,000.00	600,000.00	600,000.00	Sep 30, 2021	Oct 1, 2021	Oct 4, 2021	999,711.72	999,711.72	999,711.72	600,000.00	600,000.00	600,000.00
Sep 30, 2021	Oct 1, 2021	Oct 2, 2021	Oct 3, 2021	Oct 4, 2021																					
999,711.72	999,711.72	999,711.72	999,711.72	999,711.72																					
600,000.00	600,000.00	600,000.00	600,000.00	600,000.00																					
Sep 30, 2021	Oct 1, 2021	Oct 4, 2021																							
999,711.72	999,711.72	999,711.72																							
600,000.00	600,000.00	600,000.00																							
Use Tenor	<p>Check “Use Tenor” to use a tenor instead of an end date. The Tenors field will appear.</p> <div></div>																								

Criteria	Description									
	<p>Click  to select tenors for which you want to see the positions.</p> <p>You can now display the tenors as columns names by choosing Data &gt; Tenors &gt; Display columns by tenor name.</p> <table><tr><th>1D </th><th>3D</th><th>1W</th></tr><tr><td>999,711.72</td><td>999,711.72</td><td>999,711.72</td></tr><tr><td>600,000.00</td><td>600,000.00</td><td>600,000.00</td></tr></table> <p>You can also choose the following menu items:</p> <ul style="list-style-type: none"><li>Data &gt; Tenors &gt; Roll Tenor to next date – When not selected and Calendar &gt; Business is selected, the Tenors that fall on business days are not shown. Example - If Tenor 3D is a business day, the report will show 1D, 2D, 4D, etc.  When selected and Calendar &gt; Business is selected, the Tenors are rolled and shown as business days. Example - If Tenor 3D is a business day, the report will show 1D, 2D, 3D (which represents 3 business days), 4D (which represents 4 business days), etc.</li><li>Data &gt; Tenors &gt; End Of – This only applies to W, M and Y tenors for end of the week, end of the month, end of the year. When not selected, 1W is Start Date + 7 calendar or business days depending on Data &gt; Calendar. Example – Sept 27 + 1W = Oct 4 in Calendar days and Oct 6 in Business days.  When selected, 1W is the end of the week following the start date depending on Data &gt; Calendar – Example Sept 27 + 1W = Oct 3 in Calendar days and Oct 1 in Business days.</li></ul>	1D 	3D	1W	999,711.72	999,711.72	999,711.72	600,000.00	600,000.00	600,000.00
1D 	3D	1W								
999,711.72	999,711.72	999,711.72								
600,000.00	600,000.00	600,000.00								
Template Description	Displays the template description if a template has been loaded, and a template description is set on the template. Template descriptions can be set using <a href="#">Configuration &gt; Reporting &amp; Risk &gt; Report Templates</a> from the Calypso Navigator.									
Books	<p>Click  to select a set of books as needed. You can also enter a comma-separated list of books.</p> <p> <b>[NOTE: Book names are case-sensitive]</b></p>									
ProcessingOrg	<p>Click  to select a set of processing organizations as needed. You can also enter a comma-separated list of processing organizations.</p> <p> <b>[NOTE: Processing organization codes are case-sensitive]</b></p>									
Include Child POs	When checked, the positions of the child POs are included in the report, if any, when a PO is selected.									
Aggregation	Select the aggregation level of the positions: Book/Agent/Account, Agent/Account, Agent, Book, Client, ProcessingOrg, Global, or Book/Agent.									
Currencies Securities	<p>The Currencies label on the Cash panel switches to Securities when you select the Security panel.</p> <p>Click  to select a set of currencies for cash positions, or click  to select a set of securities for security positions.</p>									
Account Template	You can select an Account Selector template as needed. When selected, the underlying									

Criteria	Description
	<p>accounts are loaded.</p> <p>You can click  next to the drop down list to define Account Selector templates. It opens the Account Selector Templates window where you can manage the templates.</p>
Security Template	<p>On the Security panel, you can select a type of security template to be loaded:</p> <ul style="list-style-type: none"> <li>Bond – To select a Bond Report template.</li> <li>Equity – To select an Equity Report template.</li> <li>SecurityFilter – To create a security filter on-the-fly. <ul style="list-style-type: none"> <li>► See <a href="#">Securities Filter</a> for details.</li> </ul> </li> <li>Warrant – To select a Warrant Report template.</li> </ul>
Sec Code	On the Security panel, you can select a security code and enter a value in the adjacent field to select all securities with that security code value.
Include Issuances	On the Security panel, you can check the "Include Issuances" checkbox to include issuance trades.
SD Filter	On the Security panel, you can select a static data filter to filter the securities that can be loaded in the report.
Agent Cpty Id	<p>The Agent Id label switches to Cpty Id when the position class is set to Client or Margin_Call.</p> <p>Click  to select an agent / counterparty as applicable to view the positions for that agent / counterparty only.</p>
Account Id Contract Id	<p>The Account Id label switches to Contract Id when the position class is set to Margin_Call.</p> <p>Click  to select an account / contract as applicable to view the positions for that account / contract only.</p>
Agg. Config	<p>Select a custom aggregation config as needed.</p> <p>You can then specify the individual criteria.</p>  <p><b>① [NOTE: You can only select a custom aggregation config if you have configured the Inventory engine to compute custom positions – Refer to Calypso Inventory Engine documentation for details]</b></p> <p><i>Sample Inventory Position Report with Positions computed by Product Type</i></p>

Criteria	Description																				
	<table><tr><th>Account</th><th>Agg Type</th><th>Agg Attr.ProductType</th><th>Jan 15, 2008</th></tr><tr><td>FTCLRACCT</td><td>Product Type</td><td>Cash</td><td>2,001,170.00</td></tr><tr><td>FTCLRACCT</td><td>Product Type</td><td>Swap</td><td>1,243,753.23</td></tr><tr><td>FTCLRACCT</td><td>Product Type</td><td>Repo</td><td>-4,243,404.72</td></tr><tr><td>FTCLRACCT</td><td>Product Type</td><td>SimpleRepo</td><td>-1,277,873.75</td></tr></table> <p>You can configure aggregation related columns using <a href="#">Data &gt; Configure Columns</a>.</p>	Account	Agg Type	Agg Attr.ProductType	Jan 15, 2008	FTCLRACCT	Product Type	Cash	2,001,170.00	FTCLRACCT	Product Type	Swap	1,243,753.23	FTCLRACCT	Product Type	Repo	-4,243,404.72	FTCLRACCT	Product Type	SimpleRepo	-1,277,873.75
Account	Agg Type	Agg Attr.ProductType	Jan 15, 2008																		
FTCLRACCT	Product Type	Cash	2,001,170.00																		
FTCLRACCT	Product Type	Swap	1,243,753.23																		
FTCLRACCT	Product Type	Repo	-4,243,404.72																		
FTCLRACCT	Product Type	SimpleRepo	-1,277,873.75																		
Position Value	<p>This only applies to security positions.</p> <p>Select a position display value. The following values are available:</p> <ul style="list-style-type: none"><li>Quantity – The Security panel displays quantities.</li><li>Nominal – The Security panel displays current nominal values (based on the pool factor if any).</li><li>Nominal (Unfactored) – The Security panel displays original nominal values.</li></ul> <p>You can select the default amount by setting ONE of the following environment properties to true: INV_QUANTITY, INV_NOMINAL, or INV_NOMINAL_UNFACTORED.</p>																				
Custom Filter	<p>You can select a custom filter for filtering inventory positions.</p> <p>To create a custom filter, create a class named <code>apps.reporting.&lt;filter_name&gt;</code> that implements the interface <code>com.calypso.apps.reporting.BOPositionFilter</code>. Register the filter name in the <code>BOPositionFilter</code> domain.</p> <p>Sample in <code>calypsox.apps.reporting.SecurityFilter</code>.</p>																				
Display Only Multiple Agent	Select this checkbox to display only those positions that are held at more than one Agent.																				
Explode Position	<p>This only applies to security positions.</p> <p>If you have created custom movement types and balance types, you can view the details of the computation by checking the Explode Position checkbox.</p> <p>In this example, we choose to display “Collateralized Movements”, the created “parent” movement type, and check the Explode Position checkbox so that the details of the computation are shown.</p> <table><tr><td>Movement Type</td><td>Collateralized Movements</td><td>...</td><td><input type="checkbox"/> Filter Zero Balance</td><td><input checked="" type="checkbox"/> Explode Position</td></tr><tr><td>Parent Balance</td><td>Movement Type</td><td>Oct 1, 2007</td><td>Oct 2, 2007</td><td>Oct 3, 2...</td></tr><tr><td>Collateralized Movements</td><td>Movements Collateralized In</td><td>450</td><td>0</td><td>0</td></tr><tr><td>Collateralized Movements</td><td>Movements Collateralized Out</td><td>-600</td><td>0</td><td>0</td></tr></table> <p>Alternatively, you can display the "parent" movement type, like "Collateralized Movement", and clear "Explode Position". Then you right-click the position and choose <a href="#">Show &gt; Explode Position</a> to display the details of the position. The Explode Position report can use templates named "BOExplode_&lt;template name&gt;".</p>	Movement Type	Collateralized Movements	...	<input type="checkbox"/> Filter Zero Balance	<input checked="" type="checkbox"/> Explode Position	Parent Balance	Movement Type	Oct 1, 2007	Oct 2, 2007	Oct 3, 2...	Collateralized Movements	Movements Collateralized In	450	0	0	Collateralized Movements	Movements Collateralized Out	-600	0	0
Movement Type	Collateralized Movements	...	<input type="checkbox"/> Filter Zero Balance	<input checked="" type="checkbox"/> Explode Position																	
Parent Balance	Movement Type	Oct 1, 2007	Oct 2, 2007	Oct 3, 2...																	
Collateralized Movements	Movements Collateralized In	450	0	0																	
Collateralized Movements	Movements Collateralized Out	-600	0	0																	

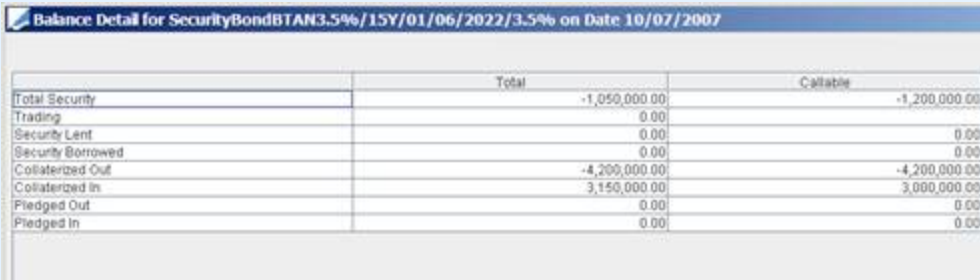

Criteria	Description
Aggregate Agg. Config	<p>Check "Aggregate Agg. Config" to aggregate custom positions.</p> <p>For example, you have defined custom positions by product type, and selected the corresponding Aggregation Config.</p> <p>On the Security panel, you want to see the positions by product type, and on the Cash panel, you don't want to see the breakup by product type.</p> <p>You can check "Aggregate Agg. Config" on the Cash panel to aggregate the custom positions.</p>
Position Direction	<p>Select All, Shorts or Longs.</p> <p>If you select Shorts, you can check "Offset Pos." to only show short positions for which there is a long position available that can offset the short position. In this case, both the short position and potential offset position are shown.</p>  <p>In this example, you can transfer the position from agent AGENT to agent CEDEL to cover part of the short position on agent CEDEL.</p>
Cash / Sec	<p>The following values are available:</p> <ul style="list-style-type: none"> <li>Both – The report displays both cash and security positions.</li> <li>Cash – The report displays cash positions only.</li> <li>Security – The report displays security positions only.</li> </ul>
Movement Type	<p>Select the movement types you want to display.</p> <p><b>Cash Positions</b></p> <p>For Cash, the following values are available:</p> <ul style="list-style-type: none"> <li>Balance — Running balances - The net of all position components - Total net position, based on all transfers</li> <li>Available Balance — Balances + Overdraft Limit on the account</li> <li>Movements — Balance on the start and end dates, and the movements in between</li> <li>Callable Balance = Usable Balance = Balance</li> </ul> <p><b>Security Positions</b></p> <p>For securities, movement types are more detailed based on the type of collaterals.</p> <ul style="list-style-type: none"> <li>Balance – Total net security position, based on all transfers</li> <li>Balance Collateralized In – Position based on transfers representing Reverse Repos and LONG Margin Call positions</li> </ul>

Criteria	Description
	<ul style="list-style-type: none"> <li>Balance Collateralized In NON CA – Position based on transfers representing Reverse Repos</li> <li>Balance Collateralized In NON Substitutable – Position based on transfers representing Reverse Repos and LONG Margin Call positions, where the securities are designated on the trade as NOT substitutable</li> <li>Balance Collateralized In Substitutable – Position based on transfers representing Reverse Repos and LONG Margin Call positions, where the securities are designated on the trade as substitutable</li> <li>Balance Collateralized Out – Position based on transfers representing Repos and SHORT Margin Call positions</li> <li>Balance Collateralized Out NON CA – Position based on transfers representing Repos</li> <li>Balance Collateralized Out NON Substitutable – Position based on transfers representing Repos and SHORT Margin Call positions, where the securities are designated on the trade as NOT substitutable</li> <li>Balance Collateralized Out Substitutable – Position based on transfers representing Repos and SHORT Margin Call positions, where the securities are designated on the trade as substitutable</li> <li>Balance In NON Substitutable – Position based on transfers representing Reverse Repos, Pledges (In), Security Borrows, and LONG Margin Call positions, where the securities are designated on the trade as NON substitutable</li> <li>Balance In Substitutable – Position based on transfers representing Reverse Repos, Pledges (In), Security Borrows, and LONG Margin Call positions, where the securities are designated on the trade as substitutable</li> <li>Balance Margin Call – Position based on transfers representing Security Margin Calls except Triparty Allocations</li> <li>Balance Margin Call Non Rehypotheneticable – The portion of the Margin Call Balance that is designated as not able to be re-hypothecated</li> <li>Balance Margin Call Rehypotheneticable – The portion of the Margin Call Balance that is designated as able to be re-hypothecated <ul style="list-style-type: none"> <li>► See Margin Call Contracts documentation for details on re-hypotheneticable collateral.</li> </ul> <p>The Margin Call Rehypotheneticable balance types will only be computed if the value MarginCallInventorySec is set in the "InventorySecBucketFactory" domain.</p> </li> <li>Balance NON Substitutable – The portion of the Balance that is designated as NON substitutable</li> <li>Balance Out NON Substitutable – Position based on transfers representing Repos, Pledges (Out), Security Loans, and SHORT Margin Call positions, where the securities are designated on the trade as NON substitutable</li> <li>Balance Out Substitutable – Position based on transfers representing Repos, Pledges (Out),</li> </ul>



Criteria	Description
	<p>Security Loans, and SHORT Margin Call positions, where the securities are designated on the trade as substitutable</p> <ul style="list-style-type: none"> <li>• Balance PayToHoldIn – Position based on transfers representing Security Borrows Hold (In) and Pay to Hold (In)</li> <li>• Balance PayToHoldOut – Position based on transfers representing Security Loans Hold (Out) and Pay to Hold (Out)</li> <li>• Balance Pledge – Position based on transfers representing Pledges</li> <li>• Balance PledgedIn – Position based on transfers representing Pledges (In)</li> <li>• Balance PledgedIn NON Substitutable – Position based on transfers representing Pledges (In), where the securities are designated on the trade as NON substitutable</li> <li>• Balance PledgedIn Substitutable – Position based on transfers representing Pledges (In), where the securities are designated on the trade as substitutable</li> <li>• Balance PledgedOut – Position based on transfers representing Pledges (Out)</li> <li>• Balance PledgedOut NON Substitutable – Position based on transfers representing Pledges (Out), where the securities are designated on the trade as NON substitutable</li> <li>• Balance PledgedOut Substitutable – Position based on transfers representing Pledges (Out), where the securities are designated on the trade as substitutable</li> <li>• Balance Repo Callable In – Position representing open Reverse Repo trades</li> <li>• Balance Repo Callable Out – Position representing open Repo trades</li> <li>• Balance Buy Sell Back – Position based on transfers representing BSB Reverse Repos</li> <li>• Balance Sell Buy Back – Position based on transfers representing BSB Repos</li> <li>• Balance Repo Triparty – Position based on transfers representing Triparty Repos (Repos and Reverse Repos) and Triparty Allocations</li> <li>• Balance Repo Triparty In – Position based on transfers representing Reverse Triparty Repos and Triparty Allocations (In)</li> <li>• Balance Repo Triparty Out – Position based on transfers representing Triparty Repos and Triparty Allocations (Out)</li> <li>• Balance RepoTrackingIn – Position based on transfers representing Repos in securities designated as subject to Repo Tracking</li> <li>• Balance RepoTrackingOut – Position based on transfers representing Reverse Repos in securities designated as subject to Repo Tracking</li> <li>• Balance SecLending Callable In – Position representing open Security Borrows</li> <li>• Balance SecLending Callable Out – Position representing open Security Loans</li> <li>• Balance SecurityBorrowed – Position based on transfers representing securities borrowed through Sec Lending Borrow trades, excluding Hold (Out) and Pay to Hold (Out)</li> </ul>

Criteria	Description
	<ul style="list-style-type: none"> <li>Balance SecurityBorrowed Collateral – Position based on transfers representing the collateral leg on Sec Lending Sec Vs Sec Borrow trades</li> <li>Balance SecurityBorrowed NON Substitutable – Position based on transfers representing securities borrowed through Sec Lending Borrow trades, where the securities are designated on the trade as NON substitutable</li> <li>Balance SecurityBorrowed Substitutable – Position based on transfers representing securities borrowed through Sec Lending Borrow trades, where the securities are designated on the trade as substitutable</li> <li>Balance SecurityLent – Position based on transfers representing securities borrowed through Sec Lending Loan trades, excluding Hold (In) and Pay to Hold (In)</li> <li>Balance SecurityLent Collateral – Position based on transfers representing the collateral leg on Sec Lending Sec Vs Sec Loan trades</li> <li>Balance SecurityLent NON Substitutable – Position based on transfers representing securities borrowed through Sec Lending Loan trades, where the securities are designated on the trade as NON substitutable</li> <li>Balance SecurityLent Substitutable – Position based on transfers representing securities borrowed through Sec Lending Loan trades, where the securities are designated on the trade as substitutable</li> <li>Balance Simple Transfer – Position based on transfers representing Simple Transfers</li> <li>Balance Substitutable – Total net position, based on ALL transfers, where the securities are designated on the trade as substitutable</li> <li>Balance SecurityBorrowed Auto / Balance SecurityLent Auto – Balances from "autoloan" sec lending trades created from the integration of MT535 messages. ▶ Refer to Calypso Message Matching for details.</li> <li>Balance Trading – Net position resulting from BUY and Sell trades</li> <li>Balance Triparty Margin Call – Position based on transfers representing Security Margin Calls from Triparty Allocations</li> <li>Balance Unavailable – Net position resulting from Unavailability Transfer trades</li> <li>Movements – All security transfers between the start and end dates Same movement types as balance types for the actual transfers.</li> </ul> <p><b>Callable (Open) Positions</b></p> <p>The scheduled task PROCESS_CALLABLETRADE allow rolling callable trades every day.</p> <p><b>Substitutable Positions</b></p> <p>You also have the ability to identify whether the transfers that created the position are substitutable or not.</p>

Criteria	Description
	 <p>In the example above, of the total of this Security taken in as Collateral (3,150,000) only 3,000,000 can be substituted out by the counterparty.</p> <p>It is also possible to add custom movement types.</p> <p>► See <a href="#">Inventory Position - Process Menu</a> for details.</p>
Filter Zero Balance	Select this checkbox to exclude dates from the report that have a zero balance.
Propagate to Security	When checked, which is the default behavior, the criteria saved in the template are the same for both the Cash and Security panels.
Propagate to Cash	When unchecked, both the criteria from the Security panel and the criteria from the Cash panel are saved in the template.
Closing Bal.	<p>When checked, the following columns will be populated on the start date:</p> <ul style="list-style-type: none"> <li>Opening Balance – Balance carried the day before the start date</li> <li>Settled – Total movements on the start date</li> <li>Closing Balance – Sum of opening balance and settled on the start date</li> </ul>  <ul style="list-style-type: none"> <li>» Double-click on Opening Balance to show the trades that caused a movement on the previous day.</li> <li>» Double-click on Settled to show the trades that cause a movement on the start date.</li> <li>» Double-click on Closing Balance to show the trades that cause a movement on the start date (same as Settled).</li> </ul>
Legal Ag. / Contract Id	On the Security panel, you can select legal agreements and margin call contracts associated with the trades (repo, security lending) to display corresponding information.
Filter Matured Securities	On the Security panel, you can check "Filter Matured Securities" to exclude matured securities.
Display Past Prepaid Transfers	<p>Only applies to Statement positions.</p> <p>On the Cash panel, you can check "Display Past Prepaid Transfers" to display transfers that</p>

Criteria	Description																					
	<p>were paid before their settlement date.</p> <p>For example, a transfer has a settlement date of 07/10/2014, and is paid on 07/09/2014. The transfer attribute "InitSettleDate" is set to the original settlement date 07/10/2014, so that it can be loaded in the Inventory Position on 07/10/2014 using this checkbox.</p>																					
Pricing Env Valuation Date	<p>These selections will only appear if the column use_pricing_env = 1 in table report_win_def for def_name = BOPosition – Contact your database administrator to set this up.</p> <p>This allows converting cash positions into the base currency of the selected pricing environment.</p> <p>The base currency will appear next to the total amount if the FX quote is known, or an error will be displayed otherwise. The menu item <b>Process &gt; Check FX Quotes</b> allows checking FX quotes only.</p> <table><tr><td>EUR</td><td>119,475.24</td><td>119,475.24</td></tr><tr><td>EUR</td><td>0.00</td><td>0.00</td></tr><tr><td></td><td>0.00 Missing FX Quote</td><td>0.00 Missing FX Quote</td></tr><tr><td></td><td></td><td></td></tr><tr><td>USD</td><td>-1,392,379,714.42</td><td>-1,392,379,714.42</td></tr><tr><td>USD</td><td>0.00</td><td>0.00</td></tr><tr><td></td><td>-1,392,379,714.42 USD</td><td>-1,392,379,714.42 USD</td></tr></table> <p>You need to configure grouping by Currency, and setup subtotals by Dates with the function SumFX (you can add it to the domain "REPORT.Functions" if it is not available for selection).</p>	EUR	119,475.24	119,475.24	EUR	0.00	0.00		0.00 Missing FX Quote	0.00 Missing FX Quote				USD	-1,392,379,714.42	-1,392,379,714.42	USD	0.00	0.00		-1,392,379,714.42 USD	-1,392,379,714.42 USD
EUR	119,475.24	119,475.24																				
EUR	0.00	0.00																				
	0.00 Missing FX Quote	0.00 Missing FX Quote																				
USD	-1,392,379,714.42	-1,392,379,714.42																				
USD	0.00	0.00																				
	-1,392,379,714.42 USD	-1,392,379,714.42 USD																				

### 4.1.1 Drill Down Display Option

When you right-click a position and choose the Show menu, a number of drill down reports are available for selection. You can view the selected drill-down report below the Inventory Position report, as shown in the example below.

Cash   Security					
ProcessingOrg	Book	Currency	Agent	Account	Position Type
PO	Global	EUR	NOSTRO AGENT	PO@NOSTRO_AGENT_EUR	THEORETICAL
PO	Global	USD	NOSTRO AGENT	PO@NOSTRO_AGENT_USD	THEORETICAL
PO	ABC123	USD	NOSTRO AGENT	PO@NOSTRO_AGENT_USD	THEORETICAL

AccountActivity Report (6/10/11 2:11:44 PM) User: calypso_user[CLEARER_ACCOUN...]					
Transfer_id	Activity Type	Date	Debit	Credit	Balance
	Starting Balance	06/10/2011		1,100,000.00	1,100,000.00
	Balance	06/10/2011		1,100,000.00	1,100,000.00
	Closing Balance	06/11/2011		1,100,000.00	1,100,000.00

### 4.1.2 Transfer Report Drill Down

When drilling down to the transfer report from a position, you can select a transfer report template that starts with "BOPosition".

In particular, you can configure a transfer report that shows COLLATERAL transfers, and CollateralTrade columns to view the underlying collaterals of a given position.

To drill-down to the transfer report, right-click a position, and choose **Show > Transfer Report**. The list of BOPosition templates will be available for selection.

By default, you will only see the movements of the day for cash balances and security balances.

To see all movements, you need to add the balances for which you want to see all movements to the domains "BOPosition.DrillDown.Cash.Balance.ShowAllMovements" for cash balances, and "BOPosition.DrillDown.Security.Balance.ShowAllMovements" for security balances.

You can show archived transfers in the Transfers drill-down if the menu item **Report > Include Archived Transfers to Drilldown** is checked.

### 4.1.3 Navigating to Another Inventory Position Report

To open another Inventory Position report based on an existing template, create an Inventory Position report template that starts with "BOPosition".

When you right-click a position, the template will be available for selection under **Show > BOPosition Report**.

### 4.1.4 Exploding a Position

If you have created custom movement types and balance types, you can view the details of the computation by exploding the position.

Right-click the position and choose **Show > Explode Position** to display the details of the position. The Explode Position report can use templates named "BOExplode\_<template name>".

### 4.1.5 Interest Entries




In the cash panel, you can right-click a position and choose **Show > Interest Entries** to bring up the Interest Entries window.

This will display in the Inventory Position Report what Interest will be capitalized to the client accounts on the next payment date, and allow the Interest amounts to be broken down into the daily constituents.

This only applies if the cash account is configured for interest bearing.

### 4.1.6 Aggregation Display Example

To aggregate based on any column (book attribute for example), select the book attribute as a sort column and column heading, then choose **View > Set Table > Aggregation**.

Cash	Security							
AGGREGATION		Book	Currency	Agent	Account	Position Type	Bk_Attr.ProfitCenter	May 1, 2007
	BOCashPosition							
	CProfitA							
	TRADING/USD/CEDEL/CEDELACCOUNT1	TRADING	USD	CEDEL	CEDELACCOUNT1	THEORETICAL	CProfitA	-257,717.55

You can also check "Explode Position" and aggregate by Parent Balance to view the details of movement types that you have created.

Cash Security								
AGGREGATION		Movement Type	Book	Currency	Parent Balance	Agent	Account	Oct 1, 2007
BOSecurityPosition								
Collateralized Movements								
TRADING/11/FUTCLR/FTCLRACCT		Movements Collateralized In	TRADING	USD	Collateralized Movements	FUTCLR	FTCLRACCT	450
TRADING/11/FUTCLR/FTCLRACCT		Movements Collateralized Out	TRADING	USD	Collateralized Movements	FUTCLR	FTCLRACCT	-600

### 4.1.7 Positions Aggregation

You can also aggregate positions based on any criteria using **Data > Configure Aggregation**.

Select the criteria you want to use to aggregate positions and the positions are aggregated accordingly.

Example:

With no aggregation - Multiple rows are shown for each currency per account, book, etc.

Currency	Account	Book	Oct 29, 2021
EUR	PO@NOSTRO_AGENT_EUR	Book01	600,000.00
EUR	PO@NOSTRO_AGENT_EUR	Global	999,711.72
EUR	PO@NOSTRO_AGENT_EUR	CRD_Sample_Trades	-177,777.80
EUR	PO@NOSTRO_AGENT_EUR	IRD_Sample_Trades	-5,064,456.12
JPY	AGENT-JPY	CRD_Sample_Trades	-1,776,353
USD	AGENT-USD	IntBook	-11,619,507.89
USD	N/A	IntBook	5,115.00
USD	PO@NOSTRO_AGENT_USD	CRD_Sample_Trades	-254,166.67
USD	PO@NOSTRO_AGENT_USD	Global	-6,330,845.91
USD	PO@NOSTRO_AGENT_USD	Book01	-717,789.68
USD	AGENT-USD	Global	-300,000.00
USD	PO@NOSTRO_AGENT_USD	IRD_Sample_Trades	-37,315,680.57
USD	PO@NOSTRO_AGENT_USD	CMD_Sample_Trades	-11,801,936.00

With currency aggregation, only one row is shown per currency:

Currency	Account	Book	Oct 29, 2021
EUR	PO@NOSTRO_AGENT_EUR		-3,642,522.20
JPY	AGENT-JPY	CRD_Sample_Trades	-1,776,353
USD			-68,334,811.72

It does not show any details. Grouping by currency with a subtotal in Aggregation view would give similar results.

AGGREGATION	Account	Book	Oct 29, 2021
BOCashPosition			
EUR			-3,642,522.20
JPY			-1,776,353
USD			-68,334,811.72

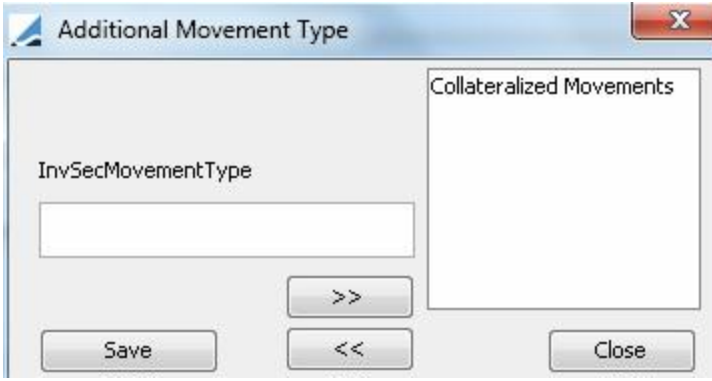
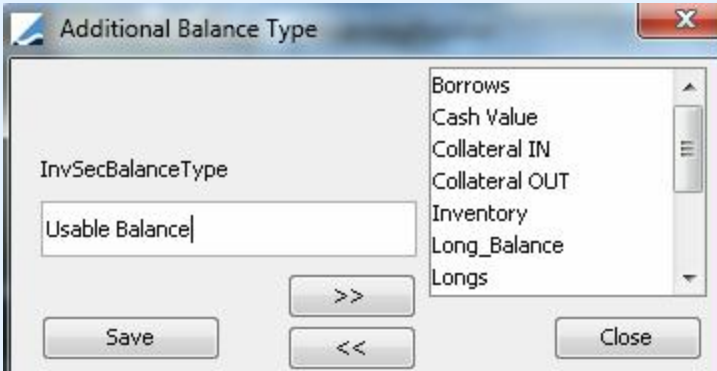
**[NOTE: If you have multiple currencies, it is recommended to select the currency in the aggregation criteria as it will not aggregate positions across currencies]**

## 4.2 Inventory Position - Process Menu

The menu items of the Process menu are described below.

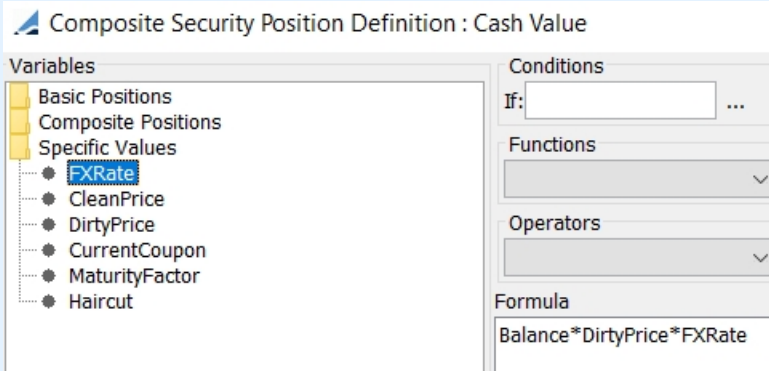
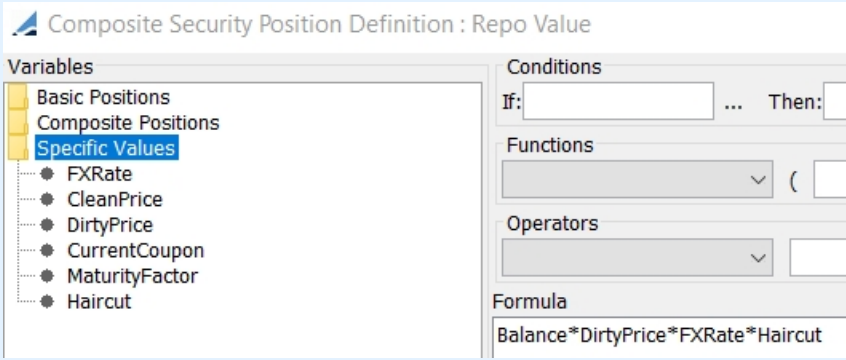
Menu Items	Description
Create Movements Type	This only applies to security positions. Enter a movement type, for example "Collateralized Movements".



Menu Items	Description
	 <p>It populates the domain "InvSecMovementType". You then need to define the movement type using <a href="#">Process &gt; Define Movement Type</a>. See below.</p>
Create Balance Type	<p>This only applies to security positions.</p> <p>Enter a balance type, for example "Usable Balance".</p>  <p>It populates the domain "InvSecBalanceType". You then need to define the balance type using <a href="#">Process &gt; Define Balance Type</a>. See below.</p>
Define Movements Type	<p>This only applies to security positions. You first need to create a movement type using <a href="#">Process &gt; Create Movement Type</a>.</p> <p>Select a movement type and build the formula using basic position types, composite position types (existing custom movement types), and specific values. You can specify conditions as needed.</p> <p>Then click <b>Apply</b>.</p> <p><a href="#">Example</a></p>



Menu Items	Description																														
	<div><div><div>Conditions</div><div>If: <input type="text"/> ... Then: <input type="text"/> ... Else: <input type="text"/></div><div>Functions</div><div><input type="text"/> ( <input type="text"/></div><div>Operators</div><div><input type="text"/> <input type="text"/></div><div>Formula</div><div>Movements_Collateralized_In+Movements_Collateralized_Out</div><div>Position Value : <input type="text"/> Template Position Value <input type="button" value="Check"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/></div></div></div> <p>This example will compute Collateralized Movements = Movements Collateralized In + Movements Collateralized Out.</p> <table><tr><th colspan="6">Cash Security</th></tr><tr><th>Movement Type</th><th>Prd Description</th><th>Book</th><th>Agent</th><th>Account</th><th>Oct 1, 2007</th></tr><tr><td>Movements Collateralized In</td><td>BondUST/10Y/11/...</td><td>TRADINGA</td><td>FUTCLR</td><td>FTCLRACCT</td><td>450</td></tr><tr><td>Movements Collateralized Out</td><td>BondUST/10Y/11/...</td><td>TRADINGA</td><td>FUTCLR</td><td>FTCLRACCT</td><td>-600</td></tr><tr><td>Collateralized Movements</td><td>BondUST/10Y/11/...</td><td>TRADINGA</td><td>FUTCLR</td><td>FTCLRACCT</td><td>-150</td></tr></table>	Cash Security						Movement Type	Prd Description	Book	Agent	Account	Oct 1, 2007	Movements Collateralized In	BondUST/10Y/11/...	TRADINGA	FUTCLR	FTCLRACCT	450	Movements Collateralized Out	BondUST/10Y/11/...	TRADINGA	FUTCLR	FTCLRACCT	-600	Collateralized Movements	BondUST/10Y/11/...	TRADINGA	FUTCLR	FTCLRACCT	-150
Cash Security																															
Movement Type	Prd Description	Book	Agent	Account	Oct 1, 2007																										
Movements Collateralized In	BondUST/10Y/11/...	TRADINGA	FUTCLR	FTCLRACCT	450																										
Movements Collateralized Out	BondUST/10Y/11/...	TRADINGA	FUTCLR	FTCLRACCT	-600																										
Collateralized Movements	BondUST/10Y/11/...	TRADINGA	FUTCLR	FTCLRACCT	-150																										
Define Balance Type	<p>This only applies to security positions. You first need to create a balance type using <a href="#">Process &gt; Create Balance Type</a>.</p> <p>Select a balance type and build the formula using basic position types, composite position types (existing custom balance types), and specific values. You can specify conditions as needed.</p> <p>Then click <b>Apply</b>.</p> <p><b>Example 1</b></p> <div><div><div>Conditions</div><div>If: <input type="text"/> ... Then: <input type="text"/> ... Else: <input type="text"/></div><div>Functions</div><div><input type="text"/> ( <input type="text"/></div><div>Operators</div><div><input type="text"/> <input type="text"/></div><div>Formula</div><div>Balance+Balance_Collateralized_In+Balance_Collateralized_In_Substitutable</div></div></div> <p>Example 1 will compute Usable Balance = Balance + Balance_Collateralized_In + Balance_Collateralized_In_Substitutable.</p>																														

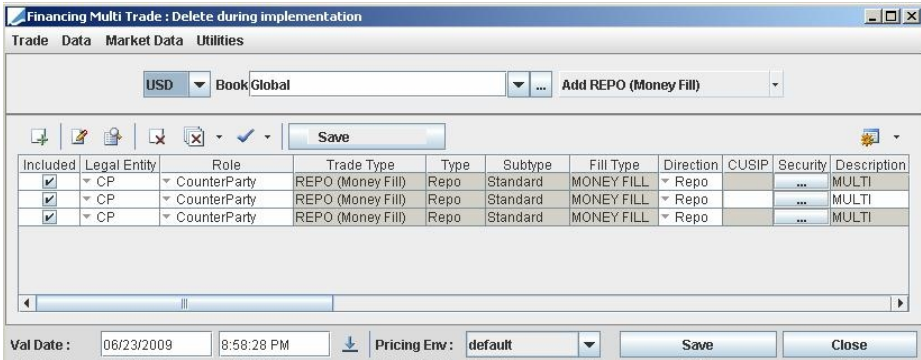
Menu Items	Description
	<p><b>Example 2</b></p>  <p>Example 2 will compute Cash Value = Balance * DirtyPrice * FXRate.</p> <p><b>Example 3</b></p>  <p>Example 3 will compute the position with haircut: Repo Value = Balance * DirtyPrice * FXRate * Haircut.</p> <p>In this case, make sure to select a legal agreement or margin call contract to retrieve haircut information.</p> <p><b>Example 4</b></p> <p>The MaturityFactor returns 0 if Position Date &gt; Product Maturity Date; or 1 otherwise. It allows computing a zero balance after bond maturity using a formula like Balance*MaturityFactor.</p>
Check FX Quotes	See search criteria Pricing Env and Valuation Date for details.

## 4.3 Popup Process Menu

When you right-click a position, the following menu items are available in the Process menu.

Menu Items	Description																																				
Details	<p>Displays the distribution of the security position.</p> <div><div>Balance Detail for SecurityBondUST/10Y/11/15/2008/4.7...</div><table><thead><tr><th></th><th>Total</th><th>Callable</th><th>CA Excluded</th></tr></thead><tbody><tr><td>Total Security</td><td>549,450.00</td><td>0.00</td><td></td></tr><tr><td>Trading</td><td>550,450.00</td><td></td><td></td></tr><tr><td>Security Lent</td><td>0.00</td><td>0.00</td><td></td></tr><tr><td>Security Borrowed</td><td>0.00</td><td>0.00</td><td></td></tr><tr><td>Collateralized Out</td><td>-1,000.00</td><td>0.00</td><td>0.00</td></tr><tr><td>Collateralized In</td><td>0.00</td><td>0.00</td><td>0.00</td></tr><tr><td>Pledged Out</td><td>0.00</td><td>0.00</td><td></td></tr><tr><td>Pledged In</td><td>0.00</td><td>0.00</td><td></td></tr></tbody></table></div>		Total	Callable	CA Excluded	Total Security	549,450.00	0.00		Trading	550,450.00			Security Lent	0.00	0.00		Security Borrowed	0.00	0.00		Collateralized Out	-1,000.00	0.00	0.00	Collateralized In	0.00	0.00	0.00	Pledged Out	0.00	0.00		Pledged In	0.00	0.00	
	Total	Callable	CA Excluded																																		
Total Security	549,450.00	0.00																																			
Trading	550,450.00																																				
Security Lent	0.00	0.00																																			
Security Borrowed	0.00	0.00																																			
Collateralized Out	-1,000.00	0.00	0.00																																		
Collateralized In	0.00	0.00	0.00																																		
Pledged Out	0.00	0.00																																			
Pledged In	0.00	0.00																																			
Reconcile Position	<p>Reconcile the selected position with the position computed by the Liquidation Engine. To use this feature, select the "Book" level aggregation in the Aggregation field.</p> <div><div>Reconciliation for SecurityBondUST/10Y/11/15/2008/4.7...</div><table><thead><tr><th></th><th>Inventory Position</th><th>PL Position</th></tr></thead><tbody><tr><td>Total Security</td><td>549,450</td><td>1,450,330</td></tr><tr><td>Trading</td><td>550,450</td><td>1,450,450</td></tr><tr><td>Security Lent</td><td>0</td><td>(120)</td></tr><tr><td>Security Borrowed</td><td>0</td><td>0</td></tr><tr><td>Collateralized Out</td><td>(1,000)</td><td>0</td></tr><tr><td>Collateralized In</td><td>0</td><td>0</td></tr><tr><td>Pledged Out</td><td>0</td><td></td></tr><tr><td>Pledged In</td><td>0</td><td></td></tr></tbody></table><p>Red rows indicate positions that are not reconciled.</p><p>You can also use the scheduled task RECON_INV_PL_POSITIONS to reconcile inventory positions with PL positions.</p><p>► Please refer to Calypso Scheduled Tasks documentation for details.</p></div>		Inventory Position	PL Position	Total Security	549,450	1,450,330	Trading	550,450	1,450,450	Security Lent	0	(120)	Security Borrowed	0	0	Collateralized Out	(1,000)	0	Collateralized In	0	0	Pledged Out	0		Pledged In	0										
	Inventory Position	PL Position																																			
Total Security	549,450	1,450,330																																			
Trading	550,450	1,450,450																																			
Security Lent	0	(120)																																			
Security Borrowed	0	0																																			
Collateralized Out	(1,000)	0																																			
Collateralized In	0	0																																			
Pledged Out	0																																				
Pledged In	0																																				
Reserve Position	<p>Select a security position, and choose Reserve Position to make the position unavailable.</p> <div><div>Reserve Position</div><div><div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div><div></div><div></div></div></div><div><div>Save reservation(s)</div><div>Cancel reservation(s)</div></div><table><thead><tr><th>Selected</th><th>ISIN Code</th><th>Security Desc</th><th>Security Id</th><th>Currency</th><th>Nominal</th><th>Nominal Reserved</th></tr></thead><tbody><tr><td><input checked="" type="checkbox"/></td><td></td><td>Equity.F</td><td>4,321</td><td>USD</td><td>0</td><td>9,000,000</td></tr></tbody></table><p>» Enter the following fields as needed:</p><ul style="list-style-type: none"><li>– Nominal Reserved: Nominal amount to be made unavailable</li></ul></div></div>	Selected	ISIN Code	Security Desc	Security Id	Currency	Nominal	Nominal Reserved	<input checked="" type="checkbox"/>		Equity.F	4,321	USD	0	9,000,000																						
Selected	ISIN Code	Security Desc	Security Id	Currency	Nominal	Nominal Reserved																															
<input checked="" type="checkbox"/>		Equity.F	4,321	USD	0	9,000,000																															

Menu Items	Description
	<ul style="list-style-type: none"> <li>– Start Date and End Date: Duration of unavailability</li> <li>– Usage: Reason of unavailability</li> </ul> <p>» Then click <b>Save reservations(s)</b>. It creates Unavailability Transfers for the reserved position. Such transfers populate the position types “Balance Unavailable” and “Movements Unavailable”.</p> <p>You can set the default book for the reserved position. The default book is the book with book attribute Custody=True.</p> <p>You can click <b>+</b> to load all existing unavailability transfers regardless of the book.</p>
Transfer Agent	Select two security positions on the same security, and choose Transfer Agent to display the Transfer Agent window for entering a transfer between the selected agents.
Position Adjustment	Select a security position, and choose Position Adjustment to display the Security Transfer window for entering a security transfer.
Unavailability Transfer	<p>Select a position (cash or security), and choose Unavailability Transfer to make this position unavailable by creating an unavailability transfer. You can specify an unavailability reason.</p> <p>Unavailability transfers populate the position types “Balance Unavailable” and “Movements Unavailable”.</p> <p>The system checks for a default trade template for the user.</p> <p>If no default template exists, then the Unavailability Transfer trade will be Open by default.</p> <p>If a default template exists, then the system will check to see if the default template is Open or Term. If the template is Term, then the system will insert the position start date plus 1D (next business date) as the end date of the trade. If the template is Open, then the trade will be Open.</p>
Repo Sweeping	With book aggregation selected in the Security panel, you can select a position and choose <b>Process &gt; Repo Sweeping</b> to open the repo trade capture screen. It automatically completes the following details based on the position you have selected in the report: security, start date, book, and nominal.
Account Sweeping > On All Selected Positions	<p>To perform account sweeping on all selected positions.</p> <p>► Refer to Account Sweeping Documentation for setup details.</p>
Account Sweeping > On Specific Date	<p>To perform account sweeping on a given position cell.</p> <p>► Refer to Account Sweeping Documentation for setup details.</p>
Pool Consolidation	<p>To perform account sweeping on an account hierarchy.</p> <p>► Refer to Account Sweeping Documentation for setup details.</p>
Financing	<p>Select a position and choose <b>Process &gt; Financing</b> to capture financing repo trades.</p> <p>For a cash position, you will capture MONEY FILL trades.</p>

Menu Items	Description
	 <p>Default values for these trades can be specified through a legal agreement between the processing organization (owner of the selected book) and the selected counterparty. Legal Agreements are defined using <a href="#">Configuration &gt; Legal Data &gt; Agreements</a> from the Calypso Navigator, and default values for financing repo trades are defined in the Details panel.</p> <p>You can also set default values configurations (created using <a href="#">Configuration &gt; Legal Data &gt; Default Values</a> from the Calypso Navigator) in the following domains:</p> <ul style="list-style-type: none"> <li>Domain = "Financing.MoneyFillConfig" - Value = Config name</li> <li>Domain = "Financing.CloseAfterSave" - Value = true (to automatically close the window when the trades are saved)</li> </ul> <p>Enter and modify the fields as needed.</p> <p>Add trades as needed.</p> <p>Click <b>Save</b> when you are done.</p> <p>The Default Values Configurations window is described in Calypso Fixed Income documentation.</p>
Margin Call	For a margin call position, creates a margin call trade.

## 4.4 Environment Properties

The following environment properties apply to the Inventory Position report.

Environment Properties	Description
AGG_CONFIG_PLACEOFSAFEKEEPING	<p>True or false. Default is false.</p> <p>When true, it allows computing the external position by Book / Agent / Account / PlaceOfSafekeeping.</p> <p>When false, it allows computing the external position by Book / Agent / Account.</p>
BO_POSITION_FORCE_TRANSACTION_SERIALIZABLE	<p>True or false. Default is false.</p> <p>Inventory positions are stored in multiple tables. If you are loading large past</p>

Environment Properties	Description
	<p>positions, there might be changes to those tables while the report is running, therefore causing inconsistent results.</p> <p>When true, it allows preventing changes in the inventory tables between different queries by increasing the isolation level to SERIALIZABLE (instead of TRANSACTION_READ_COMMITTED by default).</p> <p>In the case of Oracle, the parameter INITRANS (default is 1) should be increased for tables (and indexes) linked to inventory tables to allow multiple SQL queries running at the same time.</p> <p>inv_cash_movement</p> <p>inv_cash_balance</p> <p>inv_sec_movement</p> <p>inv_sec_balance</p> <p>inv_cust_cash_movement</p> <p>inv_cust_cash_balance</p> <p>inv_cust_sec_movement</p> <p>inv_cust_sec_balance</p> <p>inv_cash_query</p> <p>inv_sec_query</p> <p>inv_agg</p> <p>inv_temp_config_id</p> <p>inv_product_temp</p> <p>product_temp</p>
BO_POSITION_REPORT_ACCEPT_IN_DATASERVER	<p>True or false. Default is true.</p> <p>When set to true, it allows accepting the inventory positions inside the Data Server to prevent too many RMI calls. Set to false to disable (accepting done in Calypso Navigator in this case).</p> <p>Accepting corresponds to selecting the inventory positions based on the Inventory Position report criteria.</p>
BO_POSITION_REPORT_FILTER_IN_DATASERVER	<p>True or false. Default is true.</p> <p>When set to true, it allows filtering the inventory positions inside the Data Server to prevent too many RMI calls. Set to false to disable (filtering done in Calypso Navigator in this case).</p> <p>Filtering corresponds to removing applicable zero positions (based on date range).</p>
BO_POSITION_REPORT_CLEAR_POSITION	<p>True or false. Default is true.</p>

Environment Properties	Description
	Allows reducing memory usage in Inventory Position report – Disabled in case of real-time updates.
BO_POSITION_REPORT_CLEAR_DISPLAYABLE	True or false. Default is true. Allows reducing memory usage in Inventory Position report – Disabled in case of real-time updates.
BO_POSITION_REPORT_CLEAR_ROW_VECTOR	True or false. Default is true. Allows reducing memory usage in Inventory Position report – Disabled in case of real-time updates.
BO_POSITION_REPORT_PRELOAD_SECURITIES_IN_DATASERVER BO_POSITION_REPORT_PRELOAD_SECURITIES_MIN_IN_DATASERVER	If set to true, preload the securities when a Custom Filter or a SD Filter is used in the Inventory Position Report. Default is false. Minimum number of securities to activate the preloading of the product cache (default is 10). Only applies when BO_POSITION_REPORT_PRELOAD_SECURITIES_IN_DATASERVER is true.
BO_POSITION_REPORT_REALTIME_LOG_SIZE	Size of the real-time logs (default value is 50000). If set to 0, the logs are not limited.
BO_POSITION_LOAD_PRODUCT_BY_IDS	True or false. Default is true. Allows loading the products by ID in the Inventory Position report.
KEEP_OPPOSITE_XFER_FROM_INVENTORY_DETAIL	Used in the Inventory Position report. True or false. Set to true to display both legs of a repo when both the start and end legs are failed. Only one failed transfer is displayed otherwise. Default is false.
MAX_INVENTORYPOSITIONS_PER_USER	Maximum number of inventory positions to be loaded. Default is 500000. Can also be set per user using User attribute Max.InventoryPosition. These limits do not apply to Admin users.
PRODUCT_REPORT_CACHE_MAX_SIZE	Max size of Secondary Market Products cache – Default is 50000.

## 5. Reconciling Inventory Positions

From the Calypso Navigator, navigate to **Processing > Reconciliation > BO Position Reconciliation** to reconciling inventory positions against each other (menu action `reporting.ReportWindow$BOReconciliation`).

Any combination of the following types of positions can be reconciled: Client positions, Internal positions, and External positions.

You can reconcile real-time inventory positions computed by the Inventory engine, or inventory snapshots generated by the INVENTORY\_SNAPSHOT scheduled task.

You can also run the RECONCILE\_INVENTORY scheduled task to perform reconciliation on a regular basis.

### 5.1 Importing External Positions

Calypso allows importing MT950 messages for realized balances – They are identified as external positions and can be reconciled with internal positions.

► See [Integrating Payment Messages and Statements](#) for details.

### 5.2 Sample BO Position Reconciliation Report

BOReconciliation / Test a P2

Report Data View Export Process Utilities Help

Criteria

Name: Test a P2
Description:

Report Date: 24/02/2025
Agent:
Account Id: 561730
ProcessingOrg:
Aggregation: Agent/Account

Position Date: SETTLE
Position Class: INTERNAL
Position Type: THEORETICAL
Label: Base
☐ Use SnapShot

Position Date: SETTLE
Position Class: EXTERNAL
Position Type: ACTUAL
Label: Target
☐ Use SnapShot

☒ Use Issuance Underlying

Sec Code: AGENCY\_...
☐ Show Differences Only
☒ Include Cash
☒ Include Security
☐ Reconcile Payments




☒ Filter Matured Securities
☒ Filter Zero Balance

Position

Account	Agent	Book	Product	SubAccount	Base Date	Base Total	Target Date	Target Total	Difference	Since Break	Since Change
PO@NostroAgent Sec	NOSTRO AGENT	ALL	Discount/_ClientP2/30/07/2029	ALL	29/01/2015	99,00	29/01/2025	1 000,00	901,00	1	

» You can check / uncheck **View > Show Frame > Criteria** to display / hide the search criteria.



- » Specify search criteria as applicable and click  to load the corresponding positions. The selection criteria are described below.
- » You can select a template and click  to display the number of objects that will be loaded from the database before loading the report.
- » You can click  to print the report results.

Note that for the Pivot view and the Aggregation view, the print icon is disabled.

You can use [Ctrl+P] or [Ctrl+L] to print the report, or you can export the report to Excel and print it from there.

### Criteria Details

Criteria	Description
Report Date	Enter a report date. Positions on or before that date will be selected.
Agent	Select an agent (the owner of a settlement account).
Processing Org	Select a processing organization (the holder of a settlement account).
Aggregation	Select an aggregation level: Book/Agent/Account, Agent/Account, Agent, Book, Global, or Margin Call.
Use Issuance Underlying	Check to allow reconciling an internal Issuance position with an external Security position on the same security by converting the Issuance Product id to the Underlying Security id.
Position Date	Select a position date: <ul style="list-style-type: none"> <li>• TRADE — To load a position by trade date.</li> <li>• SETTLE — To load a position by settlement date.</li> <li>• AVAILABLE — Only applies to Client positions. Its purpose is to maintain the amount of cash or security available for trading in real-time, based on the client operations. The available position is computed based on the available date specified in the transfer.</li> </ul>
Position Class	Select a position class: <ul style="list-style-type: none"> <li>• EXTERNAL — To load external positions.</li> <li>• INTERNAL — To load internal Calypso-generated positions, which reflect the positions of the processing organizations.</li> <li>• CLIENT — To load client Calypso-generated positions, which reflect the accounts of the clients.  Client positions are calculated on transfers with a given legal entity, for which the processing org and the agent are the same.</li> <li>• MARGIN_CALL — To load margin call positions. Refer to the <i>Calypso Collateral Management User Guide</i> for details.</li> </ul>
Position Type	Select a position type:

Criteria	Description																		
	<ul style="list-style-type: none"><li>• ACTUAL — To load actual positions that contain transfers that have settled.</li><li>• THEORETICAL — To load theoretical positions that contain all transfers regardless of their status.</li><li>• FAILED — To load failed positions that contain transfers for which the settlement has failed. Status codes corresponding to failed transfers should be set in the transferFailedStatus domain.</li></ul> <p>You can also define a domain transferSettledStatus that contains all settled status codes, and remove the domain transferFailedStatus. All status codes not in transferSettledStatus will be considered not settled.</p> <p>Note that the behavior described here is the out-of-the-box behavior. You can customize the inventory engine to build positions based on any status or any date, including new types of positions.</p>																		
Label	Enter a label for identifying each position. The labels default to Base and Target. They will appear in the reconciliation results for the dates and totals columns.																		
Use SnapShot	<p>Check to load the positions from an inventory snapshot, you will be prompted to select a snapshot.</p> <div><input checked="" type="checkbox"/> Use SnapShot <div>INT_2007/03/21_10:22:52</div></div> <p>Inventory snapshots generated by the INVENTORY_SNAPSHOT scheduled task.</p> <p>► Please refer to Calypso Scheduled Tasks documentation for details.</p> <p>Otherwise, real-time positions are loaded.</p>																		
Show Differences Only	Check to only display positions where there is a difference.																		
Include Cash	Check to display cash positions.																		
Include Security	Check to display security positions.																		
Reconcile Payments	<p>Check to load actual payments. To reconcile the payments, right-click a row and choose <b>Process &gt; Reconcile Payments</b> – Payments will appear in the Payment panel.</p> <table><tr><th colspan="6">Payment</th></tr><tr><th>Account</th><th>Book</th><th>Base Date</th><th>Base Amount</th><th>Target Date</th><th>Target Amount</th></tr><tr><td>PO@NOSTRO_AGENT_USD</td><td>Trading5</td><td>07/23/2014</td><td>-52.50</td><td>07/23/2014</td><td>-52.50</td></tr></table>	Payment						Account	Book	Base Date	Base Amount	Target Date	Target Amount	PO@NOSTRO_AGENT_USD	Trading5	07/23/2014	-52.50	07/23/2014	-52.50
Payment																			
Account	Book	Base Date	Base Amount	Target Date	Target Amount														
PO@NOSTRO_AGENT_USD	Trading5	07/23/2014	-52.50	07/23/2014	-52.50														
Filter Matured Security	Check to select the securities having Maturity Date > Report Run Date. Checkbox enabled only when “Include Security” checkbox is checked.																		
Filter Zero Balance	Check to filter zero positions from both sides of the reconciliation.																		

## 5.3 Reconciliation Results

Position							
Account	Book	Product	Base Date	Base Total	Target Date	Target Total	Difference
PO@NOSTRO_AGENT_USD	Trading5	USD	07/23/2014	-52.50	07/23/2014	-608.05	-555.55
PO@NOSTRO_AGENT_USD	Trading2	USD	05/27/2014	0.00	05/27/2014	-358,476.32	-358,476.32
Payment							
Account	Book	Base Date	Base Amount	Target Date	Target Amount	Difference	Key
PO@NOSTRO_AGENT_USD	Trading5	07/23/2014	-52.50	07/23/2014	-52.50	0.00	USD
▼ Match Found							

**[NOTE: The columns can be configured. Sort columns, subheadings and subtotals have to be explicitly specified. Choose [Help > Menu Items](#) for details]**

The default columns are described below.

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. Menus common to all reports are described under [Help > Menu Items](#). The Process menu is described below.

### 5.3.1 Default Columns

The default columns are the following.


Columns	Description
Account	Position's account.
Book	Position's book.
Product	Position's currency.
<Base-Label> Date	Base position's date.
<Base-Label> Total	Base position's amount.
<Target-Label> Date	Target position's date.
<Target-Label> Total	Target position's amount.
Difference	=Target Total - Base Total.
Since Break	Number of days since the position has not been reconciled. The first time it is not reconciled, Since Break = 1.  Note that this column will only be populated if a reconciliation run for this position has been previously saved using <a href="#">Process &gt; Save Run</a> .
Since Change	Number of days since the position has had movements. The first time it has a movement, Since Change = 1.

Columns	Description
	Note that this column will only be populated if a reconciliation run for this position has been previously saved using <b>Process &gt; Save Run</b> .
Key	The key is the product id for a security position and the currency for a cash position.
Comment	You can select a comment from the drop-down list. The default choices are "Match Found" and "No Match". You can specify additional comments as applicable in the domain "ReconcileInventoryComment".
Assigned	You can enter a user name in this column.

### 5.3.2 Process Menu

The menu items of the Process menu are described below.

Menu Items	Description																								
Show Quantity	These menu items operate as a checkbox - You can check only one at a time.  Check "Show Quantity" to display the quantity for position-based trades, or check "Show Nominal" to display the actual nominal amount, or check "Show Nominal (Unfactored)" to display the unfactored nominal amount.																								
Show Nominal																									
Show Nominal (Unfactored)																									
Load Run	To load an existing reconciliation. You will be prompted to select a previously saved reconciliation.																								
New Run	To clear the selection criteria.																								
Save Run	To save the current reconciliation results. You will be prompted to enter a reconciliation name.																								
Save As New Run	To save the current reconciliation results as a new reconciliation. You will be prompted to enter a reconciliation name.																								
Delete Run	To delete an existing reconciliation. You will be prompted to select a previously saved reconciliation.																								
Reconcile Payments	<p>When the “Reconcile Payments” checkbox is checked, you can right-click a position and choose <b>Process &gt; Reconcile Payments</b>. The payments will be displayed in the Payment panel.</p> <table><tr><th colspan="6">Payment</th></tr><tr><th>Account</th><th>Book</th><th>Base Date</th><th>Base Amount</th><th>Target Date</th><th>Target Amount</th></tr><tr><td>PO@NOSTRO_AGENT_USD</td><td>Trading5</td><td>07/23/2014</td><td>-52.50</td><td>07/23/2014</td><td>-52.50</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	Payment						Account	Book	Base Date	Base Amount	Target Date	Target Amount	PO@NOSTRO_AGENT_USD	Trading5	07/23/2014	-52.50	07/23/2014	-52.50						
Payment																									
Account	Book	Base Date	Base Amount	Target Date	Target Amount																				
PO@NOSTRO_AGENT_USD	Trading5	07/23/2014	-52.50	07/23/2014	-52.50																				
Position Detail	To bring up the Inventory Position report for a given position. You will be prompted to select a position label.																								
Explain Difference	Only applies if one of the positions is a snapshot, and if there is a difference between the base and target positions.																								

Menu Items	Description
	<p>The Explain Difference report will be displayed.</p> 
Generate Difference	<p>To generate a Simple Transfer for a given position for which there is a difference.</p> <p>This only applies if the target position is of type EXTERNAL.</p> <p>The legal entity attributes DEFAULT_BOOK and DEFAULT_CTPY can be set on the PO of the selected position.</p> <p><b>Simple Transfer for Cash Position</b></p> <ul style="list-style-type: none"> <li>Type = Cash</li> <li>PO = PO of the BOOK</li> <li>BOOK = LE Attribute DEFAULT_BOOK</li> <li>Counterparty = LE Attribute DEFAULT_CTPY</li> <li>Direction = Deducted from the sign of the difference (negative=PAY/positive=RECEIPT)</li> <li>Principal = Absolute value of the difference</li> <li>Trade keyword TradeSource = MT950_ADJUSTMENTS</li> <li>Trade and Settlement date = Base Date in BO Reconciliation Report</li> </ul> <p><b>Simple Transfer for Security Position</b></p> <ul style="list-style-type: none"> <li>Type = Security</li> <li>Transfer Type = Security</li> <li>PO = PO of the BOOK</li> <li>BOOK = LE Attribute DEFAULT_BOOK</li> <li>Counterparty = LE Attribute DEFAULT_CTPY</li> <li>Direction = Deducted from the sign of the difference (negative=PAY/positive=RECEIPT)</li> <li>TradeKeyword TradeSource = BORECON_MANUAL_SEC_ADJUST</li> <li>Quantity = Absolute value of the difference (follow current logic for Principal)</li> <li>Security = Selected security</li> <li>Trade and Settlement date = Base Date in BO Reconciliation Report</li> </ul>

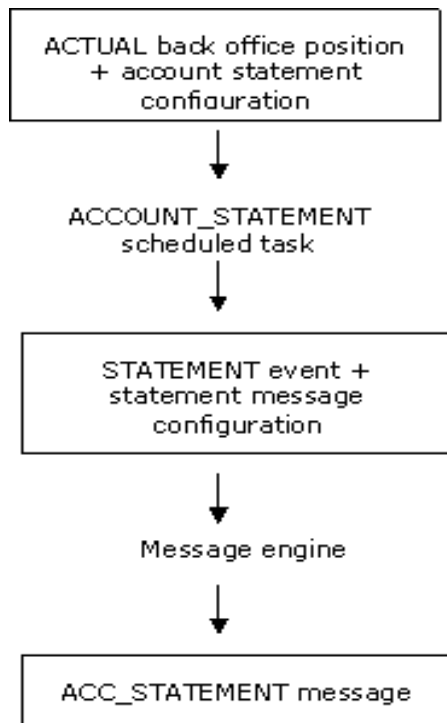
## 5.4 Troubleshooting

If you have the error, "Cannot find bucket RepoTrackingIn", when performing a BO Reconciliation on Security positions, you need to add RepoTrackingInventorySec to the domain "InventorySecBucketFactory".

## 6. Generating Account Statements

Account statement events are generated by the scheduled task ACCOUNT\_STATEMENT based on **actual cash account positions**, and **account statement configurations**. The Message engine subscribes to account statements events and generates **account statement messages** based on **statement message configurations**.

### Account Statement Generation Flow



### 6.1 Before you Begin

When a cash account is defined, the Statements panel will become available to let you configure Statements for this account.

The Statements panel is used to specify that the account can generate regular statements based on your configuration.

Please note that statements can be created only for accounts that have a processing organization, a currency, and a holder (legal entity and role must be specified).

The setup of the statements can be done individually account by account or globally for a range of accounts.

#### 6.1.1 Individual Setup

► For Global Setup, choose Help for details.

Account	Statements	Attributes	Interests	Limits	Consolidation	Translation/Revaluation	Legal Entities	Clearing	Browse																
<div> <div>Statement Type <span>Default</span></div> <div> <div> <div>General</div> <div> <div>Numbering <span>NNN</span></div> <div>Last Statement</div> </div> <div> <div>Zero Balance <input type="checkbox"/></div> <div>Last Date</div> </div> <div> <div>No Movement <input type="checkbox"/></div> <div>Active From</div> </div> <div> <div>Interim Generation <input type="checkbox"/></div> <div>To</div> </div> </div> <div> <div>Frequency</div> <div> <div>Freq <span>MTH</span></div> <div>Day <span>30</span></div> <div>Roll <span>END_MONTH</span></div> </div> </div> <div> <div>Position</div> <div> <div>Cash/Sec <span>Cash</span></div> <div>Class <span>Internal</span></div> <div>Type <span>Actual</span></div> <div>Date <span>Settle</span></div> <div>Value <span>Quantity</span></div> <div>Payment Based <input type="checkbox"/></div> <div>CAAdjustBook <input type="checkbox"/></div> </div> <div> <div>Message Config</div> <div> <div>Config <span>59197</span></div> <div>Message Type <span>ACC_STATEMENT</span></div> <div>Template <span>AccountStatement.html</span></div> <div>Format <span>HTML</span></div> <div>Gateway <span>PRINTER</span></div> </div> </div> </div> </div> <table border="1"> <thead> <tr> <th>Config Id</th> <th>Statement Type</th> <th>Numbering</th> <th>Last Statement</th> <th>Zero Bal</th> <th>No Mvt</th> <th>Client Statement Generation</th> <th>Statement</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Default</td> <td>NNN</td> <td></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>N/A</td> <td></td> </tr> </tbody> </table> </div>										Config Id	Statement Type	Numbering	Last Statement	Zero Bal	No Mvt	Client Statement Generation	Statement	0	Default	NNN		<input type="checkbox"/>	<input type="checkbox"/>	N/A	
Config Id	Statement Type	Numbering	Last Statement	Zero Bal	No Mvt	Client Statement Generation	Statement																		
0	Default	NNN		<input type="checkbox"/>	<input type="checkbox"/>	N/A																			

» Enter the fields described below and click **Add**.

You can add multiple statement configurations to generate statements for multiple positions as needed.

» Then click **Save**.

### Fields Details - General

Fields	Description
Statement Type	<p>Select the statement type: Default for an outgoing statement, or Incoming for an incoming statement.</p> <p>Incoming statements are described as part of the integration process.</p> <p>► Refer to Calypso Integrating Payment Message and Statements documentation for details.</p> <p>You can add values via the menu <b>Process &gt; Statements &gt; Add Statement Type Domain</b> that can be used for outgoing statements only. They belong to the domain StatementType.</p> <p>► For information on Clearing Statements, please refer to Calypso Clearing Member documentation or Calypso ETD Clearing documentation.</p>
Numbering	<p>Enter a rule to generate statement numbers. New values can be added via the menu <b>Process &gt; Statements &gt; Add Statement Numbering Domain</b>. They belong to the domain StatementNumbering.</p> <p>The different values available are as follows:</p>



Fields	Description
	<ul style="list-style-type: none"> <li>yy or RR: last 2 digits of the year – yyyy: Century + Year</li> <li>MM: Month</li> <li>DD: Day</li> <li>DDD: Day Number</li> <li>NNN (any length): Number - Re-initializes the statement ID at the beginning of the year.</li> <li>CCC (any length): Number - Does not reinitialize the statement ID at the beginning of the year.</li> <li>ZZZ (any length): Number resets to zero at the beginning of the year.</li> </ul> <p>They can be combined (i.e. yyyyMMDD, yyyyDDD, yyyyZZZ).</p>
Zero Balance	If this checkbox is ticked, a statement will be created even if the balance is zero and if no movement occurs in the specified period. In that case, it also means that it is a “Dormant” account. Default value = true.
No Movement	If this checkbox is ticked, a statement will be created even if no movement occurs in the specified period, whatever the balance. Default value = true.
Interim Generation	<p>Check to allow generating multiple intraday statements (camt.052).</p> <p>Make sure that you select CHECK_FREQUENCY = false when running the scheduled task ACCOUNT_STATEMENT.</p>
Last Statement	<p>Displays the number of the last statement.</p> <p>Double-click on the heading to display the Id of the last statement created.</p>
Last Date	<p>Displays the date when the last statement was edited.</p> <p>When creating a new statement rule, the date specified will be used to calculate the original balance.</p>
Active From/To	Enter dates if the statement rule is available only in a limited period.

### Fields Details - Frequency

Fields	Description
Freq Rule	<p>You can select a frequency to determine when to generate / integrate account statements.</p> <p>For the weekly / monthly frequency, you can select the day of the week / month, and select a date roll convention to roll the statement date as needed when it falls on a holiday.</p> <p>You can also double-click the Freq label to select a date rule instead.</p>
Frequency Populated	Select the frequency supported by Swift. It only applies to MT535 messages and populates tag 22F::/SFRE/.

## Fields Details - Position

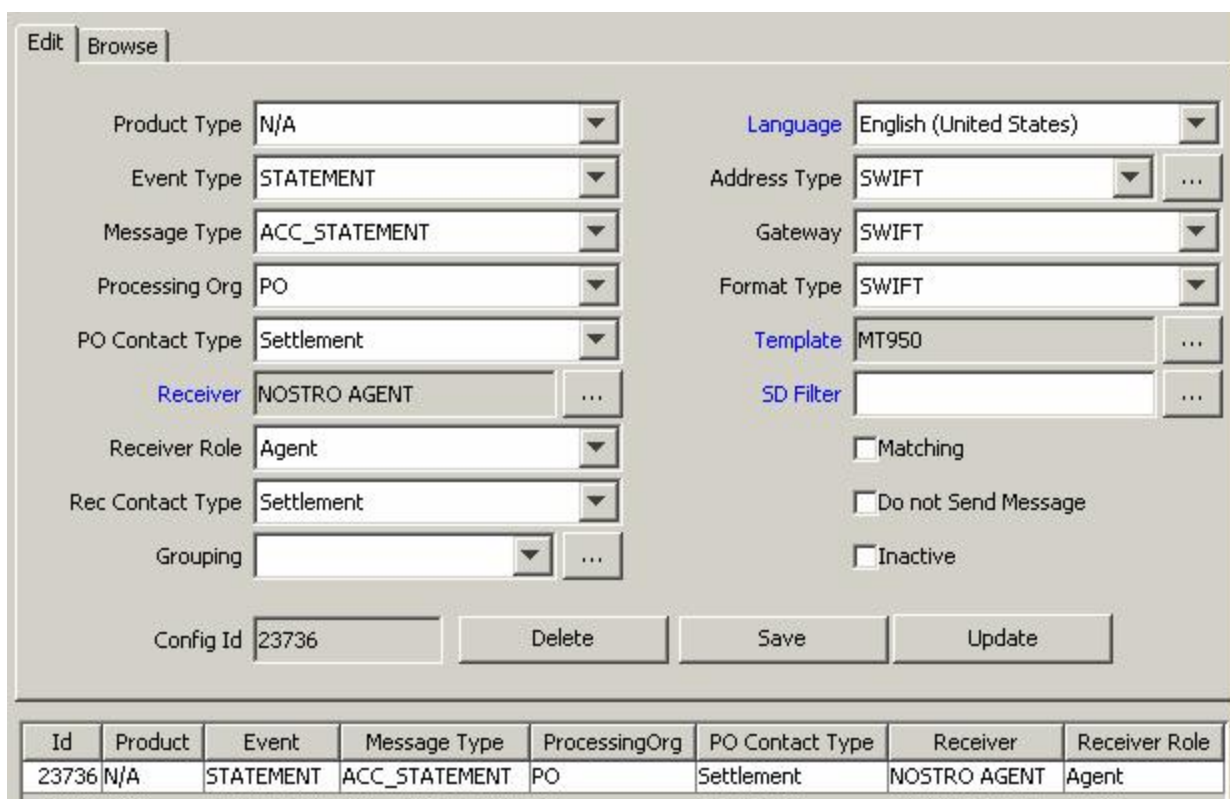
Fields	Description
Cash/Sec	Select the position type to which the statement applies: Cash or Security
Class	Select Internal, or Client.
Type	Select the type of position you want to report in the statement: Actual, Statement, or Theoretical.
Date	<p>Select the position date: Settle, Trade, or Booking.</p> <p>If you select the date type "Booking", you can specify the strategy to determine the Booking date using the domain "ProcessingConfig" for the value "BookingDateManager". The setup is described below.</p> <p>If you do not specify a strategy, the default strategy is LastStatementDateStrategy.</p> <p><b>LastStatementDateStrategy</b></p> <p>Default strategy.</p> <p>Booking Date = System Date if last Booking Statement Date &lt; System Date. Otherwise Booking Date = Last Statement Date + 1 day</p> <p><b>LegacyLastStatementDateStrategy</b></p> <p>Domain = ProcessingConfig Value = BookingDateManager Comment = com.calypso.tk.bo.bookingdate.LegacyLastStatementDateStrategy Booking Date = Value Date if last Booking Statement Date &lt; Value Date. Otherwise Last Statement Date + 1 day</p> <p><b>AccountingStrategy</b></p> <p>Domain = ProcessingConfig Value = BookingDateManager Comment = com.calypso.tk.bo.bookingdate.AccountingStrategy Booking Date = Accounting Business Date as defined in the Legal Entity attribute/Book attribute ACC_BUSINESS_DATE, or If not set the EOD of the Book</p>
Value	<p>For Security accounts, select the position Value: Quantity, Nominal, Nominal (Unfactored), or From Product.</p> <p>When "From Product" is selected, the system will check the product's quote type to determine the position value:</p> <ul style="list-style-type: none"> <li>CleanPrice, DirtyPrice: Position Value = FAMT (nominal)</li> <li>Price, PriceC, UnitaryPrice and GrossUnitaryPrice: Position Value = UNIT (quantity)</li> </ul>
Payment Based	If checked the Statement is based on actual settlements. Otherwise, it is based on expected transfers.

Fields	Description
CAAdjustBook	<p>If checked the Statement only selects CAAdjustBook transfers (transfer type is CA and transfer book has a CAAdjustBook book attribute).</p> <p>Otherwise, any transfer that satisfies the other criteria is selected.</p> <p>This is used for MT566 reconciliation. Please refer to Calypso Corporate Actions documentation for details.</p>

### Field Details - Message Config

Click **Config** to bring up the Message Configuration window. You can select an existing configuration or setup a new one.

The product type should be N/A and the event type should be STATEMENT.



Id	Product	Event	Message Type	ProcessingOrg	PO Contact Type	Receiver	Receiver Role
23736	N/A	STATEMENT	ACC_STATEMENT	PO	Settlement	NOSTRO AGENT	Agent

You can choose [Help > Message Configuration Help](#) for details.

- » Select the STATEMENT event type and an account statement message type. Select the Agent role and select an agent or ALL. You can use a standard swift template (MT940, MT950, MT535, MT536), MX template (camt.053, camt.052) or an HTML template (AccountStatement.html).

The following account statement message types are available:

- ACC\_STATEMENT - Cash Statement Messages for both text and Swift Messages

- ACC\_SEC\_STATEMENT - Security Statement Messages for text Messages
  - ACC\_SEC\_POS\_STATEMENT - For Swift MT535
  - ACC\_SEC\_TRAN\_STATEMENT - For Swift MT536
- » Save the message configuration.
- » When you close the Message Configuration window, you will be prompted to update the message configuration information in the statement configuration. Click **Yes**.

## Call Account Statement

**[NOTE: For a call account, the role should be the role defined in domain "AccountHolderRole", the message type should be ACC\_STATEMENT, and the template should be "CallAccountStatement.html" - Refer to Calypso Call Account documentation for information on defining call accounts]**

For interest bearing trades, the fee comment is stored in the transfer description. So if you display the transfer description in the HTML message, you will see the fee comment. If you display the transfer type, you will see the fee name.

The message keyword ACCOUNT\_LEGAL\_ENTITY\_FULLNAME shows the account holder full name.

If you want to separate the interest cashflows from the interest rate change, you can use the RateChange iterator.

In order to have a more personal transfer description, the system provides the ability to customize the narratives.

If a DDA Xfer is generated by another product (MM or FX trade for example), instead of having the MM standard Xfer description like "PAYMENT USD CASH INTEREST" you can replace CASH by a trade keyword value or a predefined mapping value:

Define the domain "StatementKeyword" with Value = "Narratives" (to use the trade keyword Narratives as the value to display instead of Product Type).

Or define the domain "StatementMapping" with Value = <Product Type> and Comment = <value to display> (then if Value ="Cash" and Comment = "Money Market" , the system will display Money Market instead of Cash).

You can set the environment property USE\_AGENT\_IN\_XFER\_DESCRIPTION to false if you want to remove agent/account in xfer description for CustomerTransfer (default is true).

To remove extra Net transfer in case of WHT tax (default is true), you can set in domain "AccountSetup":

- Value = USE\_TAX\_IN\_STATEMENT
- Comment = false

## Account Attributes

The domain "statementAccountAttributes" may contain account attributes to be copied to statement messages as message attributes in the form "Account.<account attribute>".

For example, to copy the account attribute StatementTransmission to the statement message, add StatementTransmission to the domain “statementAccountAttributes” and add “Account.StatementTransmission” to the domain “msgAttributes”. The value of account attribute StatementTransmission will be copied to message attribute “Account.StatementTransmission”.

You can then define static data filters on those message attributes.

## 6.2 Account Statement Processing

The scheduled task ACCOUNT\_STATEMENT generates statement events based on account statement configurations and cash account positions computed by the Inventory engine. The statement events are then processed by the Message engine for the actual generation of the statement document.

You can also click **Generate** in the Account window, Statements panel to generate the statement events. You will be prompted to select a date range.

From the Calypso Navigator, navigate to **Configuration > Scheduled Tasks** to open the Scheduled Tasks window, and select the ACCOUNT\_STATEMENT scheduled task (menu action `scheduling.ScheduledTaskListWindow`).

Select a trade filter, a user, a pricing environment, and a processing organization.

In the scheduled task, you can specify the agent for which you want to generate a statement, and the type of message (it must be the same as the message configuration selected in the statement configuration).

Task Attributes	
MESSAGETYPE	ACC_STATEMENT
ROLE	Agent
LEGAL ENTITIES	
CURRENCIES	
STATEMENT_TYPE	
FREQUENCY	
CHECK_FREQUENCY	
EXCLUDE_ACCOUNT_STATUS	
Prerequisite Check	
SD_FILTER	
Override Open Balance Date to D	
PRODUCT CACHE MAX SIZE	
THREAD COUNT	
DISABLE SECTIONS	
Save file types	
Save location	

- MESSAGETYPE – Select an account statement message type for this type of message to be generated (ACC\_STATEMENT, ACC\_SEC\_STATEMENT, ACC\_SEC\_POS\_STATEMENT or ACC\_SEC\_TRAN\_STATEMENT).
- ROLE – Select the Legal Entity role “Agent”, the same as in the Accounts Definition window.
- LEGAL ENTITIES – Select legal entities as needed or leave blank for all Agents.
- CURRENCIES – Enter a currency or multiple currencies, or leave blank for all currencies.
- STATEMENT\_TYPE - Applies to ETD Clearing - Leave blank.

- FREQUENCY - Select Daily, Date Rule or Monthly.
- CHECK\_FREQUENCY - Select true or false to check the statement frequency according to the following logic:
  - Daily Statements - Whether true or false, there is no impact on daily statements. Intraday statements will be regenerated.
  - Periodic Statements (Monthly for example) - When True, the system will check that the date matches the date rule in the account definition. If it does, it will produce the expected statements.  
When False, it will generate an inter-month statement at the date the scheduled task is executed.  
Note that periodic statements are not regenerated on or before the last statement date - See "Regenerating a Statement" below for details.
- EXCLUDE\_ACCOUNT\_STATUS - List of account status codes for which the account statement will not be generated (from the accountStatus domain).
- Prerequisite Check - Leave empty or select "SubsidiaryAccount".
- SD\_FILTER - Select a static data filter as needed to restrict the application scope of the scheduled task.
- Override Open Balance Date to D - Select true to set the opening balance date to the valuation date. It is the Last Date from the Account - Statements panel otherwise (Valuation Date - 1 business day for daily statements).
- PRODUCT CACHE MAX SIZE - Enter the size of the product client cache (default size is 10000 if not set).
- THREAD COUNT - Enter number of threads to parallelize the process (default is 1).
- DISABLE SECTIONS - Select the sections that you do not want to generate in the ETD Clearing statement.
- Save file types - Select the file types that you want to generate.
- Save location - Select the files location.

### **Processing of Late Settlements**

Late settlements can be included in the next statement, provided the statement is configured as follows.

The statement config attached to the account for which we produce the statement must be in "Booking" date. The booking date will be populated on the transfers for accounts linked to such statements as follows:

Booking Date = Value Date except if Last Statement Date <= Value date, in which case this will be Last Statement Date + 1 day.

In addition, to manage cases where only SETTLED transfers are included in the statement (which is usually the case), the UpdateBookingDate workflow rule can be added on SETTLE and MATCH actions to update the Booking Date as follows:

If the Booking Date of the transfer is <= Last Statement Date the rule updates the Booking Date to Last Statement Date + 1 to include that transfer in the next day statement.

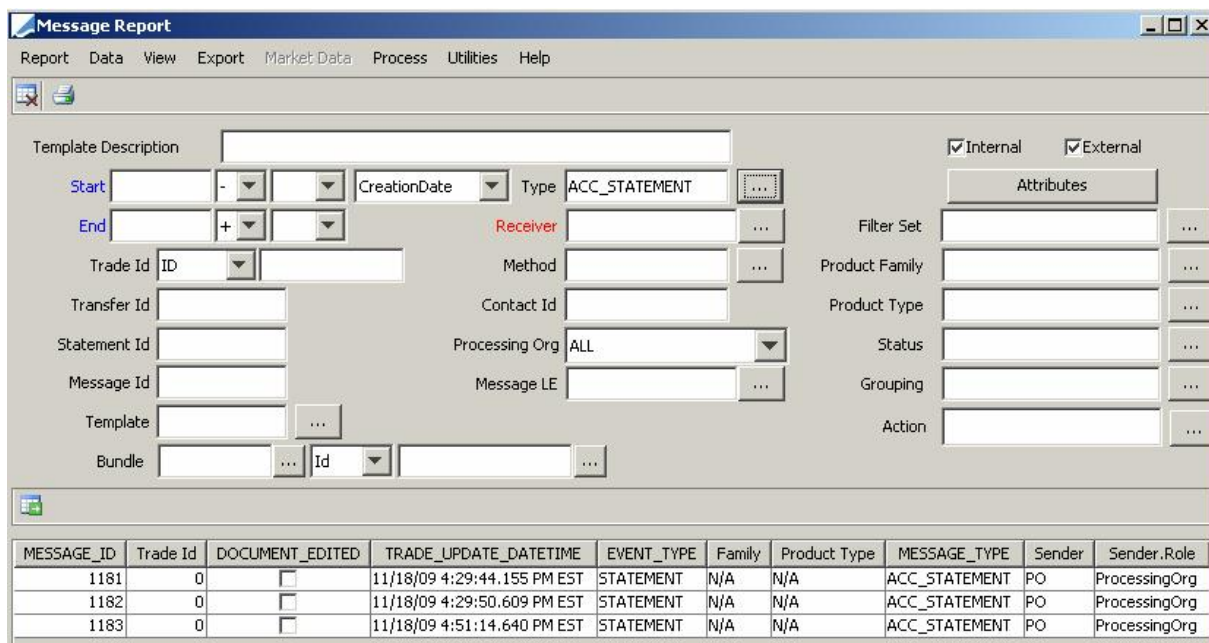
### **Regenerating a Statement**

To regenerate a statement, you can regenerate it manually from the Statement panel of the Account window, or regenerate it using the scheduled task ACCOUNT\_STATEMENT provided you modify the Last Statement date in the Statement panel of the Account window to a date prior to the regeneration date.

## 6.3 Message Report

The Message Report displays messages that have been generated by the Message engine. In particular, the message engine generates statement messages for the statements created by the ACCOUNT\_STATEMENT scheduled task.

From the Calypso Navigator, navigate to **Reports > Message Reports > Message Report** (menu action `reporting.ReportWindow$Message`) to display the Message Report as shown below.



MESSAGE_ID	Trade Id	DOCUMENT_EDITED	TRADE_UPDATE_DATETIME	EVENT_TYPE	Family	Product Type	MESSAGE_TYPE	Sender	Sender.Role
1181	0	<input type="checkbox"/>	11/18/09 4:29:44.155 PM EST	STATEMENT	N/A	N/A	ACC_STATEMENT	PO	ProcessingOrg
1182	0	<input type="checkbox"/>	11/18/09 4:29:50.609 PM EST	STATEMENT	N/A	N/A	ACC_STATEMENT	PO	ProcessingOrg
1183	0	<input type="checkbox"/>	11/18/09 4:51:14.640 PM EST	STATEMENT	N/A	N/A	ACC_STATEMENT	PO	ProcessingOrg

- » Specify search criteria as applicable (for example, Type = ACC\_STATEMENT) and click **Load** to load the corresponding message.
- » Double-click a message to view the actual document.



Swift Message Window

Sender

POSWIFT1AXXX

Receiver

NAGSWIFTXXX

Type

MT950

Field Name	Field TAG	Field Value
Transaction Reference Number	:20:	20091015-01
Account Identification	:25:	PO(AT)NOSTRO AGENT USD
Statement Number/Sequence Number	:28C:	288/00001
Opening Balance	:60F:	C091014USD69133370,72
Statement Line	:61:	0910150812DD198,56NTRF//1247
Statement Line	:61:	0910150812DD128,33NTRF//1267
Statement Line	:61:	0910150812DD57,36NTRF//1287
Statement Line	:61:	0910150915CD1480000,NTRF//1381
Statement Line	:61:	0910150915CD296000,NTRF//1383
Closing Balance (Booked Funds)	:62F:	C091015USD70908986,47

{1:F01POSWIFT1AXXX0000000000}{2:I950NAGSWIFTXXXN2020}{3:{108:MT950}}{4:  
:20:20091015-01  
:25:PO(AT)NOSTRO AGENT USD  
:28C:288/00001  
:60F:C091014USD69133370,72

This message type (MT950) is sent by an account servicing institution to an account owner. It is used to transmit detailed information about entries, whether or not caused by a Swift message, booked to the account.

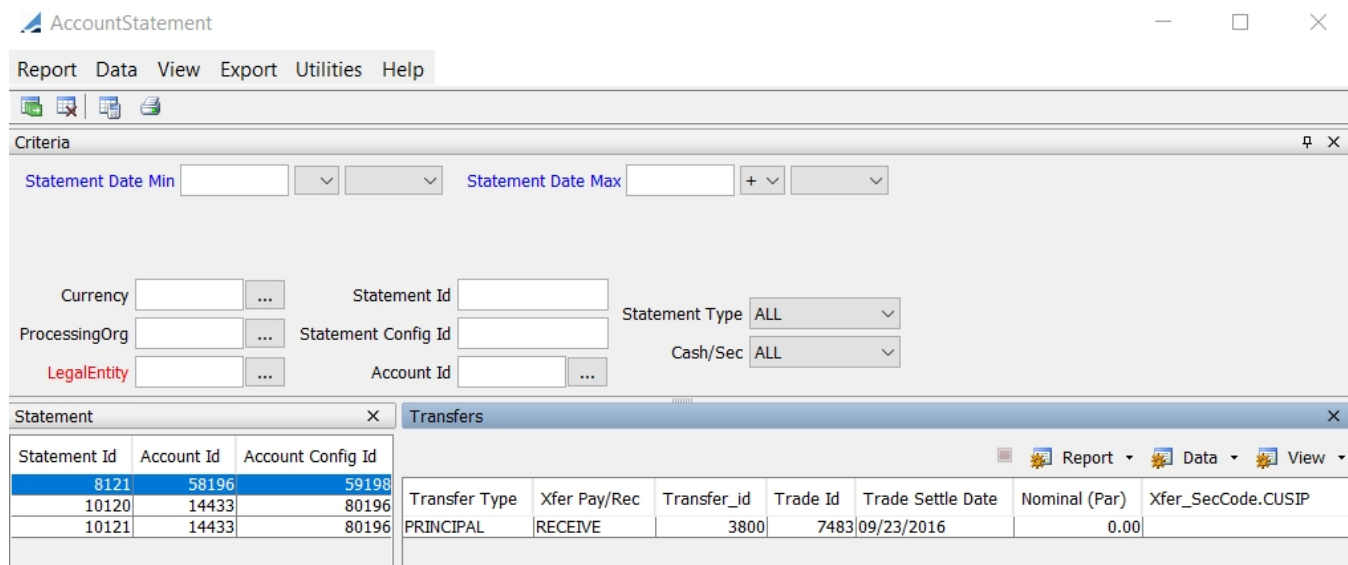
The Swift messages MT940 and MT950 are by default created with 20 lines per message. If you want to manage a different number of lines, add the property MAX\_LINE\_PER\_SWIFT\_STATEMENT and specify the value you require.

Account statement messages can be manually edited by the user via the Message report. For more details about editing message, refer to the Calypso Messages Documentation.



## 7. Viewing Account Statements

From the Calypso Navigator, navigate to **Reports > Accounting Reports > Account Statement** (menu action `reporting.ReportWindow$AccountStatement`) to view all statements created by the scheduled task ACCOUNT\_STATEMENT, or via the Account Statement Config report.



AccountStatement

Report Data View Export Utilities Help

Criteria

Statement Date Min     Statement Date Max

Currency  ... Statement Id  Statement Type  ALL

ProcessingOrg  ... Statement Config Id  Cash/Sec  ALL

LegalEntity  ... Account Id  ...

Statement Id	Account Id	Account Config Id
8121	58196	59198
10120	14433	80196
10121	14433	80196

Transfer Type	Xfer Pay/Rec	Transfer_Id	Trade Id	Trade Settle Date	Nominal (Par)	Xfer_SecCode.CUSIP
PRINCIPAL	RECEIVE	3800	7483	09/23/2016	0.00	

» You can check / uncheck **View > Show Frame > Criteria** to display / hide the search criteria.

» Enter search criteria as needed and click  to load the corresponding statements.



It also allows filtering the Statements by Closing Date. A double click on the headings **Statement Date Min** or **Statement Date Max** displayed in blue resets the date to the system date.

You can configure the columns of the report. See **Help > Menu Items** for details.

» You can double-click a statement to display the associated transfers in the Transfers panel. Note that it only displays transfers occurring during the statement period.

» You can right-click a statement and choose **Show > Linked Messages** to display the Message report for the associated statement message generated by the message engine. If you double-click the statement message in the Message report, it displays the actual statement message.

Swift Message Window		
Sender	POSWIFT1AXXX	Receiver
		NAGSWIFTXXXX
Type	MT950	
Field Name	Field TAG	Field Value
Transaction Reference Number	:20:	20091015-01
Account Identification	:25:	PO(AT)NOSTRO AGENT USD
Statement Number/Sequence Number	:28C:	288/00001
Opening Balance	:60F:	C091014USD69133370,72
Statement Line	:61:	0910150812DD198,56NTRF//1247
Statement Line	:61:	0910150812DD128,33NTRF//1267
Statement Line	:61:	0910150812DD57,36NTRF//1287
Statement Line	:61:	0910150915CD1480000,NTRF//1381
Statement Line	:61:	0910150915CD296000,NTRF//1383
Closing Balance (Booked Funds)	:62F:	C091015USD70908986,47
<pre>{1:F01POSWIFT1AXXX0000000000}{2:I950NAGSWIFTXXXXN2020}{3:{108:MT950}}{4: :20:20091015-01 :25:PO(AT)NOSTRO AGENT USD :28C:288/00001 :60F:C091014USD69133370,72</pre>		

- » You can select a template and click  to display the number of objects that will be loaded from the database before loading the report.
- » You can click  to print the report results.

Note that for the Pivot view and the Aggregation view, the print icon is disabled.

You can use [Ctrl+P] or [Ctrl+L] to print the report, or you can export the report to Excel and print it from there.

## 8. Integrating Payment Messages and Statements

The system allows integrating incoming MT103, pacs.008.001, MT202, pacs.009.001, MT202COV, MT204, MT205, MT205COV, MT210, MT900, MT910, camt.054 (camt054) messages and reconciling the incoming messages with Calypso transfers. The process is described below.

The system also allows integrating incoming MT940, MT942, MT950, MT970, camt.053 (camt053), camt.004 (camt004) and reconciling the incoming statement entries with Calypso transfers. The configuration is described below.

► For pacs.008.001, pacs.009.001 integration, please refer to Calypso MX Payment Messages documentation for details.

### 8.1 Setup Requirements

#### 8.1.1 Environment Property

You need to set the following environment property:

SPLIT\_CASH\_STATEMENT = True

It splits every MT940/MT950 message into sub-statements. Each sub-statement representing individual financial transactions.

#### 8.1.2 Processing Org Attributes

Set the following legal entity attributes on the processing organization as needed:

Id	Processing Org	Legal Entity	Role	Attribute Type	Attribute Value
10001	ALL	BANK1	ALL	CASH_MANAGEMENT	false
9523	ALL	BANK1	ALL	DEFAULT_BOOK	BANK1
9524	ALL	BANK1	ALL	DEFAULT_CPTY	CPTY_DUMMY

Fields	Description
CASH_MANAGEMENT	<p>Set to true for advanced checks, or false otherwise.</p> <p><b>Advanced Checks</b></p> <p>When set to true, the system will perform specific prerequisite checks before processing an incoming statement MT940/MT950/camt053. These prerequisite checks are the following:</p> <ul style="list-style-type: none"> <li>Check if all start-balances match the previous end-balances.</li> </ul>

Fields	Description
	<ul style="list-style-type: none"> <li>Check that all intermediate balances for an account are matching (Tag 60M/62M for a n-page statement).</li> <li>Check that opening + movements = closing balance.</li> <li>Check statement completeness and order (number of pages and existence of Tag 62F).</li> <li>Check if all accounts exist in MT940 and vice-versa.</li> <li>Check if date of end balance is not in the future.</li> <li>Check if there is only one end-balance (and so MT940) per day.</li> </ul> <p>When set to true, you will need to run two scheduled task to integrate and process incoming MT940/MT950/camt053: first MESSAGE_MATCHING to save the incoming MT940/MT950/camt053 globally as a BO Message into the system, then INC_CASH_STATEMENT to run the checks and process the incoming MT950/camt053. When set to true, only statements marked as Valid are processed into the system. If one at least of the checks failed, the system raises a Process Status exception type StatementIntegration and stops the process. The user will have to check into the ProcessStatus report to know what check has failed and rerun the integration.</p> <p><b>No Check</b></p> <p>When set to false, the system will not perform any specific check and will process all statements MT940/MT950/camt053 as they come. In that mode, you will only need to run MESSAGE_MATCHING.</p>
DEFAULT_BOOK	Default Book used by the system when creating a missing movement (Simple Transfer) from the "Match with Creation" function available in the Matching Manager.
DEFAULT_CPTY	Default Counterparty used by the system when creating a missing movement (Simple Transfer) from the "Match with Creation" function available in the Matching Manager.

### 8.1.3 Domain Values

Make sure the following domain values are set.

#### Domain "incomingType"

- Value = MT103, Comment = INC\_MT103
- Value = MT202, Comment = INC\_MT202
- Value = MT204, Comment = INC\_MT204
- Value = MT205, Comment = INC\_MT205
- Value = MT210, Comment = INC\_MT210
- Value = MT900, Comment = INC\_MT900
- Value = MT910, Comment = INC\_MT910

- Value = MT940, Comment = INC\_MT940
- Value = MT942, Comment = INC\_MT942
- Value = MT950, Comment = INC\_MT950
- Value = CAMT053, Comment = INC\_CAMT053
- Value = CAMT054, Comment = INC\_CAMT054
- Value = CAMT004, Comment = INC\_CAMT054

### ***Domain "Swift.UserHeader.Service Identifier.<currency>"***

Settlement platforms such as Target need to have a special logic to retrieve the GL Account. The settlement platform is the value of the Swift header's block 3 tag 103.

The domain "Swift.UserHeader.Service Identifier.<currency>" defines the list of supported service codes in Tag 103 of Swift header's block 3.

For example, create the domain "Swift.UserHeader.Service Identifier.EUR" for incoming EUR MT103/MT202 with the values:

- Value = EBA
- Value = STC
- Value = TGT

### ***Domain "IncomingSwiftTrade"***

In order for incoming amend or cancel messages to be linked to the original message that they are amending/canceling, the respective message types need to be added to the domain "IncomingSwiftTrade". If a message type is not in IncomingSwiftTrade, when receiving an AMEND message for that message type, the matching framework will not attempt to un-match the original message which the AMEND is replacing.

Value = CAMT053

### ***Domain "MX.Templates"***

- Value = CAMT053

### ***Domain "ExternalMessageField.MessageMapper"***

- Value = CAMT053
- Value = CAMT054

### 8.1.4 Settlement Account

The account where the processing organization receives and processes MT103/MT202/MT204/MT205/MT210/MT900/MT910/camt054 (and MT940/MT942/MT950/camt053) messages is configured as a standard SETTLE account for that specific Processing Organization, Currency and Agent.

The account must be attached to the processing org's settlement instructions.

The name of the account can be generic, for example "PO@AGENT-CCY".

#### Account Attributes

Set the following account attributes.

**XferAgentAccount** - The system stores the value of Tag 25 used by the Agent when sending intraday MT900/MT910/camt054 and T+1 MT940/MT950/camt053 in this account attribute.

#### Platform.<service code>

For the service codes defined in domain "Swift.UserHeader.Service Identifier.<currency>", you also need to set the account attributes "Platform.<service code>" to True to map the Tag 103 value of the block 3 of the incoming MT202/103.

For example, in domain "SwiftUserHeader.Service Identifier.EUR" we have the values EBA, STC, and TGT. So you need to create the account attributes: "Platform.EBA", "Platform.STC", and "Platform.TGT".

For camt053 / camt054 integration, it should be "Platform.<jurisdiction>".

Platform.EBA	▼
Platform.STC	▼
Platform.TGT	▼ True
XferAgentAccount	987654444

When multiple accounts have account attribute "Platform.TGT = true", the system needs to use the account with account attribute "Addressee1carBIC = <Receiver BIC minus ninth character>".

Example: Receiver BIC = NATXFRPPAMAR, Addressee1carBIC must be set to NATXFRPPMAR (it should not include the ninth character).

**IgnoreDuplicateStatement** - Applies to camt053 messages only.

In order to process incoming camt053 messages that contain multiple statements with same statement id, you need to set account attribute IgnoreDuplicateStatement = true.

Alternatively, you can use the domain name "camt053DuplicateStatement" with value allowDuplicate and comment true as shown in snapshot below:


The account attribute, if set, takes precedence over the domain value.

Name:	camt053DuplicateStatement
Value:	allowDuplicate
Comment:	true

### Incoming Statement Configuration

Settlement accounts are taken into account by the reconciliation process only if an incoming statement configuration is attached to the account.

To add an incoming statement configuration, select the Statements panel, and add a statement configuration of type "Incoming".

 Accounts Definition - Authorization mode OFF CMF\_1@CCP / 27604 - version 0

Account	Utilities	Reports	Process	Help
Account	Statements	Attributes	Interests	Limits
Consolidation	Translation/Revaluation	Legal Entities	Clearing	Browse

Statement Type: Incoming

**General**

Cash/Sec: Cash

Last Statement:

Client Statement

Block When Missing

Block When Previous Missing

Last Date:

Active From:

To:

**Frequency**

Rule: @Daily Date Rule

**External Inventory Position**

Initialize with Statement Message (MT940/MT950/MT970)

Booked Funds (tag 62F) Available Funds (tag 64)

Update with Settlement Confirmation Message (MT900/MT910/MT942/camt.054)

Create BOCashSettlement from the Statement Message (MT940/MT950/MT970)

The frequency is used to determine when we expect an incoming MT940/MT950/camt053 for this account. The system does not process an incoming MT940/MT950/camt053 if the frequency does not expect such a statement for a specific date; inversely, the system raises an exception in the ProcessStatus report if a statement expected by the date rule is not received.

The incoming statement configuration also allows specifying the following options.

Options	Description
Initialize with Statement Message (MT940/MT950/MT970)	<p>If not checked, there is no creation of an EXTERNAL inventory position.</p> <p>If checked, you have two options:</p> <ul style="list-style-type: none"> <li>When "Booked Funds (tag 62F)" is checked, the system uses the balance amount as confirmed in the statement MT940/MT950/camt053 or 970 tag 62F to save "on a daily basis" an EXTERNAL-BANK CONFIRMED-SETTLE DATE inventory position.</li> <li>When "Available Funds (tag 64)" is checked, the system uses the balance amount as confirmed in the statement MT940/MT950/camt053 or 970 tag 62F to save "on a daily basis" an EXTERNAL-BANK CONFIRMED-AVAILABLE DATE inventory position.</li> </ul>
Update with Settlement Confirmation Message (MT900/MT910/MT942/camt.054)	<p>If not checked, incoming MT900/MT910/MT942/camt054 are only used to reconcile Calypso transfers.</p> <p>If selected, the same incoming MT900/MT910/MT942/camt054 are used to reconcile Calypso transfers and to compute an EXTERNAL/BANK CONFIRMED/SETTLED DATE inventory position in real-time. Combined with the initialization mode from the statement, this allows computing in real-time into the system the balance of the account as confirmed by the bank, taking into account only movements which are confirmed (whether reconciled or not)</p>
Create BOCashSettlement from the Statement Message (MT940/MT950/MT970)	<p>If checked, the system will create a specific trade on a product type = BOCashSettlement.</p> <p>If checked, a BOCashSettlement trade is created per statement:</p> <ul style="list-style-type: none"> <li>Transfers associated with that trade are aggregated by <u>value date</u> (1 transfer per value date).</li> <li>Transfers associated with that trade are of type EXTERNAL and only create an EXTERNAL-ACTUAL-SETTLE DATE position.</li> <li>This option must be used when you want to recompute the external balance per value date and not per booking date as confirmed in Tag 62F or 64. This is particularly useful to calculate interest bearing trades using the exact same value date balance as the bank to check the amount.</li> </ul>

### Define the Processing Organization and Bank/Agent SWIFT Codes (LE Contact)

To be able to map an incoming message, you need to setup the related SWIFT Codes for the Processing Organization and Agent/Bank. As we reconcile outgoing SWIFT Messages, block 1 identifies the Receiver (Processing Organization) and block 2 the Sender (Bank/Agent). Thus, to be able to process the incoming messages you need to set in the LE Contact Window the SWIFT Address of the Processing Organization (to map block 1 swift address of the message receiver), and the SWIFT Address of the Agent (to map block 2 swift address of the message sender).

The LE Contact must be defined with Contact Type = ALL by default.



You can use another contact type for MT9xx and MT202 integration.

You need to add the contact type you want to use to the domain "MappingIncomingWithContact" (it applies to both the PO and the Agent):

Value = <message type>

Comment = <LE Contact type to be used to lookup the GL account>

Example:

Value = MT950

Comment = Settlement

If there is no contact with this contact type, the first contact found is used.

The logic to determine which account is impacted for a specific incoming message is the same for MT900/MT910 and MT940/MT950. We look for a unique account belonging to the processing organization which has a BIC Code = Block 1 BIC at the Agent = BIC Sender for the Account Number listed in Tag 25 and stored as XferAgentAccount account attribute for that Processing Organization's Agent.

In case environment property LOOK\_PARENT\_CONTACT = true, if the PO of the incoming message with proper BIC Code is a parent PO, then we look at accounts associated with children PO for which XferAgentAccount = Tag 25 of MT900/MT910 or MT940/MT950 to set the proper PO.

If the PO's agent has legal entity attribute MultipleAccountName = true, the system will look up multiple accounts (defined in "XferAgentAccount.1", "XferAgentAccount.2", ..., "XferAgentAccount.9"), not just XferAgentAccount.

If the currency of the message is different from the currency of the account it will check if it matches the corresponding ISO currency.

The logic is slightly different for incoming MT103/MT202/MT204/MT205/MT210 where we only consider the specific value set in Tag 103 of the Header/Block3 and map it with the Platform attribute of the account.

For camt053/camt054 messages, the identifiers are taken from the following tags.

The Incoming Linked Message Identifier is linked to the outgoing Message Identifier.

► Refer to Calypso MX Payment Messages documentation for information on setting up those identifiers.

Message Attributes	CAMT.054 Path
BusinessMessageIdentifier	From Business Header: field BizMsgIdr
LinkedInstructionId	/Document/BkToCstmrDbtCdtNtfctn/Ntfctn/Ntry/NtryDtIs/TxDtIs/Refs/InstrId
LinkedEndToEndId	/Document/BkToCstmrDbtCdtNtfctn/Ntfctn/Ntry/NtryDtIs/TxDtIs/Refs/EndToEndId
LinkedUETR	/Document/BkToCstmrDbtCdtNtfctn/Ntfctn/Ntry/NtryDtIs/TxDtIs/Refs/UETR

Message Attributes	CAMT.054 Path
LinkedSettlementAmount	/Document/BkToCstmrDbtCdtNtfctn/Ntfctn/Ntry/Amt
LinkedSettlementAmountCcy	/Document/BkToCstmrDbtCdtNtfctn/Ntfctn/Ntry/Amt
LinkedSettlementDate	/Document/BkToCstmrDbtCdtNtfctn/Ntfctn/Ntry/ValDt/Dt OR /Document/BkToCstmrDbtCdtNtfctn/Ntfctn/Ntry/ValDt/DtTm
AccountId	/Document/Ntfctn/Acct/Id/Othr/Id OR /Document/Ntfctn/Acct/Id/IBAN based on SDI attributes SDI Attributes IBAN.Agent, IBAN.Intermediary
DrCrIndicator	/Document/BkToCstmrDbtCdtNtfctn/Ntfctn/Ntry/CdtDbtInd
InstructingAgentBIC	/Document/BkToCstmrDbtCdtNtfctn/Ntfctn/Ntry/NtryDtIs/TxDtIs/RltdAgts/InstgAgt/FinInstnId/BICFI
InstructedAgentBIC	Document/BkToCstmrDbtCdtNtfctn/Ntfctn/Ntry/NtryDtIs/TxDtIs/RltdAgts/InstdAgt/FinInstnId/BICFI
NtryStatus	Document/BkToCstmrDbtCdtNtfctn/Ntfctn/Ntry/Sts/Cd
Money Amount	/Document/BkToCstmrDbtCdtNtfctn/Ntfctn/Ntry/Amt is mapped with tag 32A (in context : MT900 & 910).  For +/- in the below tag /Document/BkToCstmrDbtCdtNtfctn/Ntfctn/Ntry/CdtDbtInd  - If the Debit then it would be - - If Credit then it would be +

### Setup Example

An example is presented below for a standard bank account for the processing organization PARENT\_COMPANY (Swift is PARNTCPY) with the agent BARCLAYS BANK PLC (BARCGB22) second block displays the Account Statement Config:

### 8.1.5 Settlement Instructions

Below an example for the standard account of the processing organization PARENT\_COMPANY with the agent BARCLAYS BK PLC:

April 2025

### 8.1.6 Incoming Intraday Message Workflow

Define the incoming workflow for intraday reconciliation as shown below for incoming MT900 using [Configuration > Workflow > Workflow Configuration](#) from the Calypso Navigator.

All intraday messages (incoming MT103/MT202/MT204/MT205/MT210/MT900/MT910/camt054) follow the same workflow.

Orig Status	Action	Resulting Status	Different User	Use STP	Subtype	Product Type	Processing Org	Kick Off/ Cut Off	Filter	Prefered
NONE	NEW	UNPROCESSED	false	false	INC_MT900	ALL	ALL	false		false
PROCESSED	CANCEL	CANCELED	false	false	INC_MT900	ALL	ALL	false		false
PROCESSED	UNMATCH	UNPROCESSED	false	false	INC_MT900	ALL	ALL	false		false
UNPROCESSED	AUTOMATCH	PROCESSED	false	false	INC_MT900	ALL	ALL	false		false
UNPROCESSED	CANCEL	CANCELED	false	false	INC_MT900	ALL	ALL	false		false
UNPROCESSED	MANUALMATCH	PROCESSED	false	false	INC_MT900	ALL	ALL	false		false
UNPROCESSED	UNMATCH	UNMATCHED	false	false	INC_MT900	ALL	ALL	false		false

### 8.1.7 Incoming Statement Message Workflow

Define the incoming workflow for T+1 reconciliation as shown below for incoming statements using [Configuration > Workflow > Workflow Configuration](#) from the Calypso Navigator.

All T+1 incoming statements (incoming MT940/MT942/MT950/MT970/camt053) follow the same workflow.

The MT942 is saved as a statement and immediately split into sub-statements as soon as it is integrated into the system. Only the sub-statements are eligible for matching with the related transfer. All pending incoming MT942 sub-statements will be shown in the matching monitor to be reconciled manually with 1 or n transfers.

#### Simple Workflow

The workflow presented below can be used when processing incoming statements without prerequisite checks (scheduled task MESSAGE\_MATCHING only + Processing Organization Attribute CASH\_MANAGEMENT = false).

Orig Status	Action	Resulting Status	Different User	Use STP	Subtype	Product Type	Rules	Processing Org	Kick Off/ Cut Off	Filter
IMPORTED	CANCEL	CANCELED	false	false	INC_MT950	ALL		ALL	false	
NONE	NEW	IMPORTED	false	false	INC_MT950	ALL		ALL	false	Statement
NONE	NEW	UNPROCESSED	false	false	INC_MT950	ALL		ALL	false	NotStatement
NOT_PROCESSED	CANCEL	CANCELED	false	false	INC_MT950	ALL		ALL	false	
PROCESSED	CANCEL	CANCELED	false	false	INC_MT950	ALL		ALL	false	SubStatement Nostro
PROCESSED	UNMATCH	UNPROCESSED	false	false	INC_MT950	ALL		ALL	false	SubStatement Nostro
UNPROCESSED	AUTOMATCH	PROCESSED	false	false	INC_MT950	ALL		ALL	false	SubStatement Nostro
UNPROCESSED	CANCEL	CANCELED	false	false	INC_MT950	ALL		ALL	false	
UNPROCESSED	MANUALMATCH	PROCESSED	false	false	INC_MT950	ALL		ALL	false	SubStatement Nostro
UNPROCESSED	UNMATCH	UNMATCHED	false	false	INC_MT950	ALL		ALL	false	SubStatement Nostro

#### Static Data Filter Statement

Name:

Comment:

Groups:

Attribute	Criteria	Filter Value(s)
MSG_ATTRIBUTE.CashStatementProcess	= IN	( <input type="button" value="Add"/> ) Statement

### Static Data Filter NotStatement

Name:

Comment:

Groups:

Attribute	Criteria	Filter Value(s)
MSG_ATTRIBUTE.CashStatementProcess	= NOT_IN	( <input type="button" value="Add"/> ) Statement

### Static Data Filter SubStatement Nostro

Name:

Comment:

Groups:

Attribute	Criteria	Filter Value(s)
MSG_ATTRIBUTE.CashStatementProcess	= IN	( <input type="button" value="Add"/> ) SubStatement.Nostro

### Advanced Check Workflow

If you are working with prerequisite checks before processing the incoming statements (scheduled tasks MESSAGE\_MATCHING and INC\_CASH\_STATEMENT + Processing Organization Attributes CASH\_MANAGEMENT = true), you will need additional transitions to process the statement versus substatements created for each entry.

Specific transitions are needed to put the statement message into specific status depending on the result of the prerequisite checks. These actions (PROCESS/UNPROCESS) in the workflow below are applied by the scheduled task INC\_CASH\_STATEMENT.

Orig Status	Action	Resulting Status	Different User	Use STP	Subtype	Product Type	Rules	Processing Org	Kick Off/ Cut Off	Filter
IMPORTED	CANCEL	CANCELED	false	false	INC_MT950	ALL		ALL	false	
IMPORTED	PROCESS	STAT_PROCESSED	false	false	INC_MT950	ALL		ALL	false	Statement
IMPORTED	UNPROCESS	STAT_NOTPROCESS	false	false	INC_MT950	ALL		ALL	false	Statement
NONE	NEW	IMPORTED	false	false	INC_MT950	ALL		ALL	false	Statement
NONE	NEW	UNPROCESSED	false	false	INC_MT950	ALL		ALL	false	Not Statement
PROCESSED	CANCEL	CANCELED	false	false	INC_MT950	ALL		ALL	false	SubStatement Nostro
PROCESSED	UNMATCH	UNPROCESSED	false	false	INC_MT950	ALL		ALL	false	SubStatement Nostro
STAT_NOTPROCESS	CANCEL	CANCELED	false	false	INC_MT950	ALL		ALL	false	
STAT_NOTPROCESS	PROCESS	IMPORTED	false	false	INC_MT950	ALL		ALL	false	
STAT_PROCESSED	CANCEL	CANCELED	false	false	INC_MT950	ALL		ALL	false	
UNPROCESSED	AUTOMATCH	PROCESSED	false	false	INC_MT950	ALL		ALL	false	SubStatement Nostro
UNPROCESSED	CANCEL	CANCELED	false	false	INC_MT950	ALL		ALL	false	
UNPROCESSED	MANUAL_MATCH	PROCESSED	false	false	INC_MT950	ALL		ALL	false	SubStatement Nostro
UNPROCESSED	UNMATCH	UNMATCHED	false	false	INC_MT950	ALL		ALL	false	SubStatement Nostro

## INC\_CAMT053 Workflow

Workflow Diagram Workflow Table Kick Off / Cut Off Breaks Closing										
Id	Orig Status	Action	Resulting Status	Create Task	Use STP	Rules	Needs Man. Auth.	Use Comment	Kick Off / Cut Off	Static Data Filter
2028018	UNPROCESSED	DK	DISCARDED	On Failure	False		False	False	False	
2028012	UNPROCESSED	UNMATCH	UNMATCHED	Always	False		False	False	False	
2028010	UNPROCESSED	CANCEL	CANCELED	On Failure	False		False	False	False	
2028011	UNPROCESSED	MANUAL_MATCH	PROCESSED	On Failure	False		False	False	False	
2028008	PROCESSED	UNMATCH	UNPROCESSED	Always	False		False	False	False	
2028009	NONE	NEW	UNPROCESSED	Always	False		False	False	False	
2028006	PROCESSED	CANCEL	CANCELED	On Failure	False		False	False	False	
2028007	UNPROCESSED	MATCH	PROCESSED	On Failure	False		False	False	False	
2028004	UNMATCHED	UPDATE	UNMATCHED	Always	False		False	False	False	
2028005	UNMATCHED	UNMATCH	UNMATCHED	Always	False		False	False	False	
2028002	UNPROCESSED	UPDATE	UNPROCESSED	Always	False		False	False	False	
2028003	UNMATCHED	MATCH	PROCESSED	On Failure	False		False	False	False	
2028204	UNPROCESSED	PROCESS	INCOMPLETE	On Failure	True		False	False	False	Statement_NOT_COMPLETE
2028205	INCOMPLETE	CANCEL	CANCELED	On Failure	False		False	False	False	

Static Data Filter Window [151010/BIAB\_V151/Demo User]

Name: Statement\_NOT\_COMPLETE  
External Ref.:  
Comment:  
Groups: ANY

Criteria...

Attribute	Criteria	Filter Value(s)
MSG_ATTRIBUTE.StmtComplete	IN	false

## 8.1.8 Outgoing Message Workflow

For outgoing payment/receipt messages sent by Calypso, you will need to add the following transition / workflow rule to be able to handle the matching on reference:

Orig Status	Action	Resulting Status	Different User	Use STP	Rules	Processing Org	Kick Off/ Cut Off
PENDING	AUTHORIZE	VERIFIED	false	true	AddTransferBusinessReference	ALL	false

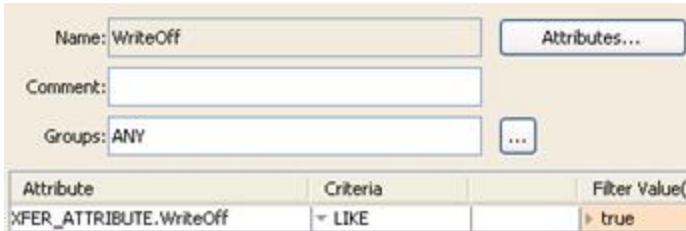


### 8.1.9 Transfer Workflow

The transfer workflow presented below is only an example to be used as a starting point. Clients must then adjust based on their business process, especially in terms of manual and automatic write-off.

Orig Status	Action	Resulting Status	Different User	Use STP	Product Type	Rules	Processing Org	Filter
CANCELED	UNMATCH	CANCELED	false	false	ALL		ALL	
CANCELED	UPDATE	CANCELED	false	false	ALL		ALL	
FAILED	AUTOMATCH	SETTLED	false	false	ALL		ALL	
FAILED	CANCEL	CANCELED	false	false	ALL		ALL	
FAILED	MANUALMATCH	SETTLED	false	false	ALL		ALL	
FAILED	PARTIAL_SETTLE	SPLIT	false	false	ALL		ALL	
FAILED	SETTLE	SETTLED	false	false	ALL		ALL	
FAILED	SPLIT	SPLIT	false	false	ALL		ALL	
FAILED	UPDATE	FAILED	false	false	ALL		ALL	
FAILED	WRITEOFF	WRITEOFF	false	true	ALL		ALL	Write Off
HELD	AUTHORIZE	VERIFIED	false	false	ALL		ALL	
HELD	CANCEL	CANCELED	false	false	ALL		ALL	
HELD	UPDATE	HELD	false	false	ALL		ALL	
INVALID	ASSIGN	CANCELED	false	true	ALL	ApplyDefaultSDI	ALL	
INVALID	CANCEL	CANCELED	false	false	ALL		ALL	
INVALID	UPDATE	INVALID	false	false	ALL		ALL	
MATCHED	UNMATCH	UNMATCHED	false	false	ALL		ALL	
NONE	NEW	INVALID	false	false	ALL	CheckSDI	ALL	
NONE	NEW	PENDING	false	false	ALL	CheckCorrectSDI, PropagateTradeKeyword	ALL	
PENDING	AMEND	PENDING	false	false	ALL		ALL	
PENDING	ASSIGN	CANCELED	false	false	ALL		ALL	
PENDING	AUTHORIZE	VERIFIED	false	true	ALL	CheckNetting	ALL	
PENDING	CANCEL	CANCELED	false	false	ALL		ALL	
PENDING	EXECUTE	SPLIT	false	false	ALL	SecurityNetting	ALL	
PENDING	EXECUTE	VERIFIED	false	false	ALL	SetKnownFlag	ALL	
PENDING	SPLIT	SPLIT	false	false	ALL		ALL	
PENDING	UNSPILT	CANCELED	false	false	ALL		ALL	
PENDING	UPDATE	PENDING	false	false	ALL		ALL	
SETTLED	CANCEL	CANCELED	false	false	ALL		ALL	
SETTLED	UNMATCH	VERIFIED	false	false	ALL		ALL	
SETTLED	UPDATE	SETTLED	false	false	ALL		ALL	
SPLIT	UPDATE	SPLIT	false	false	ALL		ALL	
SUBSTITUTED	CANCEL	CANCELED	false	false	ALL		ALL	
SUBSTITUTED	UNSUBSTITUTE	VERIFIED	false	false	ALL		ALL	
UNMATCHED	UNMATCH	UNMATCHED	false	false	ALL		ALL	
VERIFIED	AMEND	PENDING	false	false	ALL	CheckKnownFlag	ALL	
VERIFIED	ASSIGN	CANCELED	false	false	ALL		ALL	
VERIFIED	AUTOMATCH	SETTLED	false	false	ALL		ALL	
VERIFIED	CANCEL	CANCELED	false	false	ALL		ALL	
VERIFIED	FAIL	FAILED	false	true	ALL	CheckToBeFailed	ALL	
VERIFIED	HOLD	HELD	false	false	ALL		ALL	
VERIFIED	MANUALMATCH	SETTLED	false	false	ALL		ALL	
VERIFIED	PARTIAL_SETTLE	SPLIT	false	false	ALL		ALL	
VERIFIED	SETTLE	SETTLED	false	true	ALL	CheckToBeSettled	ALL	
VERIFIED	SPLIT	SPLIT	false	false	ALL		ALL	
VERIFIED	SUBSTITUTE	SUBSTITUTED	false	false	ALL		ALL	
VERIFIED	UNMATCH	VERIFIED	false	false	ALL		ALL	
VERIFIED	UNSPILT	CANCELED	false	false	ALL		ALL	
VERIFIED	UPDATE	VERIFIED	false	false	ALL		ALL	

#### Static Data Filter WriteOff



Attribute	Criteria	Filter Value
XFER_ATTRIBUTE.WriteOff	LIKE	true

This Static Data Filter allows automatically triggering the write off transfers when we are below the automatic tolerance (if set).

### 8.1.10 Attributes

Transfer attributes:

- CYSettleRef - Tag 21 of the MT103/MT202 sent by Calypso for reference matching with confirmation of debit sent by the correspondent bank.  
Tag 20 of incoming message (when using message rule AddTransferBusinessReference), or message attribute REF\_PO (if set), or Message ID otherwise.
- MatchedWith - Populated by the matching process: message id matched with the transfer.

Message attributes:

- POREf - Reference of the message sent by Calypso and confirmed by the agent.
- MatchedWith - Populated by the matching process; transfer id matched with the incoming message.
- AgentRef - Tag20 of the incoming MT900/MT910.

The following matchable object attributes are stored to process the cutoff of the intraday matching:

- Expected Cutoff - Expected date for the next cutoff. This allows integrating back value movement into the matching, even when previous cutoff/statement for that date has been received.
- Account Lastest CutOff - Last statement received and processed for that account.

### Matching Transfer Attributes to Swift Message Fields Tag 86 and Tag 61

Tag 86 of a MT940 - Information to Account Owner

Tag 61 of a MT940 or MT950 - Statement Line.Supplementary Details

The following domain have been added: "MatchingKeyFromXferAttr.Information\_to\_Account\_Owner" and "MatchingKeyFromXferAttr.Statement\_Line.Supplementary\_Details".

They should contain the corresponding transfer attributes to be used. They must belong to the domain "XferAttributes".



The transfer attributes should also be defined as trade keywords and should be added to the domain "PropagateTradeKeyword".

Matching keys have been added for these attributes:

- Information to Account Owner
- Statement Line.Supplementary Details

The tolerance rule "Contains" should be added to the domain "MatchingContext.Field.Tolerance" and can be selected on the new matching keys.

It checks if the Incoming Matching key contains the Outgoing Matching Key or if the Outgoing Matching Key contains the Incoming Matching key.

### 8.1.11 Global Payments Innovation (GPI) Fields

The fields 111 (Service Type Identifier) and 121 (Unique End-to-End Transaction Reference (UETR)) can be added to header block 3 based on the following configuration.

The message types for which the fields 111 and 121 should be added are defined in the domain "SWIFT.Templates.GPI".

By default, it contains the following messages: MT103, MT202, MT202COV, MT205, MT205COV.

You also need to set the following Processing Org attribute:

SWIFT\_GPI – true to populate field 111 (it is false by default).

Field 111 is populated with 001 by default or with the Comment specified for a given message in the domain "SWIFT.Templates.GPI" if any. You can also set Comment = NONE to not populate field 111 for that message.

Field 121 is populated with the UETR for outgoing messages and is set in the message attribute UETR for incoming messages.

If the agent cannot receive the UETR, set the following Agent attribute:

SWIFT\_ExcludeUETR = true to remove the UETR from field 121.

### 8.1.12 Message Setup

To avoid issues with reference matching when doing a Match With Creation, you need to filter the generation of messages for a Simple Transfer created from the matching manager using the Match with Creation function.

This can be done by adding a static data filter on the message setup to avoid the generation of payment messages for simple transfer, as shown below:

Product Type	SimpleTransfer	Language	English
Event Type	VERIFIED_PAYMENT	Address Type	SWIFT
Message Type	PAYMENTMSG	Gateway	SWIFT
Processing Org	ALL	Format Type	SWIFT
PO Contact Type	Default	Template	PaymentCOV.selector
Receiver	ALL	SD Filter	TradeSourceIsNull
Receiver Role	Agent	<input type="checkbox"/> Matching	
Rec Contact Type	Default	<input type="checkbox"/> Do not Send Message	
Grouping		<input type="checkbox"/> Inactive	

### Static Data Filter TradeSourceIsNull

Name:	TradeSourceIsNull	Attributes...
Comment:		
Groups:	ANY	...

Attribute	Criteria	Filter Value(s)
KEYWORD.TradeSource	IS_NULL	

## 8.1.13 Intraday Matching Context Definition

Define the matching context for intraday reconciliation using the Matching Context Definition window (menu action `refdata.MatchingContextConfigurationWindow`).

### Intraday Matching Context - Scope

Define the Scope of the intraday matching context as shown below:

Name: INTRADAY			
<div> <div>Scope</div> <div>Matching</div> <div>Matching Options</div> <div>Best Matching</div> <div>Investigation</div> <div>More Options</div> </div>			
Processing Org:	ALL	Priority:	2 - High
		Context Type:	Default
		Handler:	Default
Incoming		Outgoing	
Class	Message	Class	Transfer
Type	INC_MT103 INC_MT202 INC_MT210 INC_MT900 INC_MT910 INC_MT942	Type	NETTED UNNETTED
Filter		Filter	Xfer Nostro Payment

Name: Xfer.Nostro Attributes... Sim

Comment: Pending

Groups: ANY ...

Attribute	Criteria	Filter Value(s)
Xfer Is ODA	IS	<input type="checkbox"/> false
Xfer Is Payment	IS	<input checked="" type="checkbox"/> true
Xfer Product Type	NOT_IN	( Add ) BOCashSettlement
Xfer Status	NOT_IN	( Add ) CANCELED
Xfer Type	NOT_IN	( Add ) BANK CONFIRMED,CASHPOOLING,FORECAST

### Intraday Matching Context - Matching

Define the Matching panel of the intraday matching context as shown below:

Name: Intraday

Scope Matching Matching Options Best Matching Investigation

Workflow

Auto Match AUTOMATCH Unmatch UNMATCH

Manual Match MANUALMATCH

MisMatch

Skip Save Rules

Incoming Outgoing MatchableIsSETTLED

Keys

Name	Weight	Usage	Options
<b>Type: Amount</b>			
Settlement Amount	8 All	Cumulative, Using tolerance	
<b>Type: Date</b>			
Settle Date	7 Auto		
<b>Type: Other</b>			
Ccy	8 All		
GL Account	9 All		
<b>Type: Reference</b>			
PORef	10 Auto	Using tolerance	

The actions are applied to both the incoming message and the outgoing transfer, hence they must be defined in the Incoming Message workflow and the Transfer workflow.

Name: MatchableIsSETTLED Attributes...

Comment:

Groups: ANY ...

Attribute	Criteria	Filter Value(s)
Matchable Status	LIKE	SETTLED

For each matching criteria selected in that panel, the user needs to define using the Usage cell if the criteria is used for All (automatic and manual matching), Automatic matching only, Manual matching only, or None.

For each matching criteria selected in that panel, the user needs to define the weight and any specific tolerance he would like to apply for that criteria.

The examples below are indicative only. You may want to use different rules/tolerances based on your business processes.

Settlement Amount (criteria must be cumulative to allow n to m matching). Tolerance can be of different Type (Percentage/Unit/UnitPerAmount and Currency. When using currency, the system allows using the LE Tolerance table to set different tolerance per currency, processing organization and correspondent/bank).

Edit

Weight: 8 Usage: All

Options

☒ Cumulative

Auto Tolerance

Type

Manual Tolerance

Type Percentage Min -10% Max 10%

## Settle Date

Edit

Weight: 7 Usage: Auto

Auto Tolerance

Type Tenor Min -SD Max SD

## Ccy

Edit

Weight: 8 Usage: All

## GLAccount

Edit

Weight: 9 Usage: All

PORreference (PO reference is only used for payments)

Edit

Weight: 10 Usage: Auto

Auto Tolerance

Type: IgnoreReceiptReference Amount: Settlement Amount

### Intraday Matching Context - Matching Options

Define the Matching Options panel of the intraday matching context as shown below:

Scope Matching Matching Options Best Matching

Comments

Request Comment

Matching Options

Allow Match With Creation

Config Name: SimpleTransfer

Reversal Mode Auto Creation

Allow Partial Match

Config Name: CashSettlement

WriteOff Mode

Allow Same Side Match

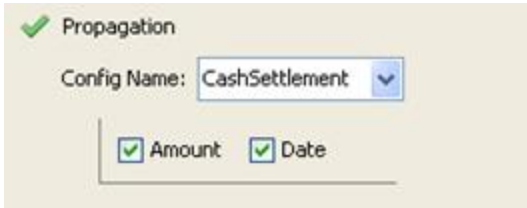
Side: Incoming

Allow Blind Match

Allow Investigation

Config Name: CashSettlement

Allow With Creation



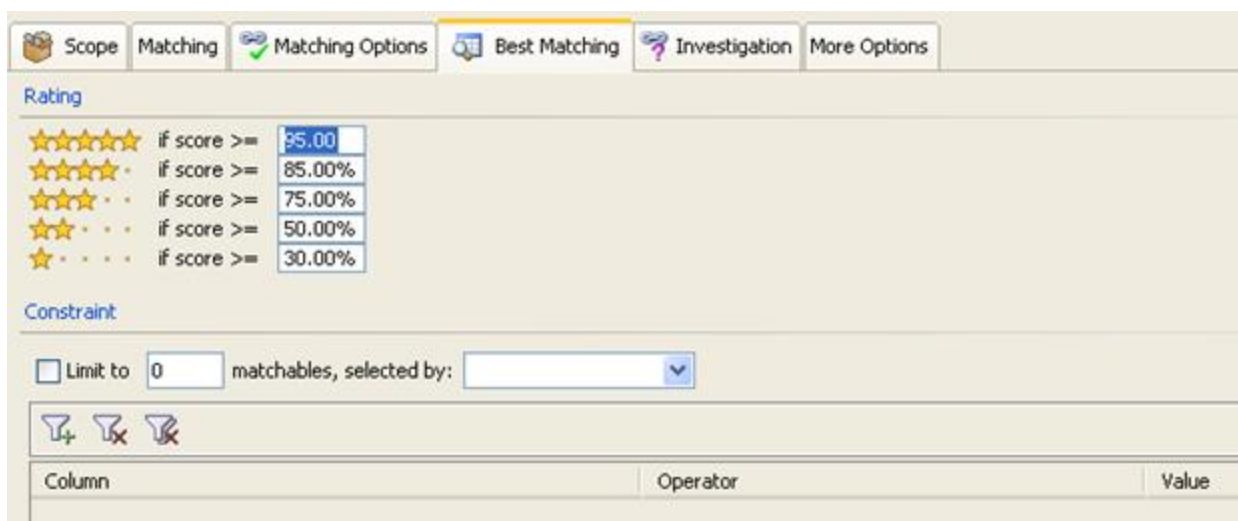
Options	Description
Request Comment	Activate the Request Comment option when you want to make a user comment mandatory when a matching is performed manually from the matching manager.
Allow Match with Creation	<p>Activate the Allow Match With Creation when you want to add the possibility for a user to create a missing movement into the system from an incoming message when choosing that menu in the matching manager.</p> <p>The system will create a Simple Xfer with the DEFAULT_BOOK and DEFAULT_CPTY set as attributes on the processing organization.</p> <p>Choose the Reversal Mode (when there is a difference of value date to reverse/new the flow from the matching manager).</p> <p>Choose the Auto Creation mode (the system will ask you to specify the default flow type) when you want to automatically create a missing movement from incoming messages.</p>
Allow Partial Match	<p>Activate the Allow Partial Match function (with Config Name = CashSettlement) when you want to allow a manual partial match. For example, Incoming Msg confirms USD 900,000.00 while you have a transfer for USD 1,000,000.00. You can manually partial match these two entries: It will settle USD 900,000.00 confirmed by the Agent and will Fail the remaining USD 100,000.00 that will remain as "item to reconcile" in the matching manager.</p> <p>Partial Match requires specific Transfer Workflow actions (PARTIAL_SETTLE) to work correctly. See workflow section for details.</p> <p>Activate the mode write off to create a specific flow for small differences going to a specific status to trigger specific postings/accounts. There again, refer to the Transfer Workflow section for additional actions required for that mode. The WriteOff Mode allows you to automatically write offs some small differences.</p> <p>The flow type is taken from domain "flowTypeWriteOff".</p>
Allow Same Side Matching	Activate the Same Side Match function when you want to allow the user to match $n$ entries within the same category. We usually only activate that options for incoming messages. The system allows Same Side Match within several incoming messages if the global amount is zero.
Allow Investigation	<p>Activate the Allow Investigation when you want to add the possibility for a user "from the matching manager" to mark an item to reconcile as "under investigation" and add a specific comment.</p> <p>Next user will be able to see the comment history and to act as this mode leave the item into the list of "pending reconciliation".</p> <p>The additional mode "Allow With Creation" allows to impact your balance for that amount without</p>

Options	Description
	having to wait for the real correction of the trade from your front desk (creation of a specific Simple Transfer into the system).
Propagation	Activate the Propagation mode if you want to propagate (when your tolerance allows it) the real settlement amount and/or real settle date on the transfer when matching an incoming message with a transfer having a different date and/or value. Specific inventory position types will reflect these changes.

The manual actions proposed by the system in the matching manager are based on tolerance and matching options defined in the matching context when selecting incoming and outgoing objects.

### Intraday Matching Context - Best Matching

Define the Best Matching panel of the intraday matching context as shown below:



### Intraday Matching Context - Investigation

Define the Investigation panel of the intraday matching context as shown below:

Name: Intraday

Scope Matching Matching Options Best Matching Investigation More Options

Dynamic Filter Options

✗ Show One to One Filter Button

✗ Show Alias Filter Button

Dynamic Filter Initialization

Column	Operator	Value
MatchStatus	Not In	Matched,Canceled,Notification

### Intraday Matching Context - More Options

Define the More Options panel of the intraday matching context as shown below:

Name: Intraday

Scope Matching Matching Options Best Matching Investigation More Options

Matchable Cut Off

Hide items after: 5 business days

Holidays: TGT

Calculator: Default

Eligibility CutOff

Config Name: CashSettlement

Cut Off Time: 1550 Time Zone: Europe/Paris

Frequency (Hour): 1

EOD Context: T+1

Run Cut Off ...

Chaser

✗ Allow Chasing

**Eligibility CutOff** must be set on the intraday matching context to clean automatically un-reconciled items intraday once the statement for that specific account/date has been received and processed by the system.

Options	Description
Config Name	Select CashSettlement.
CutOff Time	Select the starting cutoff time - Format is 1500 (for 3pm); 1530 (for 3.30pm),
Frequency (Hour)	Select frequency when the system must automatically rerun the cutoff from the initial cutoff time (min is 1h).



Options	Description
TimeZone	Select the reference Time Zone.
EOD Context	Select the End of Day context linked to intraday (must be the one for MT940/MT950/MT970/camt053).
Run CutOff	Possibility to run manual cutoff from that screen.

### 8.1.14 camt054 Mathing Context

Name: CAMT054

Scope
Matching
Matching Options
Potential Match
More Options
Investigation

Processing Org: ALL ▼
 Priority: 0 - Low ▼
 Context Type: Default ▼
 Handler: Default ▼

**Incoming**
**Outgoing**

Class: Message ▼
 Class: Transfer ▼

Type: INC\_CAMT054
 Type: NETTED  
UNNETTED

Filter: ▼
 Filter: ▼

Scope

Matching

Matching Options

Potential Match

More Options

Investigation

Workflow

Auto Match

MATCH

Unmatch

UNMATCH

Manual Match

MANUAL\_MATCH

Keys

Name	Weight	Usage	Options
<b>Type: Amount</b>			
Settlement Amount	1	Auto	
<b>Type: Date</b>			
Settle Date	1	All	
Value Date	1	All	
<b>Type: Instruction</b>			
PO Agent Code	1	All	Alias, Mismatch
PO Agent	1	All	Alias, Mismatch
PO Agent Account	1	All	
Intermediary Agent1 Code	1	All	Alias, Mismatch
Intermediary Agent1	1	All	Alias, Mismatch
<b>Type: Other</b>			
GL Account	1	All	
Ccy	1	All	
Del Type	1	All	
<b>Type: Reference</b>			
PORefMX	1	All	
<b>Type: Role</b>			
ProcessingOrg	1	All	
CounterParty	1	All	
Debtor Agent	1	All	Alias

Edit

Weight: 1

Usage: Auto

Options

Cumulative

Auto Tolerance

Type

UETR is the supported matching key.

## 8.1.15 Statement Matching Context

To reconcile statements at T+1.

### Statement Matching Context - Scope

Define the Scope of the T+1 matching context as shown below (we currently support MT940/MT950/MT970/camt053):

Name: T+1

Scope Matching Matching Options Best Matching Investigation More Options

Processing Org: BANK1 Priority: 0 - Low Context Type: Default Handler: Default

Incoming Outgoing

Class Message Class Transfer

Type INC\_MT940 Type NETTED  
INC\_MT950 UNNETTED

Filter SubstatementMT950.Nostro Filter Xfer.Nostro

Name: SubstatementMT950.Nostro Attributes...

Comment:

Groups: ANY

Attribute	Criteria	Filter Value(s)
MSG_ATTRIBUTE.CashStatementProcess	IN	[ Add ] SubStatement.Nostro

### Statement Matching Context - Matching - Matching Options - Best Matching

Define these panels of the T+1 matching context with the same criteria/options as the intraday matching context.

### Statement Matching Context - Investigation

Define the Investigation panel of the T+1 matching context as shown below:

Dynamic Filter Options

☒ Show One to One Filter Button

☒ Show Alias Filter Button

Dynamic Filter Initialization

Column	Operator	Value
Is AutoMatch	Is	True

### Statement Matching Context - More Options

Define the More Options panel of the T+1 matching context as shown below:

Matchable Cut Off

Hide items after:  business days

Holidays: TGT

Calculator: Default

Eligibility CutOff

Config Name:

Chaser

☒ Allow Chasing

### 8.1.16 Matching Manager Setup

You can monitor the progress of the integration process using the Matching Monitor (menu action `reporting.MatchingUILauncher Matchable`) - [NOTE: There is space before Matchable].





Define the matching manager templates for Intraday and statement matching contexts.

The system provides several views from the general Summary view of intraday and statement matching items.

Click  to load matchable objects.

Matching Manager (User: )

Report Data View Export Utilities UserMenu Help

 Details  Linked  Investigate  Intraday/EOD

Intraday

	MatchStatus				
Context Name	Alleged	Matched	Notification	Notification (Orphan)	Unmatched
Intraday	9	2	1	4	2
MT950					3

You can adjust the search criteria as needed.

To configure the system, you need to initialize the categories with incoming and outgoing items and then select the view to drill-down to the default template. Then, you can define for each report the default template.

The **Investigate** panel provides a summary view of un-reconciled incoming sub-statements in the top-part and un-reconciled calypso transfers in the bottom-part. This is the default view used to reconcile incoming messages and outgoing transfers.

Additional views are available for additional investigation or action:

- The **Linked** panel provides a summary view of matched/reconciled items with the possibility to unmatched wrongly reconciled items.

- The **Details** panel provides a simple view of a specific matching category. When selecting unmatched items (=transfers not reconciled), the system allows to use the **Best Match** option and provides a list of possible messages for a specific payment with rating and matching score.

## Matching Categories

Different matching status codes are used by the system to categorize incoming messages and outgoing transfers based on their reconciliation status.

- Incoming Message Matchable Status
  - Alleged = Identifies all incoming messages waiting for reconciliation.
  - Notification (Orphan) = Identifies all incoming MT103/MT202/MT204/MT205/MT210 for which the system was not able to identify the account (For example, copy of a MT202 received from the counterparty). These messages are integrated for information purposes and can be attached to any specific transfer for audit/investigation.
  - Notification = Identifies all notifications when attached to a transfer (they are considered as processed).
- Outgoing Transfer Matchable Status
  - Unmatched = Identifies all calypso transfer waiting for reconciliation.
- Incoming and Outgoing Matchable Status
  - Matched = Identifies all reconciled items.
  - Canceled = Identifies all items not eligible to matching anymore

All MT210 are considered notifications. The Nostro lookup is done as follows:


- Agent = Tag 56, or Tag 52a if Tag 56 is empty.
- Processing Org = Receiver of the Swift
- Currency = Tag 32

## Investigate View Setup

You can click **Investigate** to get the default view of all "packed" un-reconciled items. You can then, split and filter your table using the Split and Filter functions available in that panel.

Without panel split and filter all unmatched items are mixed as shown below:

Key	Key Settlement Amount	Key Ccy	Key Description	Key GL Account	Key Settle Dt	Type	Value
10,828,831 EUR				DEUMUC-MA-EUR	19622009		
-6,583,108.31 EUR				JPMLOA-EUR	19612009		
1,002,583.33 EUR				DEUMUC-MA-EUR	19622009		
574,580.534 EUR				JPMLOA-EUR	19622009		
-6,583,110 EUR				JPMLOA-EUR	19612009		
8,680,112.888 EUR				JPMLOA-EUR	19622009		
-5,000,000 EUR				JPMLOA-EUR	19612009		
5,012,918.867 EUR				JPMLOA-EUR	19622009		
574,580.534 EUR				DEUMUC-MA-EUR	19622009		
8,680,118.388 EUR				JPMLOA-EUR	19622009		
-573,310 EUR				JPMLOA-EUR	19612009		
-6,583,110 EUR				JPMLOA-EUR	19612009		
8,680,118.388 EUR				JPMLOA-EUR	19622009		
8,680,118.388 EUR				DEUMUC-MA-EUR	19622009		
5,012,918.867 EUR				DEUMUC-MA-EUR	19622009		
-6,583,108.31 EUR				DEUMUC-MA-EUR	19612009		

To configure the default layout of that screen, press the split panel icon . This will display the "incoming" un-reconciled items at the top and the "outgoing" un-reconciled items at the bottom (as shown below).

Select	Reference	Account	Amount	Ccy	SettleDate	UnderlyingId	Class	Type	Status
<input type="checkbox"/>	174		56,000,000 USD	USD	11/08/2011	64137	Message	MT202	Notification (O)
<input type="checkbox"/>	240								Notification (O)
<input type="checkbox"/>	262								Notification (O)
<input type="checkbox"/>	251								Notification (O)
<input type="checkbox"/>	51164	CHASNY-USD		USD					Alleged
<input type="checkbox"/>	51165	CHASNY-USD		USD					Alleged
<input type="checkbox"/>	273	TGT-EUR	29,000,000 EUR	EUR	11/08/2011	64141	Message	MT202	Alleged
<input type="checkbox"/>	284	TGT-EUR	11,000,000 EUR	EUR	11/08/2011	64142	Message	MT202	Alleged
<input type="checkbox"/>	53636	CHASNY-USD	-12,000,000 USD	USD	12/08/2011	64145	Message	MT1900	Alleged
<input type="checkbox"/>	51167	CHASNY-USD	56,000,000 USD	USD	11/08/2011	64146	Message	MT1910	Alleged
<input type="checkbox"/>	51168	CHASNY-USD		USD					Alleged

Select	Reference	Account	Amount	Ccy	SettleDate	UnderlyingId	Class	Type	Status
<input checked="" type="checkbox"/>	64636	CHASNY-USD	1,500,000.00 USD	USD	11/08/2011	81232	Transfer	UNNETTED	Unmatched
<input type="checkbox"/>	64152	CHASNY-USD	1,500,000.00 USD	USD	01/03/2012	80733	Transfer	UNNETTED	Unmatched


  

Type	Value
Key: Settlement Amount	
Incoming	2,500,000
Outgoing	1,500,000.00
Difference	1,000,000
Key: GL Account	
Matched	CHASNY-USD
Key: Ccy	

Then define the filter as needed.

Column	Operator	Value

OK Cancel Reset

You can click the  icon to show the filter on the Investigate panel. Please note that the Matching Manager is using a docking framework, and as such, can be configured as desired by the end-user. Thus, the view displayed here can be entirely customized by the user.

It is recommended to save your configuration as a template using **Report > Save As Template**, and make this template the default template using **Report > Set Default Template**.

## Contextual Action Buttons

Based on the configuration of the Matching Context options and the elements selected as incoming and outgoing, the system will propose the possible actions (Match, Same Side Match, Partial Match, Match with Creation, Attach).

Possible actions are the following (they are proposed by the system based on configuration and items selected in the Investigate panel):

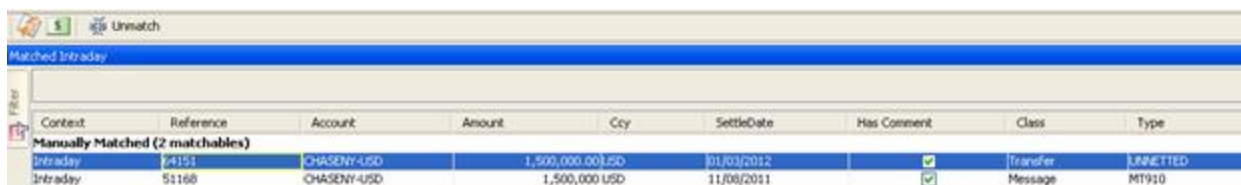
- Match
- Match With Creation
- Partial Match
- Investigate
- Attach
- Force Match

The system allows matching  $m$  incoming message with  $n$  outgoing messages manually from the Matching Manager using tolerances.

## Linked Panels

The Linked panel or Details panel of your Matching Manager allow seeing the matched items and undo the matching. The Details panel also allows doing a Best Match from unmatched transfers to propose the possible incoming message with a rating.

The system shows the category (Automatically Matched, Manually Matched, Manually Matched With Creation, Partially Matched) and the Matching couple (transfer/message).



Context	Reference	Account	Amount	Ccy	SettleDate	Has Comment	Class	Type
<b>Manually Matched (2 matchables)</b>								
Intraday	24151	CHASNY-USD	1,500,000.001 USD		01/03/2012	<input checked="" type="checkbox"/>	Transfer	UNSETTLED
Intraday	51168	CHASNY-USD	1,500,000 USD		11/06/2011	<input checked="" type="checkbox"/>	Message	MT910

You can use the **Unmatch** button to undo a matching from that screen.

Example for the Alleged category.

Matching Manager (User: j)

Report Data View Export Utilities UserMenu Help

Best Match Force Match

Alleged Intraday

Potential Match

Key.PORel	Key.GL Account	Key.Ccy	Key.Settlement Amount	Key.Settle Date	Has Comment	Context Name	ProcessingOrg	LegalEntity	Id	Type
51164	CHASNY-USD	USD	-12,000,000	11/08/2011		Intraday	BANK1	CHASE NY	64143MT900	
51165	CHASNY-USD	USD	-12,000,000	11/08/2011		Intraday	BANK1	CHASE NY	64144MT900	
273	TGT-EUR	EUR	29,000,000	11/08/2011		Intraday	BANK1	POCHLD	64143MT202	
294	TGT-EUR	EUR	11,000,000	11/08/2011		Intraday	BANK1	POCHLD	64142MT202	
53636	CHASNY-USD	USD	-12,000,000	12/08/2011		Intraday	BANK1	CHASE NY	64145MT900	
51167	CHASNY-USD	USD	56,000,000	11/08/2011		Intraday	BANK1	CHASE NY	64146MT900	
51168	CHASNY-USD	USD	2,500,000	11/08/2011		Intraday	BANK1	CHASE NY	64148MT900	
51169	CHASNY-USD	USD	4,200,000	11/08/2011		Intraday	BANK1	CHASE NY	64149MT900	
53637	CHASNY-USD	USD	56,000,000	12/08/2011		Intraday	BANK1	CHASE NY	64150MT900	

From the Alleged details, the user can select a message and click **Potential Match**. The system will then present the list of possible outgoing transfers with their score for that message.

Intraday - Potential Match

Investigation - Intraday - Potential Match

Rating	Score	PORel	Account	Amount	Ccy	SettleDate	ProcessingOrg	Agent	Id	UnderlyingType	Status
☆☆☆☆	66.22	64636	CHASNY-USD	1,500,000.00	USD	11/08/2011	BANK1	CHASE NY	61232	Transfer	Unmatched
☆☆☆☆	66.22	64152	CHASNY-USD	1,500,000.00	USD	01/03/2012	BANK1	CHASE NY	80733	Transfer	Unmatched

Difference

Type	Value
Key: Settlement Amount	
Incoming	-12,000,000
Outgoing	1,500,000.00
Unmatched	10,500,000
Key: GL Account	
Matched	CHASNY-USD
Key: Ccy	
Matched	USD

☆☆☆☆ - Unmatched (66.22%) - 1 to 1.

You can also bring up the details of the Unmatched category. When you click **Potential Match**, the system will present the list of possible incoming messages with their score for that transfer.

## 8.2 Integration and Reconciliation of Incoming Messages

In order to start the integration and reconciliation process, the following engines must be running:

- Transfer Engine
- Message Engine
- Inventory Engine
- Matching Engine
- MatchableBuilder Engine

To import incoming payment messages, run the scheduled task MESSAGE\_MATCHING.

Once imported, the incoming messages are saved to the Calypso database as a standard bo\_message, then go through the matching process.



Automatic matching will be performed if applicable. For the unmatched messages, you will need to go to the Matching Manager to manually match messages and transfers (menu action `reporting.MatchingUILauncher.Matchable`) - [NOTE: There is space before Matchable].

The system supports two modes for the integration of statements:

- **No Check Mode** - No check on statement format and completeness (PO attribute CASH\_MANAGEMENT = false). In that mode, you only need to run the MESSAGE\_MATCHING scheduled task to integrate and process incoming statements. Once saved as incoming statements, the system splits the global message (identified with Msg Attribute = Statement) into sub-statements (identified with Msg Attribute = "Substatement.Nostro") and each sub-statement is then processed by the matchable builder and matching engines for reconciliation.
- **Prerequisite Check Mode** - Check on statement format and completeness (PO attribute CASH\_MANAGEMENT = true). In that mode, you need to run the MESSAGE\_MATCHING scheduled task to integrate the statement and INC\_CASH\_STATEMENT to process the incoming statements. Once saved as incoming statement by MESSAGE\_MATCHING, the INC\_CASH\_STATEMENT splits the global message (identified with Msg Attribute = Statement) into sub-statements (identified with Msg Attribute = "Substatement.Nostro") and each sub-statement is then processed by the matchable builder and matching engines for reconciliation. The split process, with that mode, only occurs if all prerequisite checks on statement format and completeness are validated. In that case, the system throws a valid Statement Integration process status. If one check fails, split of statement is not performed and an invalid Statement Integration process status is generated. The statement is blocked in a certain status and manual action must be taken to proceed. This mode requires additional message workflow actions as specified in workflow configuration section.

The Process Status report displays exceptions/errors blocking all or part of the statement integration and intraday cleaning process.

► See [Process Status Report](#) for details.

## 8.2.1 Scheduled Task MESSAGE\_MATCHING

The import of the incoming message files is done through the MESSAGE\_MATCHING scheduled task.

This scheduled task is used to import all incoming messages (intraday matching MT103/MT202/MT204/MT205/MT210/MT900/MT910 and statements MT940/MT950/MT970/camt053) in batch mode.

### Scheduled Task Attributes

Attributes	
Attribute	Value
Swift Message Delimiter	
Swift File	20090325_BARC_EUR_0052.txt
InputDir	c:\temp
File Rename	False
Gateway	
ExternalMessageType	

- **Swift Message Delimiter** - Enter the delimiter between messages in the text file as specified in the environment property CALYPSO\_SWIFT\_LINE\_SEPARATOR (should be blank if the property is not used).
- **Swift File** - Specify the Swift File Name (eg.20090325\_BARC\_0052.txt) to integrate one specific file. To integrate all incoming MTxxx, the user has to set the value \*.txt on that field. The system will then try to save as "bo\_message" all .txt files that are located under the InputDir.
- **InputDir** - Specify the Swift File Path and Directory where txt files are saved.
- **File Rename** - Select true/false. When set to true add a timestamp to the Swift File once processed.
- **Gateway/ExternalMessageType** - If the default implementation for processing MT940 is not satisfying, the CashStatementHandlerFactory tries to retrieve a Handler respecting the order Gateway "ExternalMessageType" as specified in these attributes.

The MESSAGE\_MATCHING scheduled task does not perform any validation; it only saves the incoming message as Calypso Messages.

### 8.2.2 Scheduled Task INC\_CASH\_STATEMENT

This scheduled task is only needed for the "prerequisite checks" mode. It is only when the PO Attribute CASH\_MANAGEMENT is set to true that this mode is activated. This scheduled task is only processing statements (Intraday incoming messages only need MESSAGE\_MATCHING to be processed).

In that mode, once the scheduled task MESSAGE\_MATCHING is reported as successful, it is necessary to run the INC\_CASH\_STATEMENT scheduled task to process the incoming statements.

Thus, with the prerequisite check mode activated, the statement (MT940/MT950/MT970/camt053) integration process is a two-step process:

- We first save the complete incoming statements using the MESSAGE\_MATCHING.
- We then check the consistency and completeness of these statements, split the MT940/MT950/MT970/camt053 into sub-statements by entry using the INC\_CASH\_STATEMENT.

Then, the matching process is performed by the matchable builder and matching engines.

For corporate cash management, the INC\_CASH\_STATEMENT execution is a two-step process. You only need step 1 otherwise.

#### Step 1 - Process Incoming Statements

- Load all statement messages (initially saved by the MESSAGE\_MATCHING) applying the "Statement statuses restriction" attribute for the scheduled task's Valuation Date (= Tag 62F statement date, or tag <Document><BkToCstmrStmnt>/<Stmnt>/<Bal>/<Tp>/<dt> for camt053).
- Group the statement messages by GL (SETTLE) Account.

The correspondence between the MT940/MT950/MT970 Tag 25 for a specific Processing Organization (Receiver BIC) + Agent (Sender BIC) and the Calypso GL Account is done using the GL Account Attribute "XferAgentAccount" where we store the value of Tag 25.

For camt053 messages, the GL account is stored in tag <Document><BkToCstmrStmnt>/<Stmnt>/<Acct>/<Id>.

- Check the Group consistency (Sequence Numbering/Intermediary Balances/Statement Opening Balance = Previous Statement Closing Balance, etc.).
- Create Account Statement summarizing the group information.
- Create Sub-Statement Messages (with specific types).
- Create BOCashSettlement Trade for each valid statement.
- Apply the "Valid/Invalid Statements Action" on Account Statement summarizing the group information:
  - INC\_MT940/MT950/MT970/camt053 Message Workflow Valid Action is applied on complete and consistent grouped statements
  - INC\_MT940/MT950/MT970/camt053 Message Workflow Invalid Action is applied on incomplete and/or inconsistent grouped statements

## Step 2 - Exclude FORECAST Transfer Types

Corporate Cash Management only.

FORECAST transfer types must be excluded from the Cash Position for the Processing Organization Bank Accounts successfully processed in Step 1.

- Load all simple transfer trades with transfer type = FORECAST and related transfers type FORECAST having a Settle Date <= Scheduled Task Valuation Date for the GL Accounts in the group applying the "Forecast statuses restriction" attribute.
- Apply the "Forecast Action" set as attribute on the selected Simple Transfer trades type FORECAST and related transfers.

The "Forecast Action" is an action that must be added to your trade and transfer workflows (on transition VERIFIED - SUBSTITUTE- SUBSTITUTED for example).

- This resulting status (SUBSTITUTED in our example) must be set in the transferCanceledStatus and ignoreTradeStatus to make the system treat them as a CANCEL and exclude transfers with that specific status from the inventory position. This also allows building specific trade and transfer reports including or excluding these forecasts.

## Scheduled Task Attributes

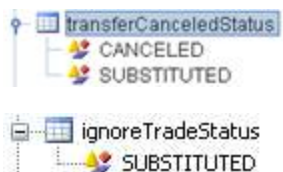
These steps are driven by the attributes set on the INC\_CASH\_STATEMENT scheduled task.

Attributes	
Attribute	Value
GL Account Id	
Statements statuses restriction	PENDING
Valid Statements Action	▼ AUTHORIZE
Invalid Statements Action	▼ BLOCK
Check Statements Exhaustivity	▼ False
Forecast statuses restriction	
Forecast Action	▼ SUBSTITUTE
Exception Report Format	▼ Excel
Email Exception Report to	

- **GL Account Id** - Specify the Processing Organization SETTLE account for which you want to run the process. If left blank, the process is run for all the processing organization SETTLE accounts initially saved by the MESSAGE\_MATCHING scheduled task.
- **Statement statuses restriction** - Specify the statement message status to take into account for the for the scheduled task's Valuation Date (= Tag62F statement date).
- **Valid Statements Action** - Specify the statement workflow action to apply on complete and consistent grouped statements.
- **Invalid Statements Action** - Specify the statement workflow action to apply on incomplete and inconsistent grouped statements.
- **Check Statements Exhaustivity** - True or false. When set to true, the system reports "missing statements" as exceptions in the exception file (e.g. a statement is expected for a specific bank account according to the incoming statement configuration date rule but the related MT940 is not received). When set to false, the system only reports exceptions for received statements, without reporting missing statements (type missing page, wrong opening balance, etc.).
- **Forecast statuses restriction** - Only applies to Corporate Cash Management - Specify the trade and transfer status to take into account to load the FORECAST trades/transfers. The system will load all Simple Transfer trades with type = FORECAST and related transfers type FORECAST which have a Settle Date <= Scheduled Task Valuation Date for that/these status(es) (eg. no restriction in the above example).

THIS IS NOT NEEDED AND MUST BE LEFT BLANK FOR STANDARD CASH MANAGEMENT

- **Forecast Action** - Only applies to Corporate Cash Management - Specify the trade and transfer workflow action that the system must apply on the selected FORECAST trades and transfers (e.g. SUBSTITUTE trade and transfer action will be applied on FORECAST transfers and Simple Transfer Trades with Transfer Type = FORECAST in the above example). The "Forecast Action" is a trade and transfer action that must be added to your trade and transfer workflows (e.g. VERIFIED - SUBSTITUTE - SUBSTITUTED for this type of trader/transfer using SD Filters or Trade and Xfer workflow types). Then, one must add the resulting status in the domains "transferCanceledStatus" and "ignoreTradeStatus" to make the system treat that status as a CANCEL and, as such, exclude transfers with that specific status from inventory position.



THIS IS NOT NEEDED AND MUST BE LEFT BLANK FOR STANDARD CASH MANAGEMENT

- **Exception Report Format** - The Scheduled Task generates an Exception report which allows having a summary of all the issues encountered during the processing. Define the format of that exception file in the "Exception Report Format" attribute. Available format include: excel, html, csv, pdf.
- **Email Exception Report to** - This exception file can be sent by email. Specify the email address or alias using the "Email Exception Report to" attribute.

### ***Prerequisite Checks performed by the INC\_CASH\_STATEMENT scheduled task***

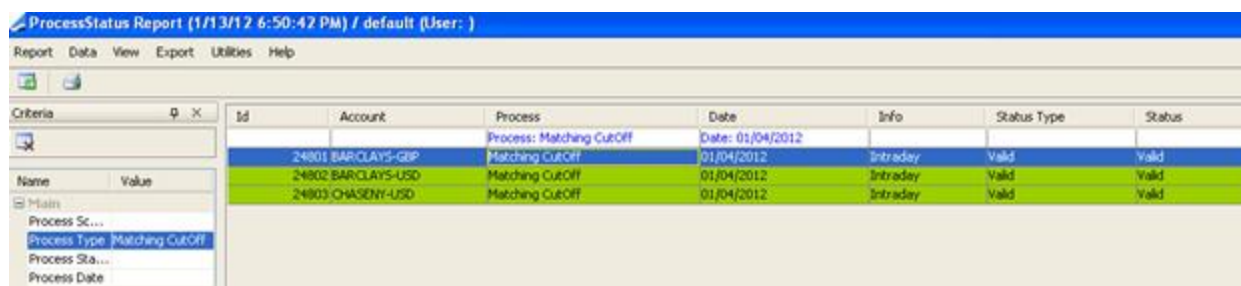
The consistency checks performed by the INC\_CASH\_STATEMENT scheduled task are the following.

- Check if all start-balances match the previous end-balances.
- Check that all intermediate balances for an account are matching (Tag 60M/62M for a n-page statement).
- Check that opening + movements = closing balance.
- Check statement completeness and order (number of pages and existence of Tag 62F).
- Check if all accounts exist in MT940 and vice-versa.
- Check if date of end balance is not in the future.
- Check if there is only one end-balance (and so MT940) per day.

## 9. Process Status Report

From the Calypso Navigator, navigate to **Processing > Process Status** to bring up the Process Status report (menu action `reporting.ReportWindow$ProcessStatus`) displays exceptions/errors blocking all or part of the statement integration and intraday cleaning process.

► See [Integrating Payment Messages and Statements](#) for details on the integration process.



ProcessStatus Report (1/13/12 6:50:42 PM) / default (User: )

Report Data View Export Utilities Help




Criteria	Id	Account	Process	Date	Info	Status Type	Status
			Process: Matching CutOff	Date: 01/04/2012			
	24801	BARCLAYS-GBP	Matching CutOff	01/04/2012	Intraday	Valid	Valid
	24802	BARCLAYS-USD	Matching CutOff	01/04/2012	Intraday	Valid	Valid
	24803	CHASENY-USD	Matching CutOff	01/04/2012	Intraday	Valid	Valid

Criteria: Name Value

Main: Process Sc... Process Type: Matching CutOff Process Sta... Process Date

Sample process status report

**[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 check / uncheck **View > Show Frame > Criteria** to display / hide the search criteria.
- » 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 fees.
- » You can select a template and click  to display the number of objects that will be loaded from the database before loading the report.
- » You can click  to print the report results.

Note that for the Pivot view and the Aggregation view, the print icon is disabled.

You can use [Ctrl+P] or [Ctrl+L] to print the report, or you can export the report to Excel and print it from there.

### Process Status Report Results

The Process Status report allows checking the status of the integration of the incoming statements when working with "prerequisite checks" mode (PO Attribute CASH\_MANAGEMENT = true).

Only incorrect or incomplete statements are blocked. Others are fully processed.

This report lists the following processing scopes with their status (warning/valid/invalid):

- **Statement Integration** - The report produces a line per PO Bank Account having an Incoming Statement Configuration. If the statement is expected and received (based on the incoming statement date rule) the status is valid, else the status is invalid and a comment (Info column) is provided to give the reason of failure. From that

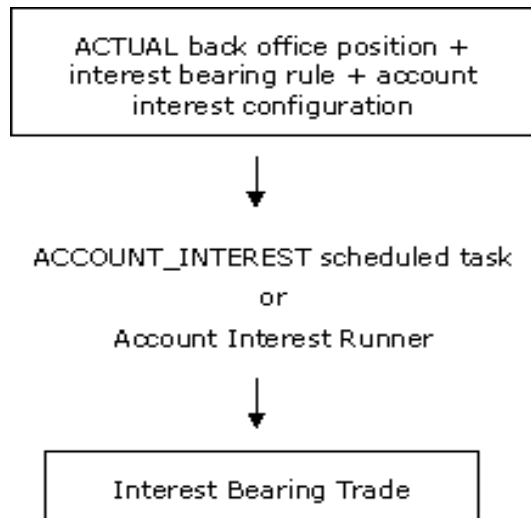
"status" line the user can reach all the information regarding the account, statement config. etc. and take further action.

- **Matching CutOff** - This process status exception is created when the eligibility cutoff has run for a specific account/statement. Each time a statement (MT940/950/970) is received and processed into the system, the system removes all intraday items waiting for reconciliation for that account/expected cutoff date as only movements confirmed into the statement are now finalizing the reconciliation. When the cutoff process has run, the user can check that the Matching CutOff process status for that account has been produced to ensure the cleaning of intraday items is finished. The cutoff process is automatic based on a start time and frequency. This process is done within the MatchableBuilder engine.

## 10. Generating Account Interests

Account interest trades (interest bearing trades) are generated by the scheduled task ACCOUNT\_INTEREST based on actual cash account positions and interest bearing rules.

### Account Interest Generation Flow



### 10.1 Before you Begin

#### 10.1.1 Interest Bearing Rules

From the Calypso Navigator, navigate to **Configuration > Accounting > Interests** (menu action `refdata.AccountInterestConfigWindow`).



Edit
Browse

References

Config Id: 2092204
Name: USD\_IR\_RATE
Type: Interest
Valid from: 10/29/2015
to:

Config Type

Penalty: No
Tiered Calculation:
Daily Balance
Account Filter: Account 0

Filter

PO:
Book:
Beneficiary:
Role:
Ccy: ANY

Interest Calculation

Rounding: NEAREST
Daily:
Compound:
Threshold: 0
Daycount: ACT/360

Frequencies

Calculation: Daily Freq
Capitalization: Daily Freq + 1
Incl. Holiday for Daily Calc: Following

Config Ranges

Account Currency: ANY
App. Config:
Balance Type: NONE
Min:
Max:
Valid from:
To:
Amount:
Ccy: USD
Rate Percentage: 100

ID	Min	Max	Active From	Active To	Is Amount	Amount	Ccy	Is Fixed	Rate	Rate Index	Spread	Is Floor	Floor	Rate Pct	Apply on Spread	Acc Ccy	Inv Aggr Description	Balance Type
2092205	-∞	0	10/29/2015		<input type="checkbox"/>	0		<input checked="" type="checkbox"/>	0.05		0	<input type="checkbox"/>	0	1	<input type="checkbox"/>	ANY		NONE
2092206	0	∞	10/29/2015		<input type="checkbox"/>	0		<input checked="" type="checkbox"/>	0.08		0	<input type="checkbox"/>	0	1	<input type="checkbox"/>	ANY		NONE

Update
Add
Delete
Valid On: 08/01/2024
Refresh

New
Delete
Save
Save as new
Authorization:
Close

The Browse panel is selected by default. Select the Edit panel to define an interest bearing rule.

- » Enter all the necessary information. The fields are described below.
- » To define a range, enter the parameters of the interest calculation, then click **Add** to add the range. Repeat for other ranges as needed.
- » Click **Save** to save the rule.

Note that if the Authorization mode is enabled, an authorized user must approve your entry.

Fields	Description
Config Id	Given by the system when the configuration is saved.
Name	Set and name standard configurations to apply to groups of clients and/or accounts. Any changes to the configuration will automatically be applied to all clients and/or accounts linked to the configuration.
Type	<p>Select the type of configuration: Interest or Margin. Margin configurations only apply to call accounts.</p> <p>► See <a href="#">Margin Rules</a> for details.</p> <p>The other types of configurations (IM, ITD, VM) apply to clearing - Please refer to Calypso Clearing documentation for details.</p>
Valid From / To	Enter the validity dates of the configuration.

Fields	Description
Config Type	<p>You can select No, Yes, or Both for Penalty. The penalty configuration is applied when the account balance is below a certain amount.</p> <p>Limits are defined in the Limits panel.</p> <p><b>❗ [NOTE: When Processing Org attribute "ALWAYS_PAY_PENALTY_INTEREST" is False, interest penalty is not paid if an account is defined with minimum balance and balance is below the limit but positive. Default is True (interest penalty is paid)]</b></p> <p>You can check Tiered Calculation to distribute the account balance over the range. Otherwise, it is applied to the absolute range.</p>
Account Filter	You can select an account, or none to apply the configuration to all accounts.
Filter	<p>It is possible to link an account interest config to:</p> <ul style="list-style-type: none"> <li>• A processing org (PO)</li> <li>• One or several trading books. The account interest config will thereafter be available for client accounts that belong to one of these books.</li> <li>• A legal entity of specified role.</li> <li>• A list of currencies, or ANY.</li> <li>• It is also possible to link an account interest config to one or several book attributes under the Authorization field. This restriction is only used in the Interest Manager: a user is able to load the interest bearing rules for which the user has the appropriate access permissions by book attribute.</li> </ul>
Interest Calculation	<p>Select rounding information and calculation.</p> <p>You can check Daily to apply the rounding to each daily amount. Rounding is applied to the final interest amount otherwise.</p> <p>You can enter a threshold. If the account balance is below the threshold, interest will not be computed.</p> <p>If you check "Compound", you need to select a compound rule to compound the interest.</p> <p><b>❗ [NOTE: When computing the interest, you need to select the retroactivity mode in order for the compounding to occur: Check the "retro Activity" checkbox in the Account Interest Runner, or set the attribute RETRO_ACTIVITY = True in the ACCOUNT_INTEREST scheduled task]</b></p> <p>You can select a daycount for Fixed Rate configurations (for Floating Rate configurations, the daycount of the Rate Index definition is used).</p> <p><b><i>Including PARTIAL_SETTLE entries to Position</i></b></p> <p>To add PARTIAL_SETTLE entries amount in interest calculation, you can set Account Property 'Add PARTIAL_SETTLE to position' to true.</p>

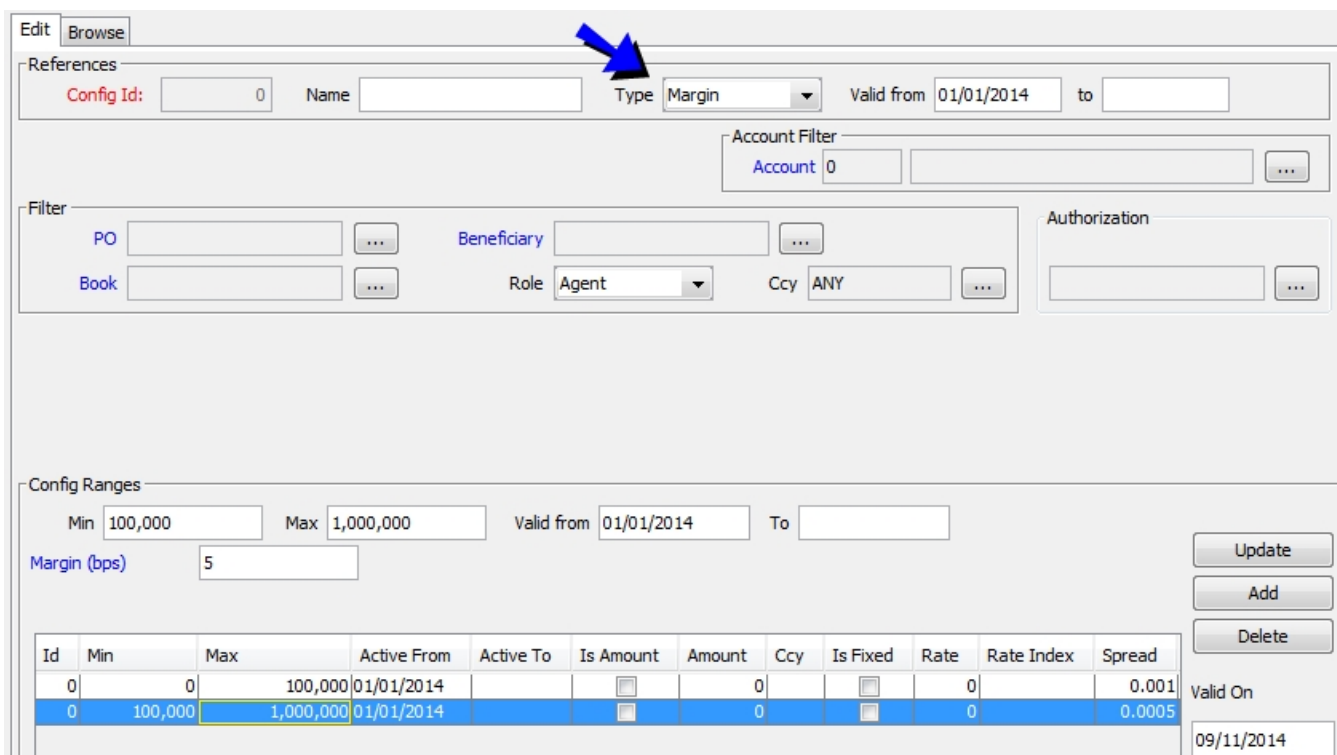
Fields	Description
Frequencies	<p>Select the calculation frequency, payment frequency, capitalization frequency and Incl. Holiday for Daily Calc frequency (for Daily settlement of Interest).</p> <p>When the calculation date is at the end of the month, the interest is calculated until the last day of the month, regardless of which day it is. If the last day of the month is a Saturday, and you want to calculate the interest until Sunday (or until the end of a holiday), you need to set the account property CHECK_END_OF_MONTH = false (it is true by default).</p> <p><b>Settle Date Generation Issue for Date Rule with Relative Month</b></p> <p>There are two ways to use a date rule in Interest Bearing trades: next(date) provides the next date generated by the date rule and generate(fromDate, toDate) provides all the dates generated by the date rule between the from and to dates.</p> <p>The “generate” method is used by default for all date rules as it has a better performance. The “next” method is used for DAILY and RELATIVE using DAILY date rules.</p> <p>You can use the “next” method for any date rule as needed by adding the date rule to the domain "dateRuleInterestUseNext".</p> <p><b>Daily Settlement of Interest</b></p> <p>For daily settlement of Interest Bearing trades, weekend accruals are included on Interest Bearing trades based on “Incl. Holiday for Daily Calc”:</p> <ul style="list-style-type: none"> <li>- Following: Weekend Accruals are included in the Interest Bearing trade settling on the previous business day</li> <li>- Preceding: Weekend Accruals are included in the Interest Bearing trade settling on the next business day</li> <li>- BLANKS: Weekend Accruals are included in the Interest Bearing trade settling on the previous business day (Default)</li> </ul>
Config Ranges	<p>Select the account currency, inventory aggregation, and the balance type as needed.</p> <p>Enter the minimum amount / maximum amount as needed to define the ranges.</p> <p>Enter Active From / Active To date for the configuration. When the Active To date of the configuration is in the past, you can set account property SKIP_INTEREST_BEARING = true to stop computing interest bearing for that account.</p> <p>You can double-click the Amount label to switch to Rate instead, in which case you can specify a fixed rate or a floating rate.</p> <p>Select the interest currency.</p> <p><b>Amount</b></p> <div> Amount <input type="text" value="260"/> Ccy <input type="text" value="USD"/> Rate Percentage <input type="text" value="100"/> </div> <p>» Enter the interest amount.</p>

Fields	Description
	<p><b>Fixed Rate</b></p> <p>Rate <span style="float: right;">Rate Percentage <input type="text" value="100"/></span></p> <p>Fixed <input type="text" value="2.45"/></p> <p>» Enter the interest rate.</p> <p><b>Floating Rate</b></p> <p>Rate <span style="float: right;">Reset <input type="text"/> ... Rate Percentage <input type="text" value="100"/></span></p> <p>Float <input type="text"/> <span>USD</span> <span>LIBOR</span> <span>3M</span> <span>LIBO...</span></p> <p>» Define the floating rate.</p> <p>You can enter a spread in the field next to the currency.</p> <p>You can define a floor rate (minimum rate). Note that if you allow negative rates, you should either set a negative floor rate ("-1.2" for example), or no floor rate.</p> <p><b>Negative Rates</b></p> <p>If you set the pricing parameter ALLOW_NEGATIVERATE to true for the InterestBearing product type, the system allows calculating interest with negative rates.</p> <p>You can set the starting date to consider negative rates in the pricing parameter ALLOW_NEGATIVERATE_DATE (provided ALLOW_NEGATIVERATE = true). The format should be MM-DD-YYYY.</p> <p>However, if the account attribute "NEVER USE NEGATIVE RATE" is set to true for a given account, the system will not allow calculating interest with negative rates even if ALLOW_NEGATIVERATE is true.</p> <p><b>Zero Interest</b></p> <p>If you set the pricing parameter EXCLUDE_ZERO_TRADE to true for the InterestBearing product type, the system does not generate trades with zero interest. They are generated otherwise.</p> <p><b>Reset Rate</b></p> <p>You can determine how the reset rate is used throughout the reset period using the value IB_USE_RESET_DAY_FOR_DATE_RULE in the domain "AccountSetup". If Comment = true, the reset rate is used for the whole reset period. It is only used for the reset date otherwise.</p> <p>You can determine how missing rates are handled based on the value of account attribute IB_MISSING_RATE:</p> <ul style="list-style-type: none"> <li>Create or Blank (default behavior) - If rate is missing, entry created with interest rate set to zero, task created alerting missing rate.</li> <li>NotCreate - If rate is missing, no entry created, task created alerting missing rate.</li> </ul>

## Margin Rules

For call accounts, you have the ability to add a specific Margin (in bps) onto an account (not visible by the client):

- The margin is added on top of the interest configuration set on the Account.
- It can be entered as a pre-configured margin and the line can be added to the Interest list configuration, or can be add as a Quick Entry Margin.
- A margin can only be entered if an account has a generic Interest Config (not a quick entry).
- It cannot be inherited from a Master Account (only the Interest configuration can be).




The screenshot shows the 'References' section with fields for Config Id (0), Name, Type (Margin), Valid from (01/01/2014), and to. Below this is the 'Filter' section with fields for PO, Book, Beneficiary, Role (Agent), Ccy (ANY), and Authorization. The 'Config Ranges' section shows Min (100,000), Max (1,000,000), Valid from (01/01/2014), To, and Margin (bps) (5). A table lists configurations with columns: Id, Min, Max, Active From, Active To, Is Amount, Amount, Ccy, Is Fixed, Rate, Rate Index, Spread. The table has two rows: one with Id 0, Min 0, Max 100,000, Active From 01/01/2014, and another with Id 0, Min 100,000, Max 1,000,000, Active From 01/01/2014. The second row is highlighted in blue. To the right of the table are buttons for Update, Add, and Delete, and a 'Valid On' date field set to 09/11/2014.

- » Define the characteristics of the margin calculation and click **Add**.
- » Then click **Save** to save the configuration.

### 10.1.2 Associating an Interest Bearing Rule with an Account

Once you have defined a rule, you need to associate it with the account that is receiving interest.

From the Calypso Navigator, navigate to **Configuration > Accounting > Accounts**, and load your account in the Account panel.



- » Check the Interest Bearing checkbox - Once checked, the Interests panel becomes available.

Note that for call accounts, "Interest Bearing" is mandatory and checked by default.

If the interest bearing rule has a capitalization frequency, the interest is capitalized, and any adjustment due to back-dated trades is capitalized as well. If you do not want to capitalize the adjustments, you can set the account attribute "CAPITALIZE ADJUSTMENTS" to false.

- » Then select the Interests panel. The interest rule can be defined for individual accounts or for master accounts. See below for details.
- » You can also associate an interest rule with multiple accounts using [Process > Interest Bearing > Bulk Update Interest Config](#).




Note that this function is only available for call accounts.

It brings up the Account report: Load the call accounts that you want to update and select them. Right-click and choose [Action > Update Current Interest Config](#). You will be prompted to select an interest / margin configuration.

Click **Apply** to set the selected configuration on the selected accounts.

The account can be associated with a Margin Call Contract using the account attribute MC\_CONTRACT\_ID.

In this case, you can use the trade workflow rule UpdateIBSettleDate to automatically set the Settle Date Confirmed field on the Interest Bearing trade. It shows the trade keyword ConfirmedSettleDate = Date action is applied + OffSet Days from associated Margin Call Contract (Cash column of the Collateral Dates in the Dates & Times tab).

Collateral Dates			
  			
Method	Currency	Collateral Categories	
Standard	USD	ANY	Cash
		0	2

If the account of the Interest Bearing trade is not associated with a Margin Call Contract or the Offset Days are not set, ConfirmedSettleDate = Settlement Date.

The Settle Date Confirmed can also be set manually on the Interest Bearing trade.

When set, this date is used as the settlement date in the associated transfers.

## Master Account Setup

For the master account, check the Master Account checkbox.

Accounts Definition - Authorization mode OFF Master Acc APL-4942 / 479734 - version 1

Account Utilities Reports Process Help

Account Statements Attributes Interests Limits Consolidation Translation/Revaluation Clearing Legal Entities Browse

Process Interest ☒ Master Acc... Aggregation Aggregate

Destination Account  ... Id 0 ☐ Split Xfers PAY/REC ☐ Split Adjustment/Int...  
Master Account  ... Id 0 ☒ Capitalize Ib On Sou... ☐ PayOut Externally ☐ Agg. Entries On Master Acc. ...

Valid from  To  Type Interest ☐ Penalty  
Config Name  ... Show Add Remove Update

Id	Config Id	Config Name	Type	Is Penalty	Active From	Active To
479736	479729	IB Config APL-4942	Interest	<input type="checkbox"/>	20/04/2010	

- » Set the Aggregation to Individual to apply the interest rule to the master account's balance only, or Aggregate to apply the interest rule to the balance of all the accounts within the master account including the master account.
- » Optional - Select the account where the interest will be posted from the Destination Account field (if different from the account itself).
- » Define a validity period.
- » Select the type of configuration: Interest or Margin (Margin configurations only apply to call accounts). Then click  next to the Config Name field to select an interest rule. If the interest rule is specific to a processing organization, beneficiary, or account, it will only be available on the corresponding account.

So for example if the interest rule is specific to agent MYAGENT, you will only be able to associate this rule with an account for legal entity MYAGENT and role Agent.

You can set additional parameters: "Split Xfers PAY/REC", "Split Adjustment/Interest", "Capitalizes Ib On Source", "PayOut Externally", "Agg. Entries On Master Account".

► See [Additional Settings](#) for details.

If the interest rule is defined as both interest and penalty, an interest will be computed when the balance on the account is above its overdraft limit or minimum balance requirement, and a penalty will be computed otherwise.

Limits are defined in the Limits panel.

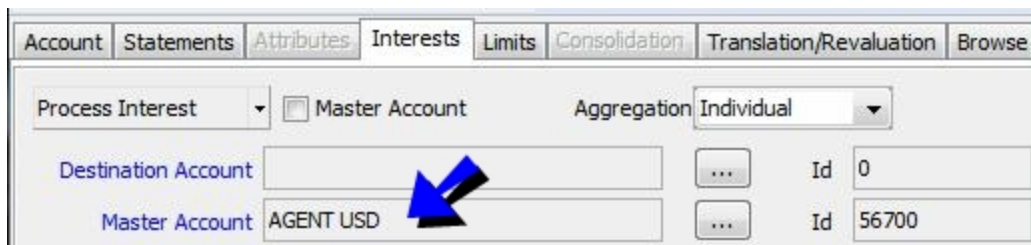
If the interest rule is defined as interest only (Penalty = No), an interest will be computed when the balance on the account is above its overdraft limit or minimum balance requirement. In this case, you can also associate a penalty configuration if you have defined one. Check the Penalty checkbox, and add a penalty configuration to the account.

Id	Config Id	Config Name	Type	Is Penalty	Active From	Active To
0	41185	Standard Inv Account	Interest	<input type="checkbox"/>	01/01/2012	
0	55181	Penalty Config	Interest	<input checked="" type="checkbox"/>	01/01/2012	

- » Click **Add** to add the rule. Then click **Save**.

To associate an account with a master account, clear the Master Account checkbox, and select the master account. Select the account where the interest will be posted from the Destination Account field (if different from the account itself).

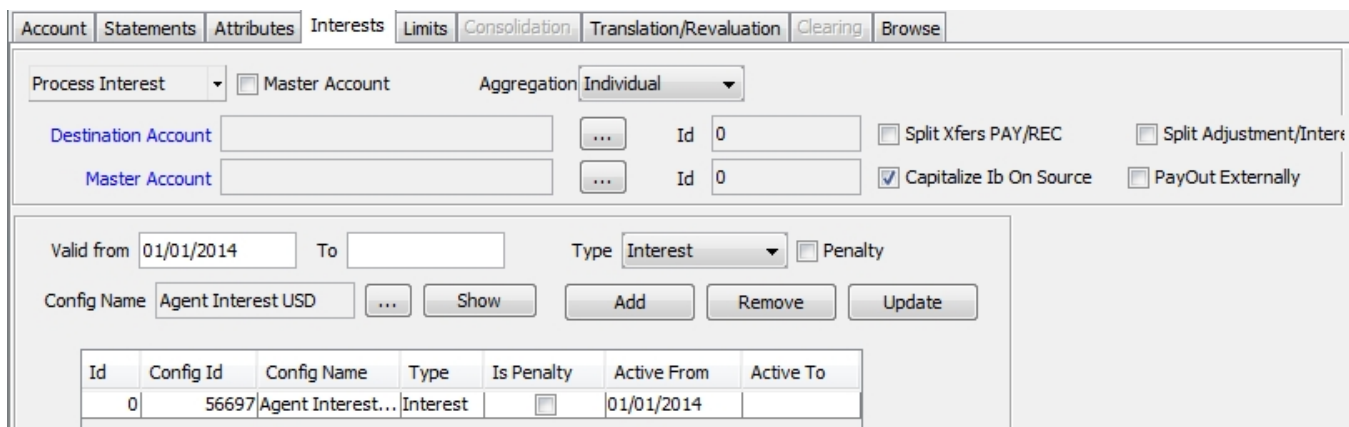
There is no need to select an interest rule – The interest rule of the master account will be applied.



- » Set the Aggregation to Individual to apply the interest rule to the individual account's balance only, Master to apply the interest rule to the master account's balance only, or Aggregate to apply the interest rule to the balance of all the accounts associated with selected the master account including the master account.
- » Click **Save**.

## Individual Account Setup

Same as for a master account but the Master Account checkbox is unchecked, and the Master Account field is empty. The only available aggregation level is Individual.



- » Optional - Select the account where the interest will be posted from the Destination Account field (if different from the account itself).
- » Define a validity period then add an interest rule as described in the Master Account Setup.
- » Click **Add** to add the rule. Then click **Save**.

## Additional Settings

Additional settings can be set for generating account interest.



#### Accounts Definition - Authorization mode OFF Acc 1 APL-4942 / 479737 - version 1

Account		Utilities		Reports		Process		Help	
Account	Statements	Attributes	Interests	Limits	Consolidation	Translation/Revaluation	Clearing	Legal Entities	Browse
Process Interest	<input type="checkbox"/> Master Acc...	Aggregation		Aggregate					
Destination Account		...	Id	0	<input type="checkbox"/> Split Xfers PAY/REC	<input type="checkbox"/> Split Adjustment/Int...			
Master Account	Master Acc APL-4942	...	Id	479734	<input checked="" type="checkbox"/> Capitalize Ib On Sou...	<input type="checkbox"/> PayOut Externally	<input type="checkbox"/> Agg. Entries On Master Acc. ...		

- You can check "Split Xfers PAY/REC" to create two transfers for a given Interest Bearing trade: one that aggregates the PAY entries, and one that aggregates the REC entries. Otherwise all entries are aggregated into a single transfer.
- "Split Adjustment/Interest" - When not checked, only Interest Bearing trades of type INTEREST are generated. When checked, Interest Bearing trades of type INTEREST are generated for credit balances, and Interest Bearing trades of type ADJUSTMENT are generated for debit balances.
- You can check "Capitalizes Ib On Source" to create the interest bearing trade on the source account - The account can be transferred to an external account using the scheduled task ACC\_TRANSFER\_INTEREST. It can be transferred to:
  - The destination account if specified.
  - The account associated with the external counterparty if "PayOut Externally" is checked. The external counterparty is selected in the attributes of the scheduled task ACC\_TRANSFER\_INTEREST.

The transfer of interest is triggered by the scheduled task ACC\_TRANSFER\_INTEREST, or manually at the account level when you choose **Process Interest > Pay Interest**.

► See [Transferring Interest](#) for details.

If "Capitalizes Ib On Source" is not checked, the interest bearing trade is created directly on the external account:

- The destination account if specified.
- The account associated with the legal entity of the source account for role CounterParty if "PayOut Externally" is checked.

For example, the source account is defined for legal entity AGENT1 with role Agent. If "PayOut Externally" is checked, the system will look for an account defined for legal entity AGENT1 with role CounterParty.

- You can check "PayOut Externally" to transfer the interest to an external counterparty - See "Capitalizes Ib On Source" for details.
- You can check "Agg. Entries On Master Account" to aggregate all entries from Master and Child accounts into a unique Interest Bearing trade on the Master account. This is only applicable if the field Aggregation = Aggregate.

## Call Accounts

When you associate an interest bearing rule with a call account, additional functions are available.

You can check "Interest Quick Entry" to define the interest configuration on-the-fly.

Account | Statements | **Attributes** | Interests | Limits | Consolidation | Translation/Revaluation | Browse

Process Interest:  ☐ Master Account Aggregation: Individual  ☒ Interest Quick Entry  
☐ Margin Quick Entry  
☐ PayOut Externally

Destination Account:  ... Id: 0  
Master Account:  ... Id: 0

Interest Calculation: Rounding: NEAREST Daycount: 30/360  
Frequencies: Calculation: @Begin of Month Capitalization: @Begin of Month  
Payment: @Begin of Month

Config Ranges

Min:  Max:  Valid from: 10/01/2011 To:   
Rate:  Rate Percentage: 100  
Fixed: 1.25

Update  
Add  
Delete

Id	Min	Max	Active From	Active To	Is Amount	Amount	Ccy	Is Fixed	Rate	Rate Index	Spread		Ra
0	-∞	∞	10/01/2011		<input type="checkbox"/>	0		<input checked="" type="checkbox"/>	0.0125		0	<input type="checkbox"/>	0

Valid On

- » Define the characteristics of the interest calculation and click **Add**.
- » When you save the account, the interest configuration is saved as well.

You can check "Margin Quick Entry" to define the margin configuration on-the-fly.

Account | Statements | **Attributes** | Interests | Limits | Consolidation | Translation/Revaluation | Browse

Process Interest:  ☐ Master Account Aggregation: Individual  ☐ Interest Quick Entry  
☒ Margin Quick Entry  
☐ PayOut Externally

Destination Account:  ... Id: 0  
Master Account:  ... Id: 0

Valid from: 01/01/2011 To:  Type: Margin  ☐ Penalty  
Config Name:  ... Show Add Remove Update

Id	Config Id	Config Name	Type	Is Penalty	Active From	Active To

Margin Ranges

Min:  Max:  Valid from: 10/01/2011 To:   
Margin (bps): 25

Update  
Add  
Delete

Id	Min	Max	Active From	Active To	Margin
0	-∞	∞	10/01/2011		0.0025

- » Define the characteristics of the margin calculation and click **Add**.
- » When you save the account, the interest configuration is saved as well.

### 10.1.3 Access Permission and Authorization

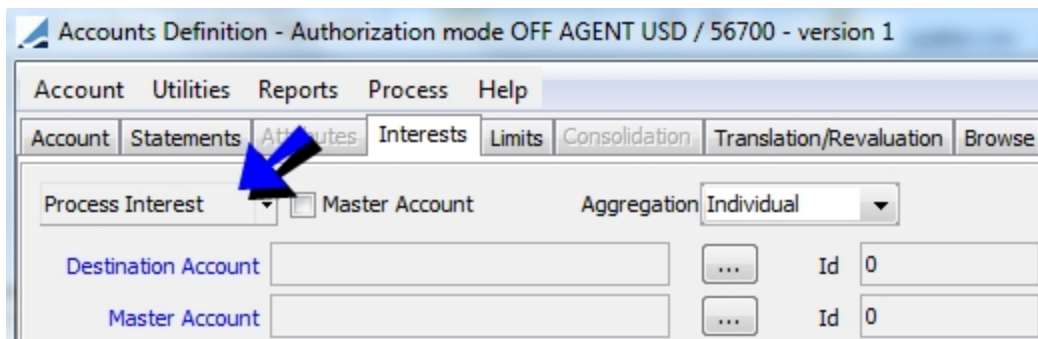
The access permissions relating to account interest generation are: AddModifyAccountInterest and RemoveAccountInterest.

In order for Authorization mode to apply to account interest configs, you need to add "AccountInterestConfig" to the domain "classAuthMode".

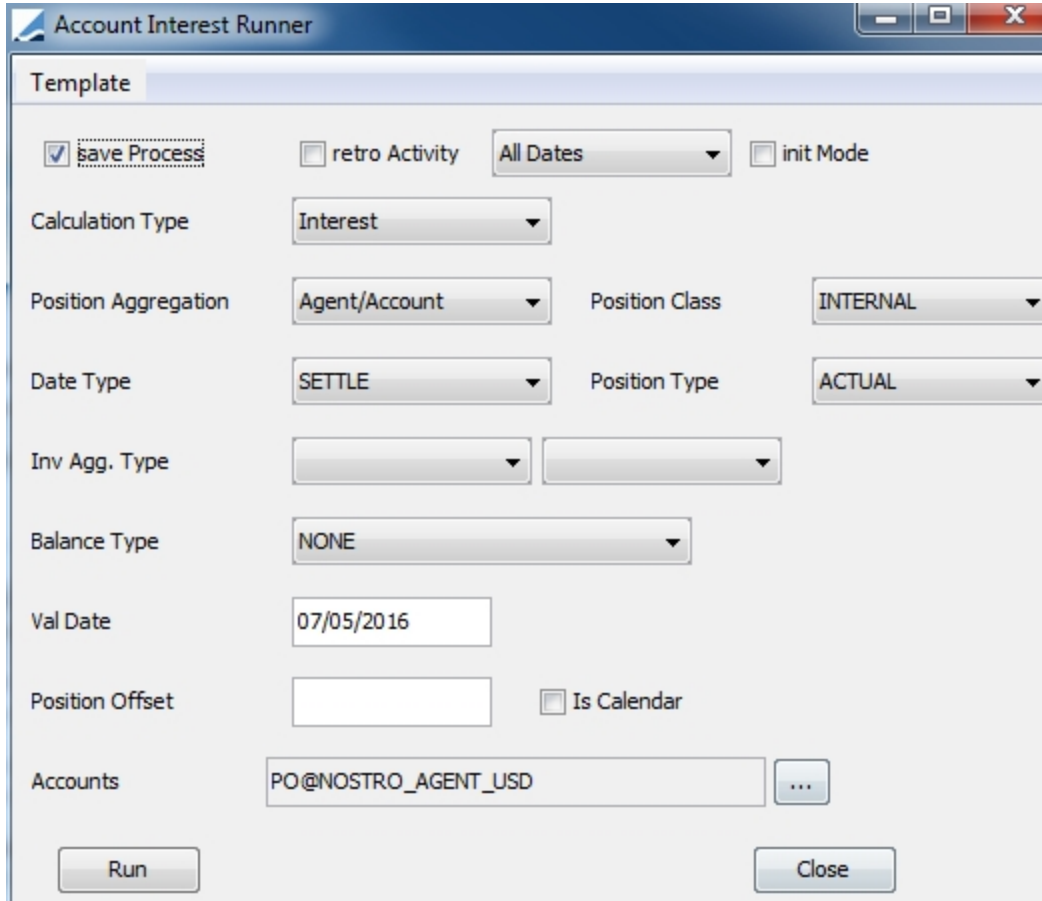
## 10.2 Generating Account Interest

You can process interest computation from the Interests panel in the Accounts window by clicking the **Process Interest** button, or you can run the ACCOUNT\_INTEREST scheduled task.

### 10.2.1 Process Interest on the Fly



- » When you click **Process Interest**, the Account Interest Runner dialog appears.



Check "save Process" to generate the interest bearing trades, select the proper position criteria, and click **Run**. You can save the information as a template.

For information on "retro Activity" and "init Mode", please refer to the ACCOUNT\_INTEREST scheduled task below.

### 10.2.2 ACCOUNT\_INTEREST Scheduled Task

From the Calypso Navigator, navigate to **Configuration > Scheduled Tasks** (menu action `scheduling.ScheduledTaskListWindow`), and configure a task of type ACCOUNT\_INTEREST.

Interest bearing trades are generated based on the inventory position computed by the Inventory engine on accounts associated with an interest bearing rule.

Select a trade filter, a user, a pricing environment, and a processing organization.

In the scheduled task, you can specify the agent for which you want to generate account interest, and the inventory position to select.

Task Attributes	
CHECK CONFIG ONLY	
SAVE PROCESS	
CALCULATION TYPE	
ACCOUNT ID	
LEGAL_ENTITY	
SD_FILTER	
FileName	
POSITION AGGREGATION	
POSITION CLASS	
DATE TYPE	
POSITION TYPE	
INV_AGG_TYPE	
INV_AGG_VALUE	
RETRO_ACTIVITY	
RETRO_ACTIVITY_TYPE	
INITIALIZATION_MODE	
OFFSET BALANCE DAYS	
OFFSET IS CALENDAR	
EXCEPTION ON ZERO BALANCE	
PUBLISH EXCEPTIONS	
THREAD COUNT	

Set the following attributes as needed.

- **CHECK CONFIG ONLY** - Set to true to check that all the selected accounts have a valid config from the valDate to the valDate + "To Days" (default is 1 month). The expired config is displayed in the file given as attribute. This produces a report which lists all the interest matrices that are attached to live accounts and that have expired or are due to expire in the coming month (or number of days defined in the "To Days" of the Scheduled Task). If attribute set to false, ACCOUNT\_INTEREST exceptions will be generated instead.
- **SAVE PROCESS** - If False, the scheduled task will simulate the Interest bearing process and generate a report to be checked by the users. If True, it will also save the Interest Bearing Trade.
- **CALCULATION TYPE** - Refer to the type defined on the matrix; choose Interest, Claim, etc. Interest in this example.
- **ACCOUNT ID** - You can enter one particular account if you want to launch the process on one specific account only.
- **LEGAL\_ENTITY** - You can enter one particular Client name if you want to launch the process for one particular Client only.
- **SD FILTER** - Define an SD Filter if you want to restrict the process to one given Processing Organization or Book.
- **FileName** - Set the name and the directory of the report displaying the interest trades.
- **POSITION AGGREGATION** - Define the type of position aggregation that will be used as the basis of interest calculation: "Agent/Account" or "Book/Agent/Account".
- **POSITION CLASS** - Client: To calculate interest on client accounts, Internal: To calculate interest on nostro accounts, or External: To calculate interest on incoming positions for reconciliation purposes.

- DATE TYPE - Trade: To calculate interest based on trade date positions, Settle: To calculate interest based on settle date positions (real settle date), or Value: To calculate interest based on value date (theoretical settle date) => this Would be the most commonly used for interest calculations.
- POSITION TYPE - Actual: For interest calculations, Theoretical: Should not be used (it is available for flexibility purposes in case one client wants to use it), or Failed: For claim calculation.
- INV\_AGG\_TYPE - Select an inventory aggregation type as applicable.
- INV\_AGG\_VALUE - Select an inventory aggregation value as applicable, or “\_ANY\_”.
- RETRO\_ACTIVITY - True: The process will work in retro-activity mode, or False: The process will not apply any retro-activity rules.

In retro-activity mode, the system generates adjustments for backdated movements (if any) between their value date and their real settle date. To manage the adjustments, the system creates a new position ACTUAL in value date.

**Note that the retro-activity mode is required to compute interest compounding.**

- RETRO\_ACTIVITY\_TYPE - Used in case the retro-activity is set - The default is "All Dates": We use one year in the past or retro-activity date rule set on the account.

You can also select:

- Current month : Since the beginning of the month.
- Previous month: Since the beginning of the previous month.
- Current year: Since the beginning of the year.
- Previous year : Since the beginning of the previous year.
- INITIALIZATION MODE - Set to True: Normally you set this the first time you calculate interest in the system. This will allow the system to create trades of interest without generating adjustments.
- OFFSET BALANCE DAYS - By default, the interest is calculated on the balance on the valuation date - You can enter a number of days to calculate the interest on the balance on the valuation date minus the number of days.
- OFFSET IS CALENDAR - To specify if the offset of the balance is calendar or business days.
- EXCEPTION ON ZERO BALANCE - When there is an error due to a missing configuration, by default we publish an exception only when the balance is not zero. You can set this attribute to true to generate an exception on zero balances as well.
- PUBLISH EXCEPTIONS - If set to false, we do not create a task when there is an error of configuration / missing quote. You can set to true to create a task in such a case.
- THREAD COUNT - Enter the number of threads for multi-thread processing by account. Default is 1 (no multi-thread processing).

Once the scheduled task is defined, save it and run it.

**[NOTE: It is recommended to run the process with the Inventory engine off]**



The scheduled task retrieves all SETTLE accounts with the “Interest Bearing” checkbox checked, and the positions corresponding to the selected attributes.

The position is stored each day and retrieves the corresponding interest bearing rule to compute the interest amount. The scheduled task creates interest bearing trades.

## Book Selection

If environment property IB\_USE\_BOOK\_POSITION = true (default), the book associated with the cash position, if any, is selected.

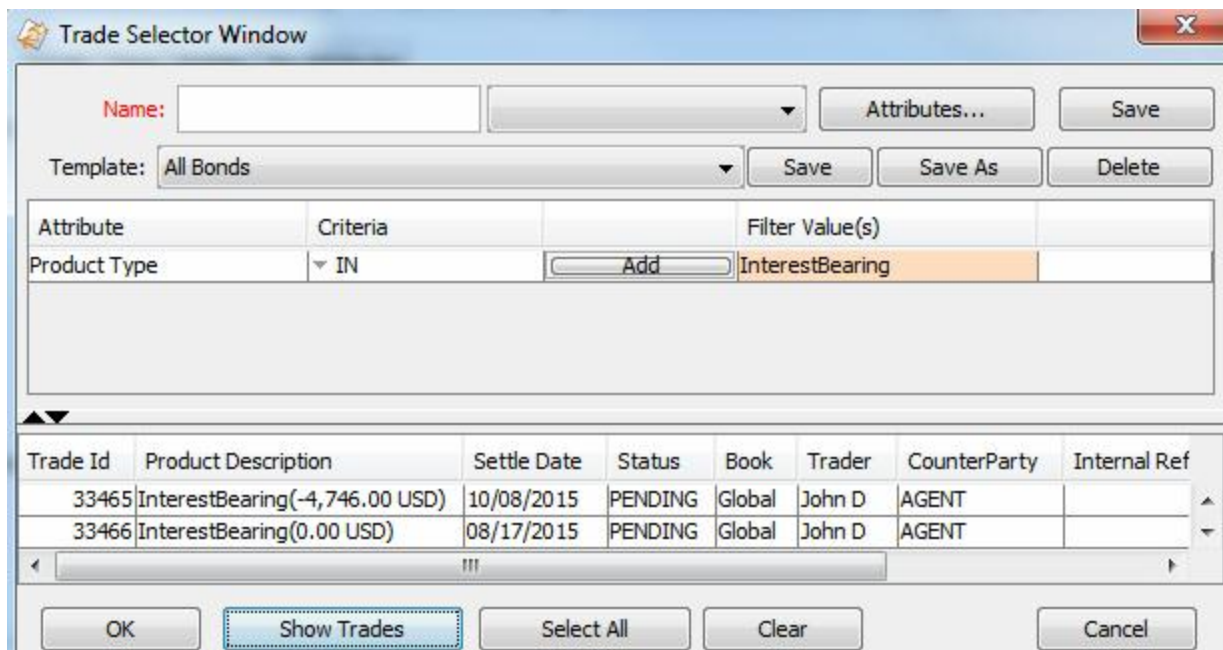
Otherwise:

- The book specified in the account attribute "FUNDING BOOK" is selected in priority.
- If not set, the book specified in the legal entity attribute "FUNDING BOOK" of the account's processing org is selected.
- If no book is associated with the cash position, the User Defaults book of the user generating the trades is selected.

## Viewing Interest Bearing Trades

From the Calypso Navigator, navigate to **Processing > Accounting Operations > Interest Bearing > Trade > Open** to view the interest bearing trades.

It opens the trade selector.



Attribute	Criteria	Filter Value(s)
Product Type	IN	InterestBearing

Trade Id	Product Description	Settle Date	Status	Book	Trader	CounterParty	Internal Ref
33465	InterestBearing(-4,746.00 USD)	10/08/2015	PENDING	Global	John D	AGENT	
33466	InterestBearing(0.00 USD)	08/17/2015	PENDING	Global	John D	AGENT	

- » Click **Show Trades** to view all interest bearing trades.
- » Double-click a trade to view its details.

 InterestBearing(0.00 null) -PO is Default Processing Organisation (0) - Version : 0 [161039/CAL1610]

Trade Back Office InterestBearing Analytics Pricing Env Market Data Utilities Help Template

Trade Details Fees Entries Inv Attributes

To AGENT ... Agent Book Global ... Status NONE ID ...

From PO ... ProcessingOrg Trade Date 10/08/2015 11:59:00 PM Settle Date 10/08/2015

Start Date 10/08/2015 End Date 10/08/2015

Pay Transfer Type INTEREST Account Id 56700

Settle Date Confirmed Payment Date

Principal 4,746.00 Ccy USD ☐ Is Client Template NONE

You can select the Entries panel to view the calculation details.

Trade

Details

Fees

Entries

Inv Attributes

Add

Remove

Update

Show Config

Pay Interest

Type

Date

Value Date

Amount

Adjustment

Rate

Config Id

Range

ADJUSTMENT

Type

Date

Value Date

Adjustment Date

Amount

Adjustment

Rate

Spread

Tiered

ADJUSTMENT

08/17/2015

10/08/2015

08/17/2015

-47.92

0.00

2.3

0

☐

ADJUSTMENT

08/18/2015

10/08/2015

08/18/2015

-47.92

0.00

2.3

0

☐

ADJUSTMENT

08/19/2015

10/08/2015

08/19/2015

-47.92

0.00


2.3

0

☐

You can click **Pay Interest** to transfer the interest to another account.

► See [Transferring Interest](#) for details.

 **[NOTE: To view interest bearing trades in the Trade Browser, you need to add 1 day to the valuation date because the trades are created as of today at 11:59:00 PM]**

### 10.2.3 Interest Bearing Trades Pricing

#### Agent Accounts

Pricer measures are shown from the perspective of the Processing Org: positive when the PO receives interest from the Agent, and negative when the PO pays interest to the agent.



## Client Accounts

Pricer measures are shown based on the environment property PO\_VIEW\_OF\_CLIENT\_IB.

If PO\_VIEW\_OF\_CLIENT\_IB = false (default), pricer measures are shown from the perspective of the Client: positive when the Client receives interest from the PO and negative when the Client pays interest to the PO.

If PO\_VIEW\_OF\_CLIENT\_IB = true, pricer measures are shown from the perspective of the Processing Org: positive when the Client pays interest to the PO and negative when the PO receives interest from the PO.

## 10.3 Transferring Interest

You can transfer the interest to another account by choosing **Process Interest > Pay Interest** in the Interests panel of the Account window, or navigate to **Configuration > Scheduled Tasks** (menu action `scheduling.ScheduledTaskListWindow`), and configure a task of type ACC\_TRANSFER\_INTEREST. It will generate a customer transfer.

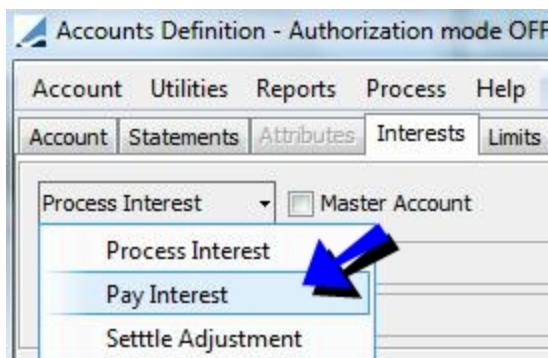
If you set the transfer workflow rule `ApplyActionLinkedXfer` on the transitions VERIFIED – SETTLE – SETTLED and SETTLED – UNSETTLE – VERIFIED, both the interest payment and the interest transfer will be settled at the same time.

Only positive interest amounts are transferred by default but the account can be setup to also receive interest by setting the account attribute "PayInterestOnly=False".

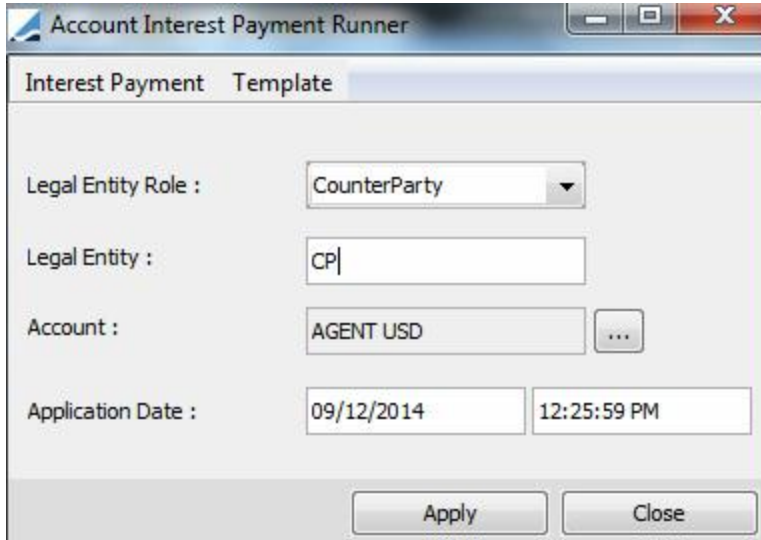
The following trade keywords are populated:

- INTEREST\_TRANSFER\_FROM (on Customer Transfer trades)
- INTEREST\_TRANSFER\_TO (on Interest Bearing trades)
- TradeSource (on Customer Transfer trades)

### 10.3.1 Pay Interest On-the-fly



When you select **Process Interest > Pay Interest**, it brings up the Account Interest Payment Runner dialog.



- » Select the destination legal entity role and legal entity. This will determine the SDIs to be used, and therefore the destination account.
- » Select the source account.
- » Enter an application date and click **Apply**.

### 10.3.2 ACC\_TRANSFER\_INTEREST Scheduled Task

Select a trade filter, a user, a pricing environment, and a processing organization.

Task Description

Task Type:

ACC\_TRANSFER\_INTEREST

External Reference:

Comments:

Description:

Execution Parameters

Attempts:

1

Retry After:

0

minutes

JVM Settings:

Log Settings:

Task Notification Options

☐ Send Emails

☐ Publish Business Events

To User:

+ Common Attributes

- Task Attributes

LEGAL_ENTITY ROLE	External
ACCOUNT ID	23101
LEGAL_ENTITY	AGENT
CHECK_PREVIOUS_DAYS	
EXCLUDE_TRADE_STATUS	

» Set the following attributes:

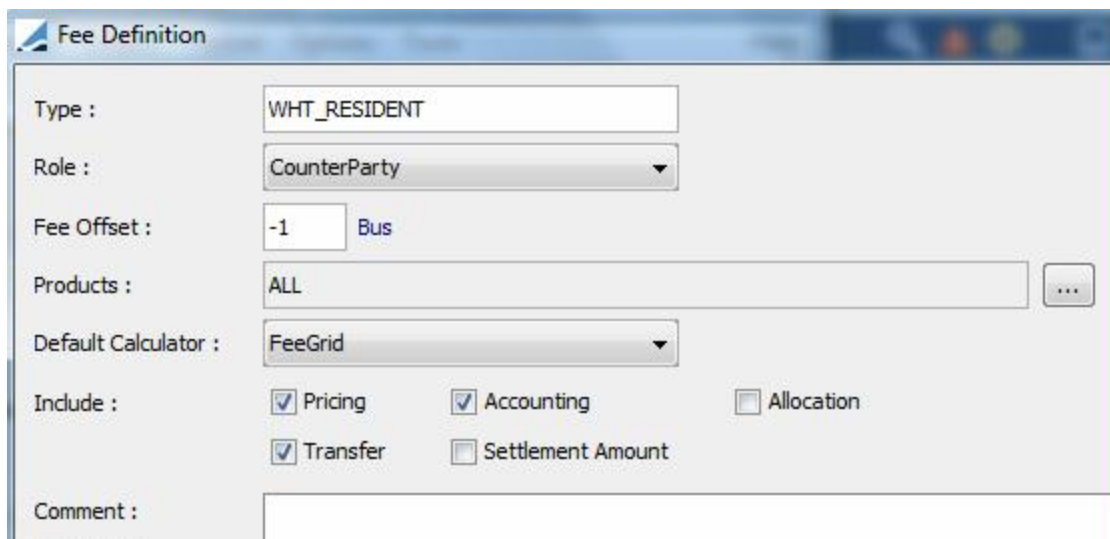
- LEGAL\_ENTITY ROLE – Role of the legal entity to which the interest is transferred. In order to choose the correct SDI, you must assign a new role to the legal entity (External for example). So this legal entity will have a SDI for the role Agent and a SDI for the role External (which will contain the external account).
- ACCOUNT\_ID - Id given by the system, not the account name. Source account.
- LEGAL\_ENTITY - Name of the Legal Entity to which the interest is transferred.
- CHECK\_PREVIOUS\_DAYS - When set to true and the valuation date is not the payment date, the system amends /creates the interest bearing trade if the payment date is a holiday. When set to false, the interest bearing trade is amended / created only if the valuation date is the payment date.
- EXCLUDE\_TRADE\_STATUS - You can enter a list of comma-separated status codes to exclude the trades in corresponding status.

» Once the scheduled task is defined, save it and run it.

## 10.4 Withholding Tax

To activate the Withholding Tax in Calypso, set the environment property WITHHOLDINGTAX to true.

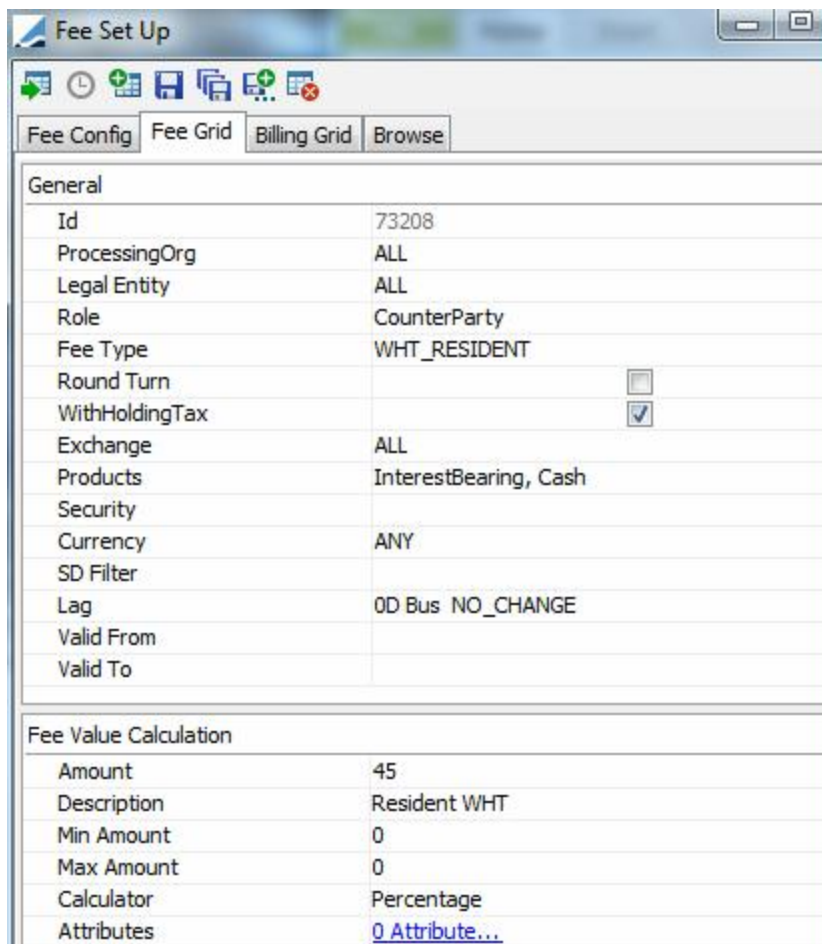
From the Calypso Navigator, navigate to **Configuration > Fees, Haircuts, & Margin Calls > Fee Definition** to define the withholding tax fees. You can define as many fees as needed (a resident WHT fee, a non resident WHT fee, and an XTRA WHT fee to handle the cases where no DTT treaty is signed).



» You can click [Help](#) for complete setup details.

Then from the Calypso Navigator, navigate to **Configuration > Fees, Haircuts, & Margin Calls > Fee Set Up** to define the related grids in the Fee Grid panel. Be sure the grid is flagged as WithholdingTax and defined with Role = ALL. Thus the grid may be eligible for both Loan and Deposit trades (where client role is counterparty), and Interest Bearing trades (where client role is the Account Holder role).

Note that if the Authorization mode is enabled, an authorized user must approve your entry.



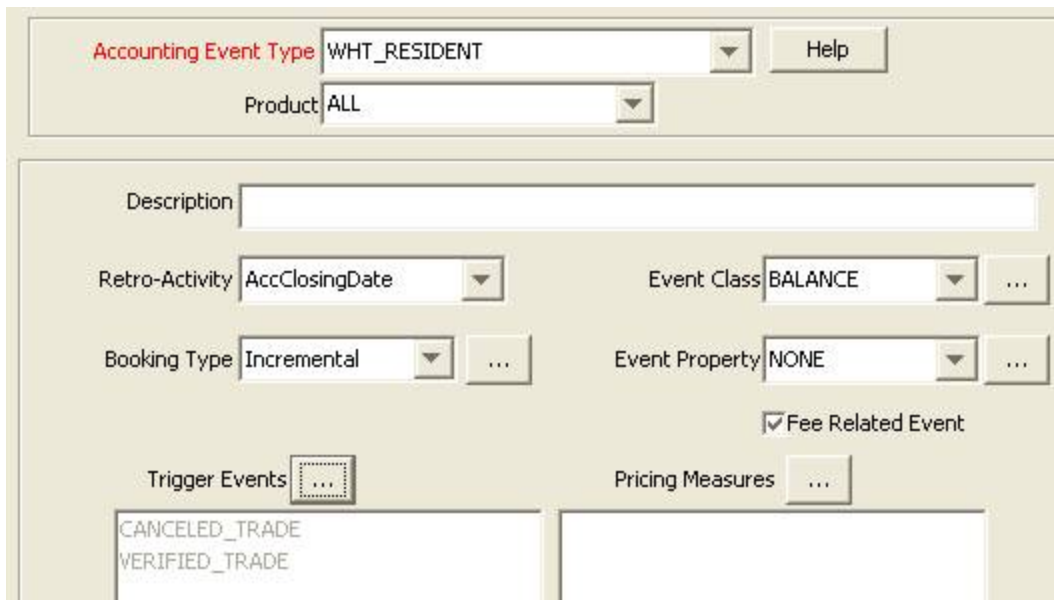
General	
Id	73208
ProcessingOrg	ALL
Legal Entity	ALL
Role	CounterParty
Fee Type	WHT_RESIDENT
Round Turn	<input type="checkbox"/>
WithHoldingTax	<input checked="" type="checkbox"/>
Exchange	ALL
Products	InterestBearing, Cash
Security	
Currency	ANY
SD Filter	
Lag	OD Bus NO_CHANGE
Valid From	
Valid To	

Fee Value Calculation	
Amount	45
Description	Resident WHT
Min Amount	0
Max Amount	0
Calculator	Percentage
Attributes	<a href="#">0 Attribute...</a>

Then define the related accounting events.

From the Calypso Navigator, navigate to **Configuration > Accounting > Events** and define an event with event name equals to the fee type:



Make sure to check "Fee Related Event".

Withholding Tax transfers are created by the Scheduled Task ACCOUNT\_INTEREST.

As soon as Withholding Tax applies to an Interest Bearing Trade, the system generates an additional transfer type <WITHHOLDINGTAX FeeName>. In terms of messages, the WITHHOLDINGTAX related transfer should move to SETTLED when the related INTEREST transfer is moved to SETTLED. Then it impacts:

- The account balance and is taken into account into the Asset/Liability and Reclassification Accounting process
- The account statement

## 10.5 Rate Change

Rate Change is currently only supported on call accounts.

### 10.5.1 RATE\_CHANGE Transfer

To be able to report rate changes in customer statements, the system creates a transfer of type "RATE\_CHANGE", attached to the interest bearing trade(s), based on its value date. If needed, please add it to the domain "flowType".

RATE\_CHANGE transfers are created by the scheduled task ACCOUNT\_INTEREST.

The system creates a RATE\_CHANGE transfer type with a specific Xfer Description as stated below.

Example 1: INTEREST and withholding tax

Settlements									
Transfer Id	Xfer Description	Xfer Pay/Rec	Transfer Type	Product Type	Transfer Amount	Value Date	Settle Currency	GL Account	Transfer Status
76007	RATE CHANGE TO 5%BP	RECEIVE	RATE_CHANGE	InterestBearing	0.00	01/02/2008	USD	60075	VERIFIED
76018	WITHHOLDINGTAX2 USD 136.11 (DR)	RECEIVE	WITHHOLDINGTAX2	InterestBearing	136.11	03/03/2008	USD	60075	VERIFIED
76019	GROSS INTEREST CAPITALISED USD 680.56 (CR)	PAY	INTEREST	InterestBearing	(680.56)	03/03/2008	USD	60075	VERIFIED

Example 2: INTEREST without withholding tax

Settlements									
Transfer Id	Xfer Pay/Rec	Xfer Description	Transfer Type	Product Type	Transfer Amount	Value Date	Settle Currency	Transfer Status	GL Account
77063	PAY	INTEREST CAPITALISED	NONE	NONE	(164.384)	03/03/2008	EUR	SETTLED	60426

The new rate is used in interest calculation (new adjustment) from its value date.

A RATE\_CHANGE transfer can also be generated by the system if the floating rate index used in the configuration is changing in the Quote Set. This Rate Index has to be defined as a Base Rate and its attribute GenerateRateChange must be set to True.

**ⓘ [NOTE: It must only be used in case of an annually or monthly reviewed rate (i.e. Base Rate or equivalent) in order not to produce a daily RATE\_CHANGE]**

By default, a RATE\_CHANGE transfer is generated for Interest Bearing Trades with zero amount.

If you do not want to generate those transfers, you can set the Comment to "false" in the domain "AccountSetup" for the value "ADD\_XFER\_CONFIG\_CHANGE".

Name:	AccountSetup
Value:	ADD_XFER_CONFIG_CHANGE
Comment:	false

### 10.5.2 Backdated Rate Change

Back dated RATE\_CHANGE transfers are also created by the scheduled task ACCOUNT\_INTEREST, provided the RETROACTIVITY attribute is set to True.

In such a case, the system creates a RATE\_CHANGE transfer with Value Date = Initial Date of Rate Change and Settle Date = Today (entered date of the rate change), provided you have set the property XFER\_BV\_REAL\_SETTLE\_DATE to true.

That RATE\_CHANGE transfer is attached to the Interest Bearing trade of the initial period where it should have been confirmed and will be reported on the current period statement, based on its SETTLE DATE, provided it is in a SETTLED status.

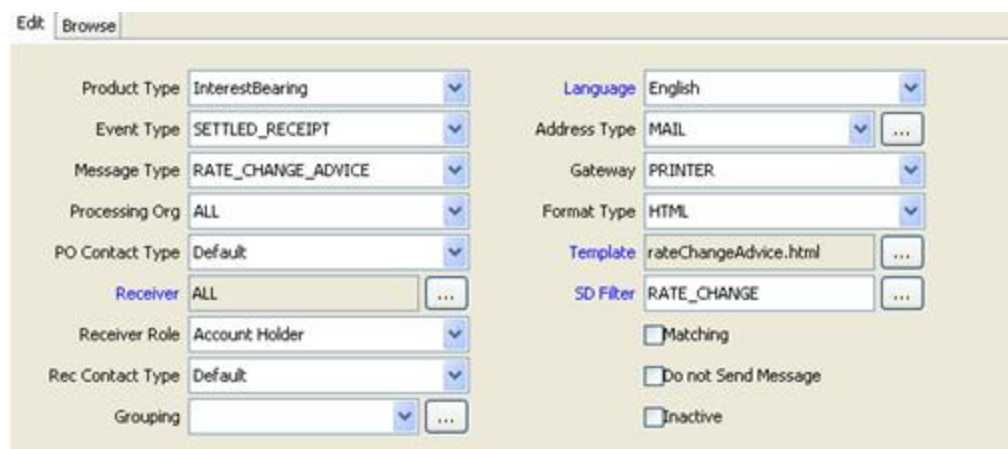
### 10.5.3 Rate Change Message

When generating a RATE\_CHANGE transfer (on the current Interest Bearing trade), two Xfer Attributes are populated:

- RateChangeName: set to "FixedRate" or to the name of the floating rate +(spread+margin)
- RateChangeValue: All In rate at the related value date

This transfer can trigger a message based on message type "RATE\_CHANGE\_ADVICE".

Sample message setup:



The screenshot shows the 'Edit' tab of a message setup window. The 'Message Type' is set to 'RATE\_CHANGE\_ADVICE'. The 'Product Type' is 'InterestBearing', 'Event Type' is 'SETTLED\_RECEIPT', and 'Processing Org' is 'ALL'. The 'PO Contact Type' is 'Default', 'Receiver' is 'ALL', 'Receiver Role' is 'Account Holder', and 'Rec Contact Type' is 'Default'. The 'Language' is 'English', 'Address Type' is 'MAIL', 'Gateway' is 'PRINTER', 'Format Type' is 'HTML', and the 'Template' is 'rateChangeAdvice.html'. The 'SD Filter' is 'RATE\_CHANGE'. There are checkboxes for 'Matching', 'Do not Send Message', and 'Inactive', all of which are currently unchecked. The 'Grouping' field is empty.

The Static Data Filter RATE\_CHANGE filters on the Xfer Type = RATE\_CHANGE.

The following template keywords can be used:

- |TRANSFER\_VALUEDATE| is the date at which the rate is changing
- |TRANSFER\_SETTLEMENTCCY| is the currency of the customer account
- |CALL\_ACCOUNT\_TYPE|
- |CALL\_ACCOUNT\_SUBTYPE|
- |ACCOUNT\_NAME|
- |ACCOUNT\_ACTUALBALANCE|
- |TRANSFER\_RateChangeValue|
- |TRANSFER\_RateChangeName|

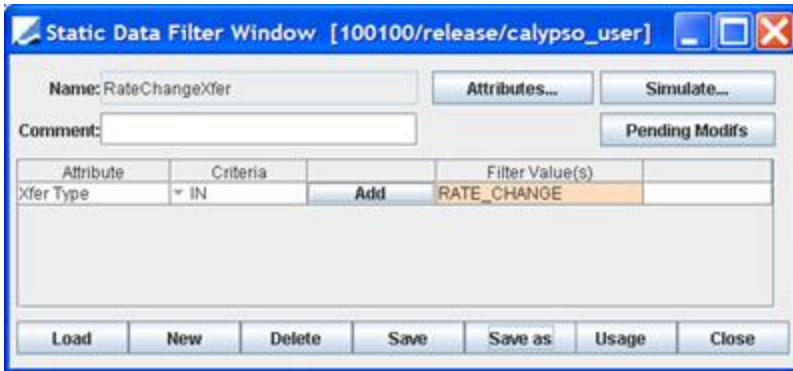
### 10.5.4 Rate Change Workflow

The RATE\_CHANGE transfer should have its own workflow to go directly to SETTLED and be part of the statement for that period without creating any specific task in the Task Station.



This transfer being created for "technical reasons", the end-user should not see that transfer into their task station, and it should SETTLE automatically to make it appear as soon as created in the statements. For that reason, we advise to add the following transfer workflow subtype for RATE\_CHANGE transfers

First, define the following SD Filter:



Static Data Filter Window [100100/release/calypso\_user]

Name: RateChangeXfer

Comment:

Attributes... Simulate... Pending Modifs

Attribute	Criteria	Filter Value(s)
Xfer Type	IN	RATE_CHANGE

Load New Delete Save Save as Usage Close

Then, add the value RateChangeXfer to the domain "XferWorkflowType".

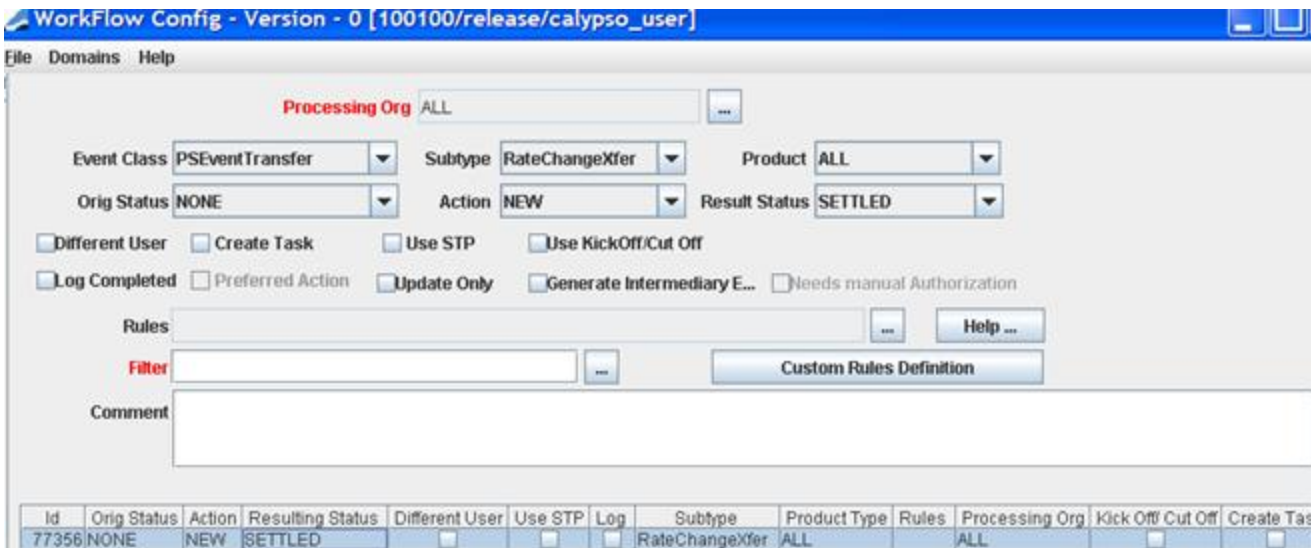


XferWorkflowType

Name: XferWorkflowType

Value: RateChangeXfer

Then from the Calypso Navigator, navigate to **Configuration > Workflow > Workflow**, and add the following transfer workflow for the Subtype **RateChangeXfer**:



WorkFlow Config - Version - 0 [100100/release/calypso\_user]

File Domains Help

Processing Org: ALL

Event Class: PSEventTransfer Subtype: RateChangeXfer Product: ALL

Orig Status: NONE Action: NEW Result Status: SETTLED

☐ Different User ☐ Create Task ☐ Use STP ☐ Use KickOff/Cut Off

☐ Log Completed ☐ Preferred Action ☐ Update Only ☐ Generate Intermediary E... ☐ Needs manual Authorization

Rules: ... Help ...

Filter: ... Custom Rules Definition

Comment:

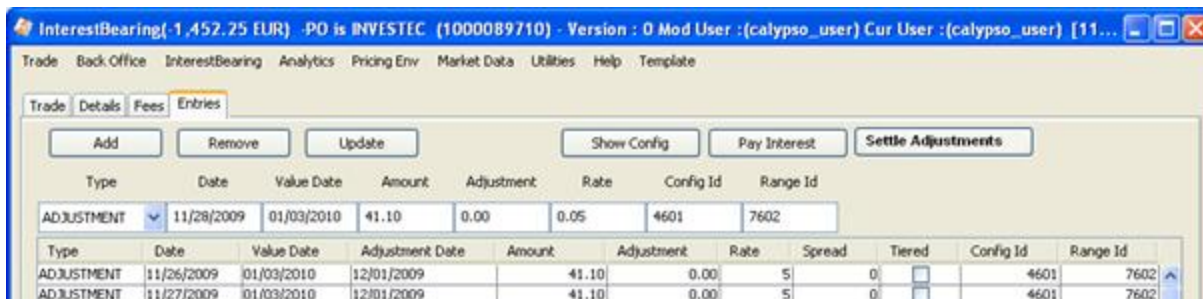
Id	Orig Status	Action	Resulting Status	Different User	Use STP	Log	Subtype	Product Type	Rules	Processing Org	Kick Off Cut Off	Create Tas
77356	NONE	NEW	SETTLED	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RateChangeXfer	ALL		ALL	<input type="checkbox"/>	<input type="checkbox"/>

RATE\_CHANGE transfers will automatically go to a SETTLED status and will be reversed and NEW (using the Transfer Engine param XFER\_USE\_REVERSE = true).

**[NOTE: If you want to generate a Rate Change message, then the RATE\_CHANGE workflow must have a temporary status like VERIFIED to only reach the SETTLED status on value date (with a KickOff config) to avoid the multi-generation of a message in case of floating rate]**

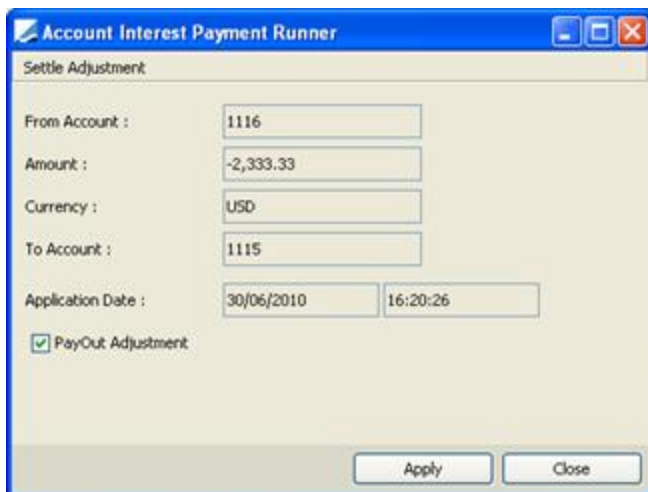
## 10.6 Settlement of Interest Bearing Adjustments

The early settlement of Interest Bearing trades can be done at Interest Bearing trade level or at the Account level as shown bellow. It creates a Transfer on current Interest Bearing trade of the account with today's date and with an amount equal to the sum of all adjustment entries initially planned at Interest Bearing Settle date.



Click **Settle Adjustments** - It brings up the Account Interest Payment Runner dialog.

You can also choose **Process Interest > Settle Adjustment** from the Interests panel of the Account window.



The window used to generate this transfer has also an additional checkbox "PayOut Adjustment" enabled if the interest must be transferred to another account. If checked, it creates the related transfer to transfer the interest which includes the calculated adjustment and related withholding tax.

Additionally, the accounting event **ADJUSTMENT** can be used to take into account any ADJUSTMENT amount early settled between start and end date of the Interest Bearing trade.

## 10.7 Chasing Interest Bearing Trades in Bulk

You can send chasers in bulk for interest bearing trades using an action with workflow rule IBBulkChaser and message template "SubsidiaryICInterestAdviceBulk.html" (based on message keyword TRADE\_BROWSER\_TEMPLATE that displays a Trade Browser report for the template defined in domain "BulkIBChaserTemplate").

### Domain BulkIBChaserTemplate

It must contain a Trade Browser template that contains the Interest Bearing trades for which you want to generate a chaser.

### InterestBearing Trade Workflow

Add action BULK\_CHASE with trade workflow rule IBBulkChaser.

Example: VERIFIED - BULK\_ACTION - TO\_BE\_AGREED

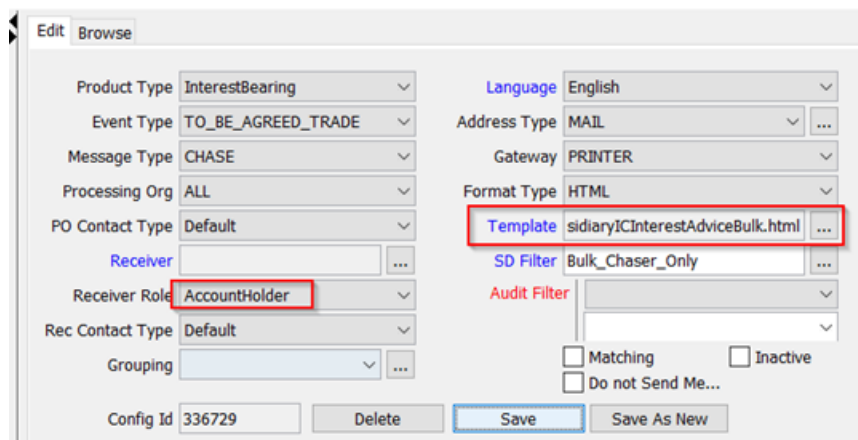
The workflow rule prevents the generation of the bulk message if:

- A Trade Browser template is not defined in domain "BulkIBChaserTemplate"
- No Interest Bearing trade is returned by the template

The action should be applied to a single Interest Bearing trade, and it will generate a chaser for all trades returned by the specified template.

It is recommended to add the action BULK\_CHASE to the domain "TradeActionNotAuthorizedInMultiSelection" so that you can only apply it to 1 trade, otherwise you may generate duplicate chaser messages.

### Chaser Message Setup



Product Type = InterestBearing

Event Type = <result status of BULK\_ACTION>\_TRADE - Example: TO\_BE\_AGREED\_TRADE

Message Type = CHASE

Template = SubsidiaryInterestAdviceBulk.html

Static data filter:

Static Data Filter Window [161031/V16-1/calypso\_user]

Name: Bulk\_Chaser\_Only

External Ref.:


Comment:

Groups: ANY

Criteria...

Attribute	Criteria	Filter Value(s)
Trade Action	IN	BULK_CHASE

When you apply the action BULK\_CHASE to an interest bearing trade, the chaser is generated.



**InterestBearing Payment Advice**

Dear Brian de Palma,

We are pleased to advice, for value date, , that you will .

**INTERESTS DETAILS**

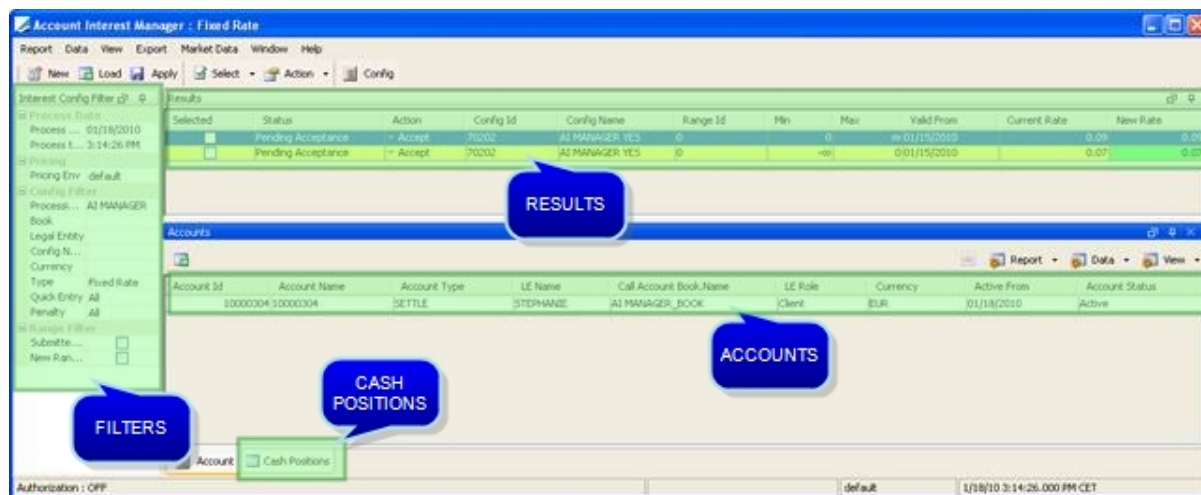
Trade Id	Product Description	Bundle Name	Trade Date	Account Id	Trade Settle Date
2200179510	InterestBearing(2 756,10 USD)		févr. 02, 2020 05:59 AM	95206	01/03/2020
2200179508	InterestBearing(3 333,35 USD)		févr. 02, 2020 05:59 AM	262738	28/02/2020

# 11. Interest Manager

The interest manager is used to update account interest ranges (interest rates, spread, or amounts) from interest bearing rules. This window does not allow a user to create a new interest bearing rule or range.

► See [Generating Account Interest](#) for information on creating interest bearing rules.

## 11.1 Account Interest Manager Tour



- The Filters area allows setting search criteria to load interest bearing rules.
- The Results area shows the ranges of the interest bearing rules that correspond to the selected criteria.
- The Accounts area shows the accounts that use the selected interest bearing rules.
- The Cash Positions panel displays the inventory position on all accounts that are using the selected interest bearing rules.

## 11.2 Interest Config Filters

This panel is used to narrow the list of interest bearing rules to be loaded.

### Process Date

Fields	Description
Process Date	Defaulted to today. This date is used to set the effective from/to dates to the account interest ranges.

### Pricing

Fields	Description
Pricing Env	Select a pricing environment to load rate values for floating rates.

### Config Filters

Fields	Description
Processing Org	If set, the system will load the Interest Bearing Rule defined for this particular PO.
Book	If set, the system will load the Interest Bearing Rule defined for this particular book(s).
Legal Entity	If set, the system will load the Interest Bearing Rule defined for this specific legal entity (i.e account holder)
Currency	If set, the system will load the Interest Bearing rule defined for this currency.
Type	Amount, Fixed or Floating. If set, the system will only load the ranges defined with this type of rate/amount.
Quick Entry	If set, the system will only load the quick entry configurations. These configurations are defined with an account id not null.
Penalty	If set, the system will use the penalty flag as load criteria.

### Range Filters

Fields	Description
New ranges	To only load the ranges for which the rate still needs to be set.
Submitted ranges	To only load the ranges for which the new rate needs to be authorized/accepted.

## 11.3 Results Panel

All the interest ranges that match the criteria entered by the user are loaded in this panel.

The user will be able to specify the new rate, new spread, or new amount in the corresponding columns.



Selected	Status	Action	Config ID	Config Name	Range ID	Min	Max	Valid From	Current Rate	New Rate	New Amount	New Spread
<input checked="" type="checkbox"/>	New	Submit	70202	AI MANAGER YES	0	0		01/18/2010	0.088	0.09		
<input checked="" type="checkbox"/>	New	Submit	70202	AI MANAGER YES	0			01/18/2010	0.06	0.06		

The range is automatically flagged as "Selected" as soon as a user changes the applicable rate/spread or amount. Then, all changes are submitted once the user click **Apply**.

The status is updated from New to PendingAcceptance and the changes need to be accepted or rejected to be effective.



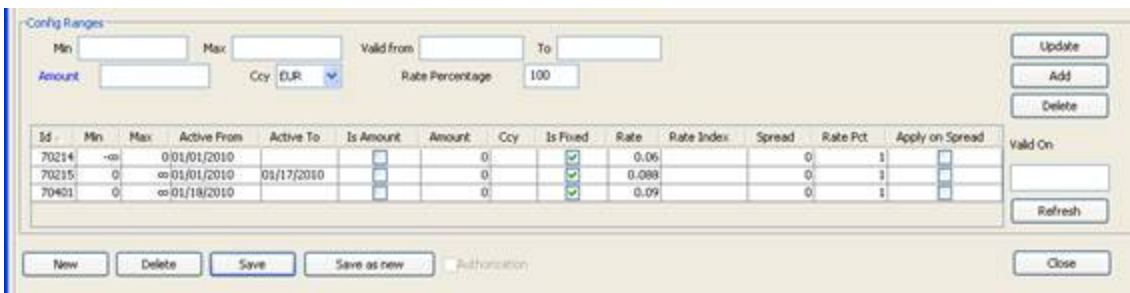
Another user can load all submitted ranges, decide to accept/reject the changes, and click on **Apply** to save the results.



Once accepted, the interest bearing rule is updated, taking the new rate and effective date into account.

Old range is updated with ActiveTo date = Process Date – 1 day.

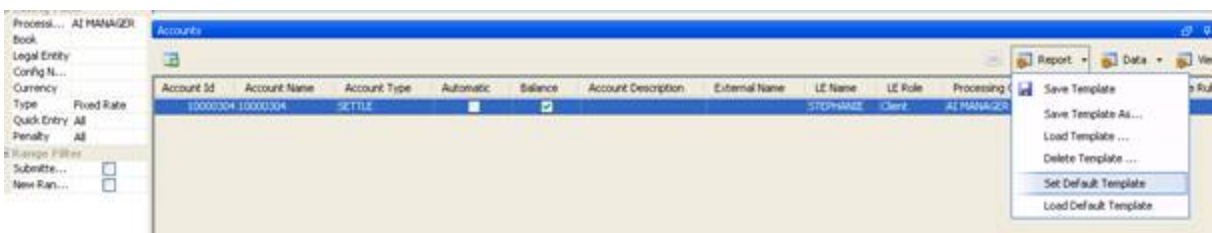
New range is created with ActiveFrom date = Process Date.



## 11.4 Accounts Panel

This panel is used to display the list of accounts that are using the selected interest bearing rules.

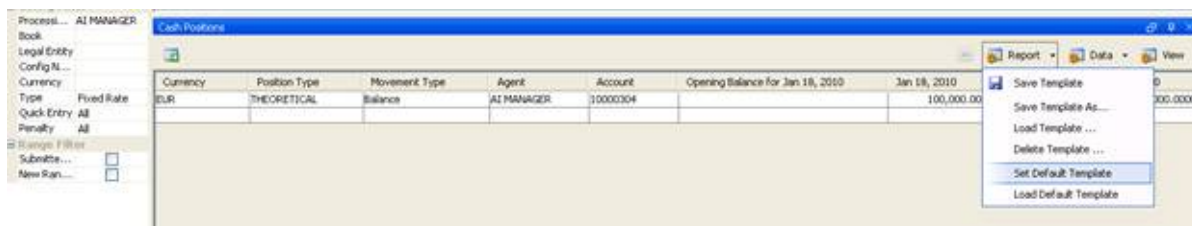
It is possible to configure several templates and set default templates, using the Report Menu of the panel.



## 11.5 Cash Position panel

This panel is used to display the inventory position on all accounts that are using the selected interest bearing rules.

It is possible to configure several templates and set default templates, using the Report Menu of the panel.



## 11.6 Access Permissions

SubmitAccountInterestUpdate: give the right to a user to submit changes.

ValidateAccountInterestUpdate): give the right to a user to validate changes.



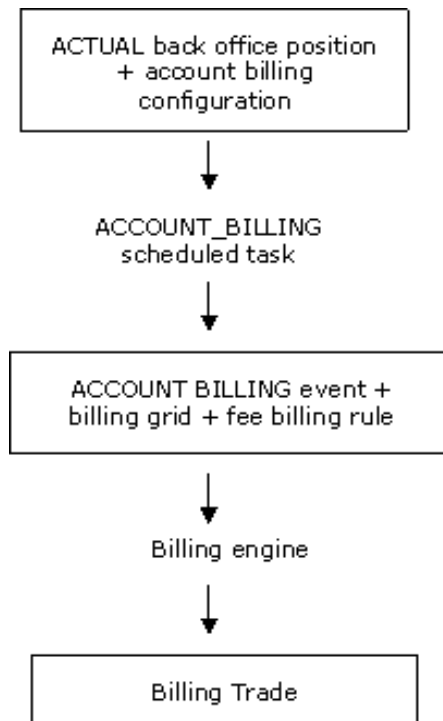
## 12. Generating Account Fees

The Cash Management activity requires invoicing of Nostro / Client accounts:

- Management Fees relating to account transactions
- Management Fees on account positions

### Account Fees Flow

Account billing events are generated by the scheduled task ACCOUNT\_BILLING based on actual **account positions** and **account billing configurations**. The Billing engine subscribes to account billing events to generate **account management fees** (billing trades) based on **billing grids** and **fee billing rules**.



### Viewing Billing Trades

► You can view billing trades using [Reports > Fees & Settlement > Billing Fee Report](#) from the Calypso Navigator - Help is available from that window.

### Before you Begin

An account can generate fees if the account has the “Billing” checkbox checked.



#### Sample account definition

The ACCOUNT\_BILLING scheduled task will only process accounts for which the Billing checkbox is checked.

You can set a default book for billing trades in the legal entity attribute "FUNDING BOOK" of the legal entity that pays / receives the fee (broker, counterparty, agent, etc.).

### Billing Trade Workflow

Billing trades follow the standard trade workflow. However, make sure that the AMEND action is available, as new billing fees will be added to the same trade during the billing period, and the billing trade will therefore be amended. Also, it is recommended to move the billing trade to a status that can no longer be amended at the end of the billing period.

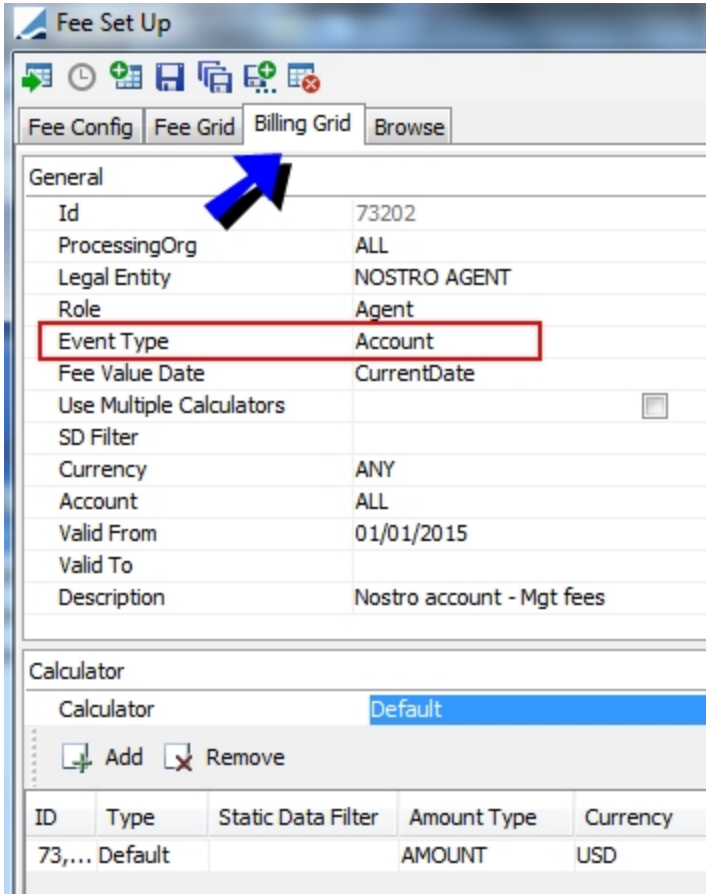
### Authorizing Billing Grids

In order for the Authorization mode to apply to billing grids, you need to add "BillingGrid" to the domain "classAuthMode".

## 12.1 Defining a Billing Grid

The billing grid allows automating the fee calculation for accounts.

From the Calypso Navigator, navigate to **Configuration > Fees, Haircuts & Margin Calls > Fee Set Up** (menu action `refdata.FeeSetUpWindow`), and select the Billing Grid panel.



**Fee Set Up**

Fee Config | **Billing Grid** | Browse

**General**

Id	73202
ProcessingOrg	ALL
Legal Entity	NOSTRO AGENT
Role	Agent
<b>Event Type</b>	<b>Account</b>
Fee Value Date	CurrentDate
Use Multiple Calculators	<input type="checkbox"/>
SD Filter	
Currency	ANY
Account	ALL
Valid From	01/01/2015
Valid To	
Description	Nostro account - Mgt fees

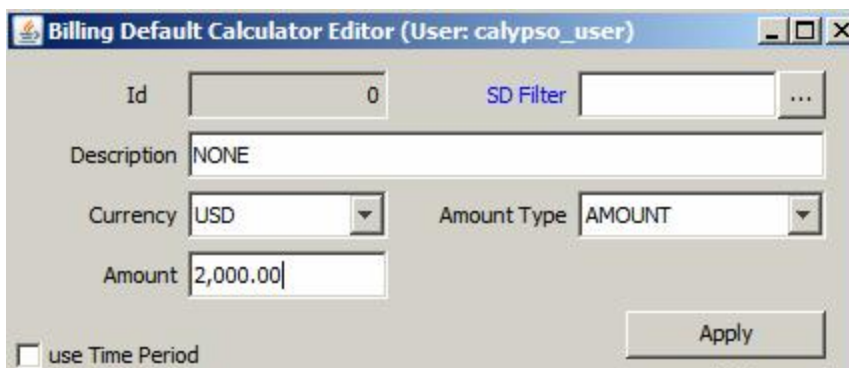
**Calculator**

Calculator: **Default**

ID	Type	Static Data Filter	Amount Type	Currency
73,...	Default		AMOUNT	USD

#### Sample billing grid for account fee

- » Enter the fee application criteria as needed and select the event type for which the fee will be generated: Account (account management) or MaintenanceTrade (account transaction)
- Enter the validity dates of the grid - They apply to the selected "Fee Value Date" of the related object.
- The "Fee Value Date" determines which date on the billing event should be used to select the Billing Grid, the Billing Rule, and to set the value date on the billing trade.
- By default, it can be set to the following values: CurrentDate (Today), or CustomDate (if the Fee Value Date of the billing event has been customized) – You can add more types of dates to the domain "billingAccount.feeValueDates".
- Fill in the Description field to describe the grid. This field is mandatory.
- You can check "Use Multiple Calculators" to generate a fee for each applicable calculator. Otherwise, a fee is generated only for the first applicable calculator.
- » Select a calculator (Default or FeeConfig), and click **Add** to define the calculator.
    - For the Default calculator, the fee will be computed based on the amount defined here.



The screenshot shows the 'Billing Default Calculator Editor' window. It contains the following fields and controls:

- Id:** A text box containing the value '0'.
- SD Filter:** A button with a dropdown arrow.
- Description:** A text box containing the value 'NONE'.
- Currency:** A dropdown menu currently set to 'USD'.
- Amount Type:** A dropdown menu currently set to 'AMOUNT'.
- Amount:** A text box containing the value '2,000.00'.
- use Time Period:** An unchecked checkbox.
- Apply:** A button at the bottom right.

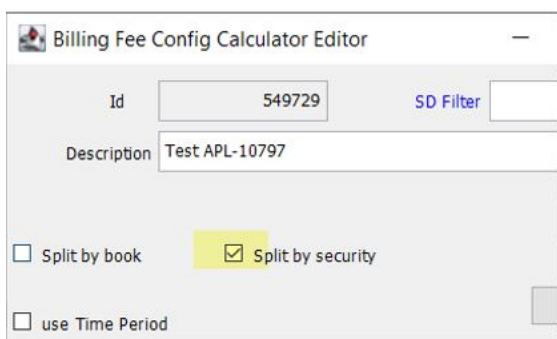
Enter a description and an amount. The amount can be signed: "-" means the PO pays the fees, "+" means the PO receives the fee.

You can check "use Time Period" to select a date rule to generate the fee.

Then click **Apply**.

- For the FeeConfig calculator, the fee will be computed based on the fee defined in the Fee Config panel.

► See [Defining Account Fees](#) for details on defining invoice fees.



The screenshot shows the 'Billing Fee Config Calculator Editor' window. It contains the following fields and controls:

- Id:** A text box containing the value '549729'.
- SD Filter:** A button with a dropdown arrow.
- Description:** A text box containing the value 'Test APL-10797'.
- Split by book:** An unchecked checkbox.
- Split by security:** A checked checkbox.
- use Time Period:** An unchecked checkbox.

You can check the "Split by book" checkbox to allocate the fees to the original books, and click **Apply**.

You can check the "Split by security" checkbox to allocate the fees based on the security which is split by each security, and click **Apply**.

- » Save the billing grid.

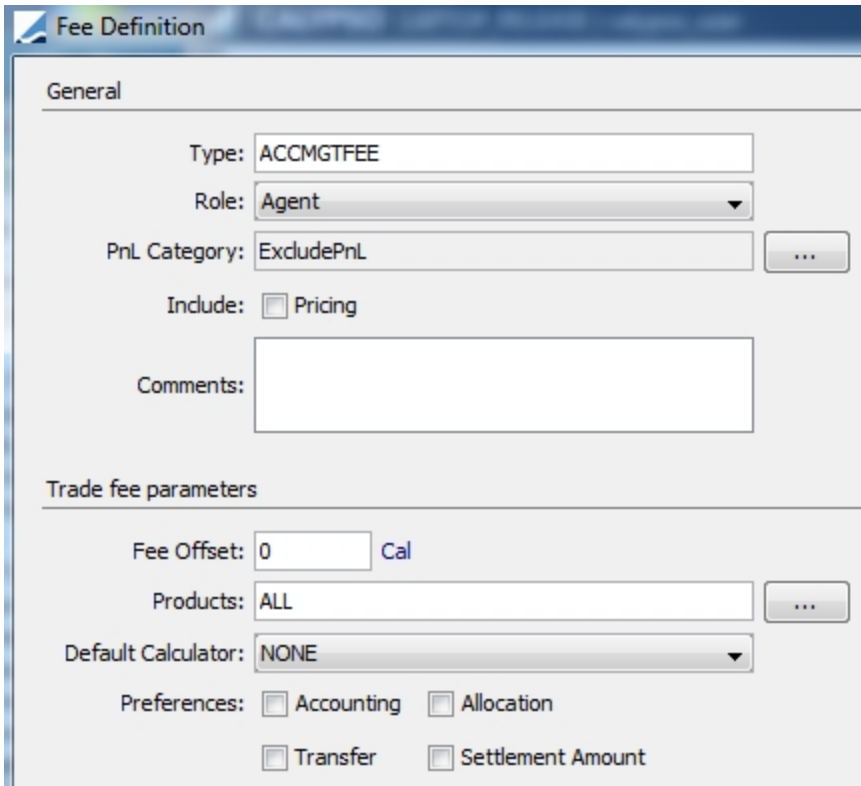
Note that if the Authorization mode is enabled, an authorized user must approve your entry.

## 12.2 Defining Account Fees

The Fee Config panel of the Fee Set Up window allows defining fees for the FeeConfig calculator in the context of billing fees. When the FeeConfig calculator is set on the Billing Grid, the fee config is used to compute the fee.

## 12.2.1 Fee Definition

Define the fee using **Configuration > Fees, Haircuts, & Margin Calls > Fee Definition** (menu action `trading.FeeDefinitionWindow`).



**Fee Definition**

**General**

Type: ACCMGT FEE

Role: Agent

PnL Category: ExcludePnL

Include: ☐ Pricing

Comments:

**Trade fee parameters**

Fee Offset: 0 Cal

Products: ALL

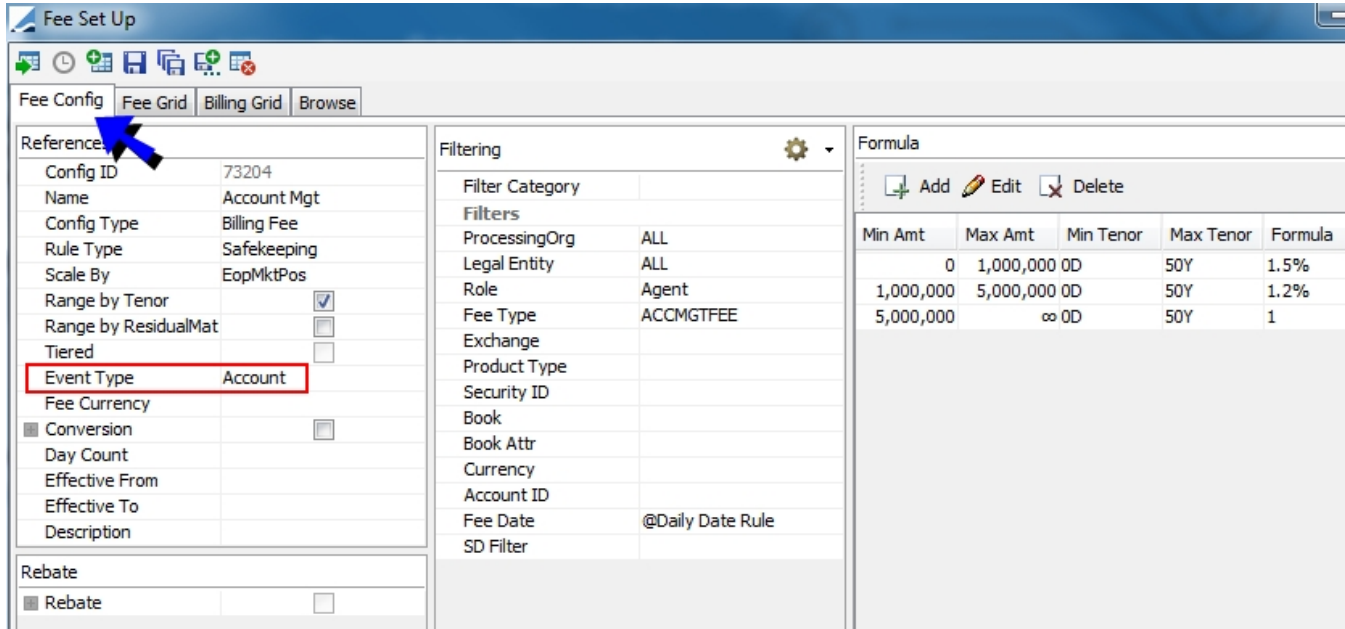
Default Calculator: NONE

Preferences: ☐ Accounting ☐ Allocation ☐ Transfer ☐ Settlement Amount


Make sure that you set the proper role. It should be Agent or Client.

## 12.2.2 Fee Definition

From the Calypso Navigator, navigate to **Configuration > Fees, Haircuts, & Margin Calls > Fee Set Up** (menu action `refdata.FeeSetUpWindow`) to open the Fee Configuration window.



#### Sample account fee config

- » Enter a configuration name and set the fee parameters as needed. They are described below.
- » Then click **Add** to add an entry to the fee. It brings up the Formula Definition dialog. It is described below.
- » Click  to save the configuration. The configuration will be used when the FeeConfig calculator is set on a Billing Grid, based on the selected filters.

Note that if the Authorization mode is enabled, an authorized user must approve your entry.

You can also click  to bring up the Browse panel for loading existing configurations.

#### References

These parameters are used to compute the fee.

Fields	Description
Config ID	ID of the configuration given by the system upon saving.
Name	Enter a configuration name.
Config Type	Select "Billing Fee" to generate invoice fees.

Fields	Description
Rule Type	<p>Select the reference amount unit:</p> <ul style="list-style-type: none"> <li>Maintenance - (Number of transactions, Trade notional)</li> <li>Safekeeping - (Market position)</li> <li>CashSafekeeping - (Cash market position)</li> </ul> <p><b>[NOTE: These rules only apply to account management fees generated by the ACCOUNT_BILLING scheduled task on inventory positions]</b></p>
Scale By	<p>Select the reference amount of the fee:</p> <ul style="list-style-type: none"> <li>For Maintenance, you can select Count, Notional, or ConvNotional (Trade Notional converted to the fee currency)</li> <li>For Safekeeping, you can select Average position (AvgMktPos), or End of Period position (EopMktPos).</li> </ul>
Range by Tenor	Check to set the fee range by tenor, or clear to set the fee range by number of days.
Range by ResidualMat	Check to set the fee range by residual maturity, or clear to set the fee range by product.
Tiered	<p>Only applies to Maintenance fees.</p> <p>Check to indicate that the reference amount is distributed over the range, rather than applied to the absolute range.</p> <p>For example, you have the following range:</p> <ul style="list-style-type: none"> <li>0 to 1,000 - Fee rate is 10%</li> <li>1,000 to 5,000 - Fee rate is 5%</li> <li>5,000 and up - Fee rate is 2%</li> </ul> <p>The reference amount is 7,000.</p> <ul style="list-style-type: none"> <li>For the non-tiered method, the fee rate is 2% (5,000 and up range).</li> <li>For the tiered method, the fee rate is 10% for the first 1,000 - Then 5% for the next 4,000 - Then 2% for the remaining 2,000.</li> </ul>
Event Type	<p>Select the event type:</p> <ul style="list-style-type: none"> <li>For Maintenance, you can select Account or MaintenanceTrade (transactions on the account).</li> <li>For Safekeeping, you can only select Account.</li> </ul> <p><b>[NOTE: MaintenanceTrade events are only generated in the context of the Clearing module - They rely on trade keywords specified in the Clearing module - Refer to Calypso Clearing documentation for details]</b></p>

Fields	Description
Fee currency	You can select a fee currency, or leave empty for ANY.
Conversion	<p>Check if you want to convert the fee using the FX rate at the end of the billing cycle. It is converted using the fee date FX rate otherwise.</p> <p>For computing the converted fee at the end of the billing cycle, you need to run the scheduled task EOD_REBATE_FEE.</p> <p>► See <a href="#">Conversion Process</a> for details.</p> <p>Select the pricing environment for loading the FX rates. If not set, the pricing environment defined in the Billing engine will be used.</p>
Day Count	Select a daycount as needed.
Effective From	Enter the effective start date of the configuration.
Effective To	Enter the effective end date of the configuration (optional).
Description	Enter a free form description as needed.


## Rebate

Not applicable for account fees.

## Filtering

These parameters are used to determine the conditions of application of the fee. You can use pre-defined filtering criteria, or a filter template.

Pre-defined criteria:


Filtering




Filter Category	
<b>Filters</b>	
ProcessingOrg	ALL
Legal Entity	ALL
Role	Agent
Fee Type	ACCMGTFEE
Exchange	
Product Type	
Security ID	
Book	
Book Attr	
Currency	
Account ID	
Fee Date	
SD Filter	

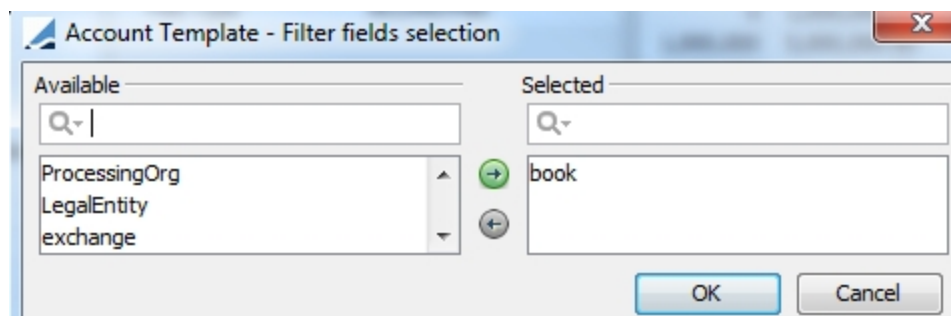


Fields	Description
Processing Org	Select a processing organization as needed, or ALL.
Legal Entity	Select a legal entity of specified role, or ALL.
Role	Select a role.
Fee Type	Enter the fee type - The fee type must be defined in the Fee Definition window.
Exchange	Select one or multiple exchanges (legal entity of role MarketPlace), or leave empty for ALL.
Product Type	Select one or multiple product types, or leave empty for ALL. Product groups are identified as "G. <group name>" and are created using <a href="#">Configuration &gt; Product &gt; Group</a> .
Security ID	Enter one or multiple product IDs (separated by commas), or leave empty for ALL.
Book	Select one or multiple books, or leave empty for ALL.
Book Attr	Select one or multiple book attribute / attribute value, or leave empty for ALL.
Currency	Select one or multiple currencies, or leave empty for ALL.
Account ID	Only applies to account management fees.
Fee Date	Only applies to account management fees.
Calc Period End Date	It is a Date Rule only applies to Rule Type: Safekeeping and CashSafekeeping. When populated, the amount is computed from the previous date before the current value date.
SD Filter	Select a static data filter as needed, or leave empty.

#### Filter template:

Filtering	
Filter Category	Account
Filters	
Role	Agent
Fee Type	ACCMGTFEE
Book	

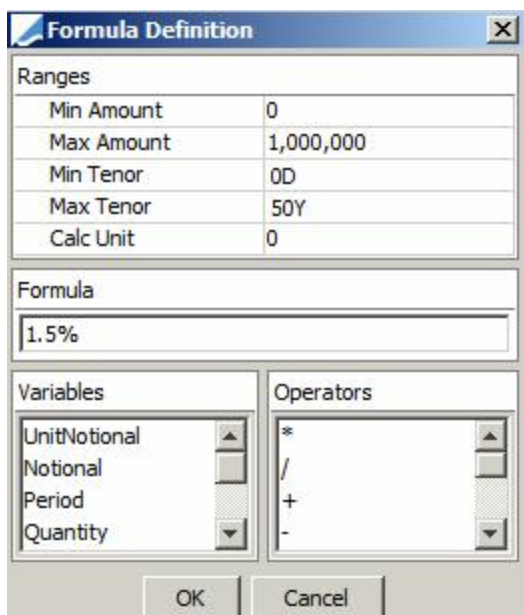
- » To add a new filter template, choose  > [Filter category > Add](#). You will be prompted to enter a filter category name. Enter a name and click **OK**.
- » Then choose  > [Filter fields template](#). You will be prompted to select a filter category previously created, and to select the filter criteria you want to use.



Fields	Description
Filter Category	Select a filter template previously created.
Role	Select a role.
Fee Type	Enter the fee type - The fee type must be defined in the Fee Definition window.
Filter Template Criteria	Select the values for the filter criteria defined in the filter template. In this example, the filter template contains the filter criteria Book.

## Formula Definition

Click **Add** to bring up the Formula Definition dialog.



## Sample formula

- » Enter the parameters to define the ranges of the fee. They are described below.

- » You can type in the formula, or double-click variables and operators to add them to the formula. Only the displayed variables and operators can be used in the formula.
- » Click **OK** when you are done.

Fields	Description
Min Amount	Enter the minimum and maximum amounts of the range. It refers to the reference amount defined by the Rule Type and Scale By parameters: Count, Notional, AvgMktPos, or EopMktPos.
Max Amount	No value is considered as 0 for the minimum amount, and infinite for the maximum amount. The minimum amount is inclusive. The maximum amount is non inclusive.
Min Tenor Max Tenor	You can also select a minimum tenor and a maximum tenor to scale the fee rates by product maturity ("Range by ResidualMat" is not checked), or by residual maturity ("Range by ResidualMat" is checked).
Min Days Max Days	<p><b>① [NOTE: For products without maturity date, the fee rates are scaled by settlement date instead]</b></p> <p>The minimum tenor is inclusive. The maximum tenor is non inclusive. If "Range by Tenor" is not checked, you can enter a number of days instead of selecting a tenor.</p>
Calc Unit	Enter a calculation unit when defining a fee expressed as an amount per unit. For example 2 per million of notional: Calc Unit = 1000000 and Formula = 2*UnitNotional.
Variables	<p>You can use the following variables in the formula depending on the selected reference amount: Quantity, Price, ContractSize, FaceValue, UnitNotional, Notional, ConvNotional (Trade Notional converted to fee currency), Markup, Count, AvgMktPos, EopMktPos, CumulPos.</p> <p>AvgMktPos only takes business days into account.</p> <p>The Markup allows setting a markup percentage per legal entity. You can define the legal entity attribute "Client Markup" and set a markup percentage on the attribute. For example, Client Markup = 120 for 120%. The Markup variable in the formula will be multiplied by 120%.</p> <p>The CumulPos is the cumulated balance from the business days of calculation period start date until current value date, quoted at current value date.</p>
Operators	<p>You can use the following operators in the formula: Subtract(-), Multiply (*), Add (+), Divide (/), Absolute Value, Max, Min, Round, Round Up, Round Down.</p> <p><b>① [NOTE: If the fee is always paid, the formula should be defined as an absolute value]</b></p>

### Sample Fee Config for Cash Position

**Fee Set Up**

Fee Config | Fee Grid | Billing Grid | Browse

References		Filtering		Formula	
Config ID	159902	Filter Category			
Name	CashSafeKeeping_EOP	Filters			
Config Type	Billing Fee	ProcessingOrg	MSG		
Rule Type	CashSafekeeping	Legal Entity	BROKER MSG		
Scale By	EopPos	Role	Agent		
Range by Tenor	<input checked="" type="checkbox"/>	Fee Type	CASH SAFEKEEPING FEE		
Range by ResidualMat	<input type="checkbox"/>	Exchange			
Tiered	<input type="checkbox"/>	Product Type			
Event Type	Account	Security ID			
Fee Currency		Book			
Conversion	<input type="checkbox"/>	Book Attr			
Day Count		Currency			
Effective From		Account ID	MSD Nostro accts (3588)		
Effective To		Fee Date	Last Calendar Day of M...		
Description		SD Filter			

Min Amt	Max Amt	Min Tenor	Max Tenor	Formula
0	15,000 0D	50Y		-ABS(EopPos*0.02)
15,000	∞ 0D	50Y		-ABS(EopPos*0.0015)

### Sample Fee Config for Client Position

**Fee Set Up**

Fee Config | Fee Grid | Billing Grid | Browse

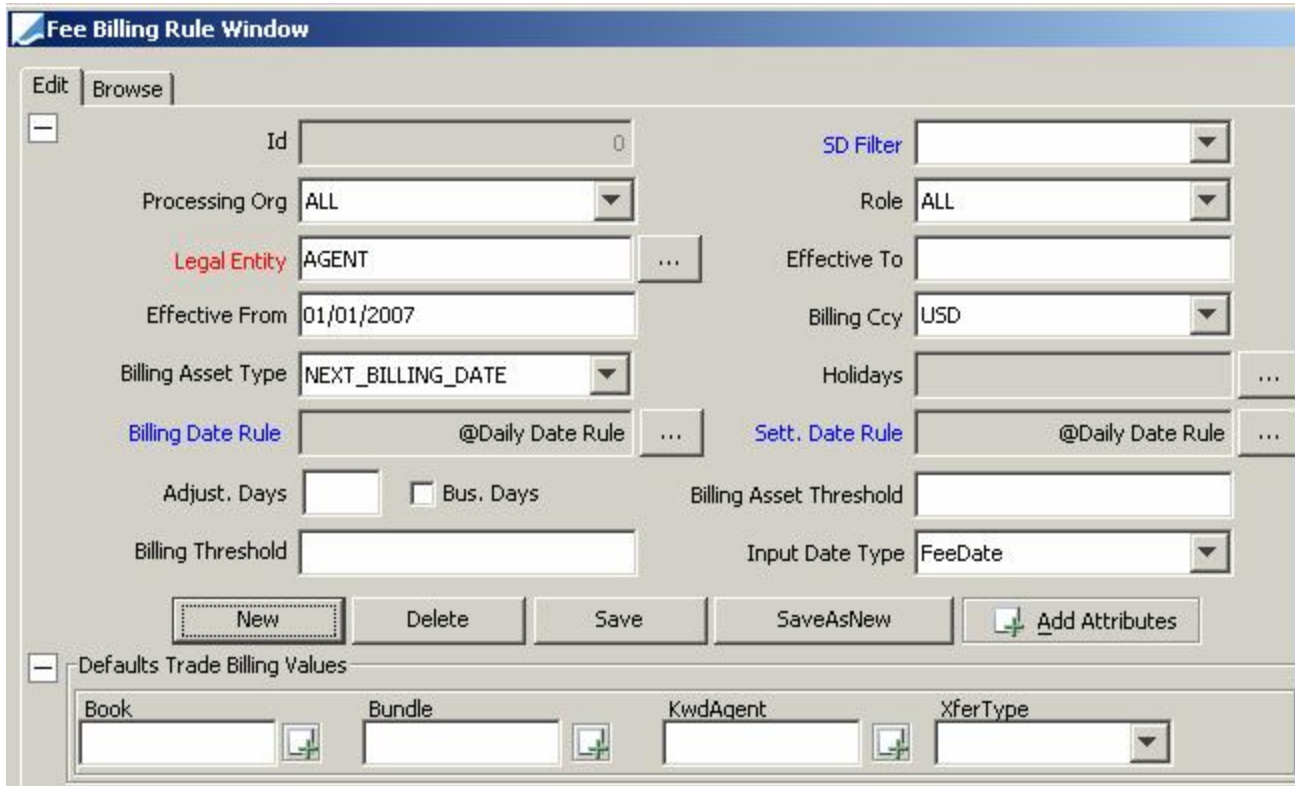
References		Filtering		Formula	
Config ID	160009	Filter Category			
Name	SafeKeeping_AVG_client	Filters			
Config Type	Billing Fee	ProcessingOrg	CREDIT DU NORD		
Rule Type	Safekeeping	Legal Entity	CLIENT W		
Scale By	AvgMktPos	Role	Client		
Range by Tenor	<input checked="" type="checkbox"/>	Fee Type	SAFEKEEPING FEE_CLIENT		
Range by ResidualMat	<input type="checkbox"/>	Exchange			
Tiered	<input type="checkbox"/>	Product Type			
Event Type	Account	Security ID			
Fee Currency	EUR	Book			
Conversion	<input type="checkbox"/>	Book Attr			
Day Count		Currency	EUR		
Effective From		Account ID	CLIENT W @ CDN (130432)		
Effective To		Fee Date	Last Calendar Day of Month		
Description		SD Filter			

Min Amt	Max Amt	Min Tenor	Max Tenor	Formula
0	15,000 0D	50Y		-ABS(AvgMktPos*0.02)
15,000	∞ 0D	50Y		-ABS(AvgMktPos*0.0015)

## 12.3 Defining a Fee Billing Rule

The billing rule allows defining the billing frequency, and a billing threshold if needed.

Define the Billing rules using **Configuration > Fees, Haircuts & Margin Calls > Fee Billing Rule** from the Calypso Navigator (menu action `refdata.FeeBillingRuleWindow`).



The screenshot shows the 'Fee Billing Rule Window' with the following fields and values:

- Edit** | **Browse** (tabs)
- Id**: 0
- Processing Org**: ALL
- Legal Entity**: AGENT
- Effective From**: 01/01/2007
- Billing Asset Type**: NEXT\_BILLING\_DATE
- Billing Date Rule**: @Daily Date Rule
- Adjust. Days**: (empty)
- Bus. Days**: (checkbox)
- Billing Threshold**: (empty)
- SD Filter**: (empty)
- Role**: ALL
- Effective To**: (empty)
- Billing Ccy**: USD
- Holidays**: (empty)
- Sett. Date Rule**: @Daily Date Rule
- Billing Asset Threshold**: (empty)
- Input Date Type**: FeeDate
- Buttons**: New, Delete, Save, SaveAsNew, Add Attributes
- Defaults Trade Billing Values**:
  - Book**: (empty)
  - Bundle**: (empty)
  - KwdAgent**: (empty)
  - XferType**: (empty)


#### Sample billing rule for account fee

- » Enter the following fields:
  - Select a legal entity, or double-click the Legal Entity label to set the legal entity to ALL.
  - Select the same role as in the billing grid.
  - Select the billing currency or ANY.
  - Select the billing date rule to determine the billing frequency.
  - Select the settlement date rule to determine the settlement frequency of the fee.
  - Select the transfer type of the billing trade as needed. If not set, the transfer type is set to INTEREST. Note that transfer types are defined in domain “flowType”.

**[NOTE: If the attribute EntryType is set, and the Default Transfer Type is not set, the transfer type defaults to the EntryType]**

- » You also need to define the following attributes - This only applies if you have selected the FeeConfig calculator in the Billing Grid.

#### Attributes Window

Setup 	
Name	Value
BillingFeeFullPeriod	true
BillingOnly	true
DefaultBook	Book 3 APL-10797
DefaultTransfer Type	ACCOUNT MGT FEE
BillingAccrualDayCount	
BillingEnableAccrual	
BillingSingleAmount	
EntryType	
MatchSecurity	

- BillingOnly - Set to True so that it is only used for billing trades.
- EntryType - Set to the fee type , "ACCMGT FEE" for example.
- XferByBook - Set to True to create a transfer by book.
- BillingFeeFullPeriod - Set to True to have a single billing fee.
- MatchSecurity - Set to True to create a new billing trade when the Security Id is different. This is applicable only when 'split by security' is selected.

» Save the billing rule.

## 12.4 Generating Account Fees

The Billing engine is used to generate the billing fees.

### 12.4.1 Billing Engine Configuration

The Billing engine is configured in the Engine Manager of Web Admin: event subscription and engine parameters.

You may need to add this engine if it is not available for configuration: Create a new engine called BillingEngine, with class name `com.calypso.engine.billing.BillingEngine`.

The Billing engine can subscribe to the following events: PSEventAccountBilling and PSEventMaintenanceTrade – This type of event is generated by the ACCOUNT\_BILLING scheduled task for accounts that have the Billing checkbox checked.

The behavior of the Billing engine may be modified with the following engine parameters.

If a parameter is not available for setup, you can register it in the domain "engineParam".

Parameters	Description
BILLING_NOAMEND_EXCEPTION	True or false. Default is true.  When set to false, no exception is generated when the AMEND action is not available on the workflow of the existing Billing trade.

Parameters	Description
IGNORE_ACTION	Comma-separated list of trade actions to be ignored by the engine.
MAX_BATCH_EVENT	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.  Allows controlling engine memory usage, therefore improving the performance.
MAX_QUEUE_SIZE	Maximum number of events buffered on an engine event queue.  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.  Allows controlling engine memory usage, therefore improving the performance.
PricingEnv	Pricing environment used by the engine. If not set, the default Pricing Environment of the user running the engine will be used.
TIMEOUT_RESTART	Number of seconds to wait before an engine restarts after MAX_QUEUE_SIZE has been reached. The default value is 3600 seconds (1 hour).

### 12.4.2 Starting the Billing Engine

The Billing engine can be started from the Engine Manager in Web Admin.

► Please refer to Calypso Web Admin documentation for complete details.

### 12.4.3 Generating Account Billing Events and Billing Fees

Account billing events and trade maintenance events are generated by the scheduled task ACCOUNT\_BILLING.

From the Calypso Navigator, navigate to **Configuration > Scheduled Tasks** (menu action `scheduling.ScheduledTaskListWindow`), and select the type ACCOUNT\_BILLING.

Select a trade filter, a user, a pricing environment, and a processing organization.

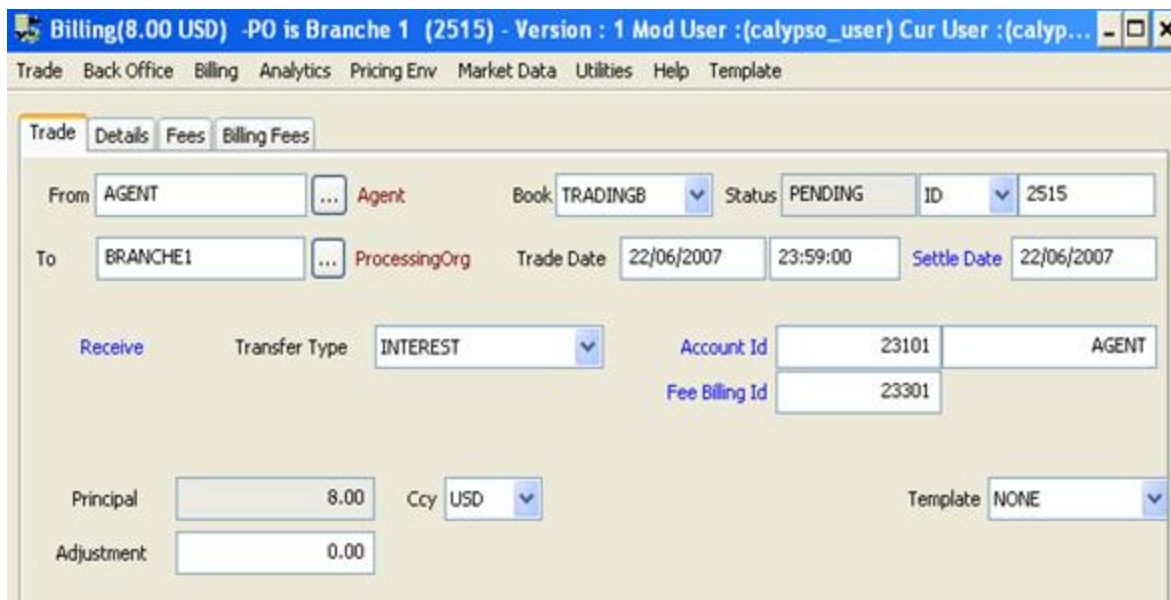
Task Attributes	
ACCOUNT NAME	CLIENT W @ CDN
LEGAL_ENTITY	CLIENT W
SD_FILTER	
CHECK FEE CONFIG	True
PROCESS	Account
One Account per Event	True
Include Automatic Account	
Inventory Type	Cash
Balance Type	Balance

- » Enter the attributes below as applicable:
- ACCOUNT NAME – Enter the account name to reduce the scope of the Scheduled Task or leave blank.
  - LEGAL\_ENTITY – Enter the Legal Entity short name to reduce the scope of the Scheduled Task or leave blank.
  - SD\_FILTER – Select a specific SD Filter to reduce the scope of the Scheduled Task. Note that this SD Filter currently works only if you specify data directly related to the account definition.
  - CHECK FEE CONFIG - Select true to check if you have specified fee configuration for account fees, or false otherwise.
  - PROCESS - Only applies if CHECK FEE CONFIG is true - Select Account to generate account billing events, or Maintenance Trade to generate trade maintenance events.
  - Inventory Type - Select Cash or Security.  
For Cash, the fee should have Rule Type = CashSafekeeping.
  - Balance Type - Enter the balance type as needed.
- » Save and run the scheduled task.

**[IMPORTANT NOTE: The Billing engine should be running in order for the billing fees to be generated]**

From the Calypso Navigator, navigate to **Processing > Accounting Operations > Billing > Trade > Open** to view billing trades. It opens the trade selector. Click **Show Trades** to view all billing trades. Double-click a trade to view its details.





You can view the details of the fees in the Billing Fees panel.

#### 12.4.4 Conversion Process

Conversion entries are generated using the scheduled task EOD\_REBATE\_FEE .

The conversion process converts the fee using the FX rate at the end of the billing cycle.

The scheduled task EOD\_REBATE\_FEE must be run daily. It retrieves the billing trades for which the end date falls on the scheduled task valuation date.

The system creates new billing entries of type REBATE to book the difference between the billing fee amount originally computed and the billing fee amount computed at the end of the period, once the actual FX rate is known. There is one REBATE billing entry per trading book.

You can set the book attribute "Rebate Book" on the book of the original billing trade to book the rebate fee in the rebate book. If this book attribute is not set, the rebate fee is booked in the same book as the original billing trade.

<b>Task Description</b>	
Task Type:	EOD_REBATE_FEE
External Reference:	
Comments:	
Description:	
<b>Execution Parameters</b>	
Attempts:	1
Retry After:	0 minutes
JVM Settings:	-Xms512m -Xmx1024m -XX:MaxPermSize=256m
Log Settings:	
<b>Task Notification Options</b>	
<input type="checkbox"/> Send Emails	<input type="checkbox"/> Publish Business Events
To User:	
<b>Common Attributes</b>	
<b>Task Attributes</b>	
Contract Fee	False
Process	Conversion
APPLY ACTION	
LegalEntity	

#### Sample EOD\_REBATE\_FEE scheduled task setup

You need to set the following attributes:

- **Contract Fee = False.**
- **Process = Conversion**
- **APPLY ACTION** - It is possible to specify the action to be applied in the scheduled task. For example, the billing trade could stay in PENDING status during the billing period and move to VERIFIED status once the rebate is computed, if any. This could be achieved by setting the action to AUTHORIZE for example.
- **LegalEntity** - You can enter a legal entity ID as needed.

## 13. Cash Sweeping

Treasurers, as part of their daily activity, need to optimize their liquidities by managing many accounts in different banks, while minimizing fees (like overdrafts and commissions) and moving excess amounts to accounts which offer the best conditions.

Banks can also provide similar facilities to their clients and offer automatic DDA (Direct) transfers depending on pre-defined rules. Those transfers can be done automatically through the scheduled task TARGET\_BALANCE (cash sweeping on account basis) or through the scheduled task ACC\_BOOK\_SWEEPING (cash sweeping on book basis).

Both activities are managed through the Account Sweeping Configuration window and the scheduled tasks which provide:

- The ability to automatically move cash from one/several account(s) or book(s) to another
- A completely automated process via a scheduled task
- The ability to partially automate the process (i.e. a scheduled task/report which allows modifying account sweeping choices)

This process is based on the Inventory position. The result is the generation of:

- Transfer Agent trades (for Nostro Sweep)
- Simple Transfer trades (for Client Account Sweep)
- Customer Transfer trades (Call Accounts)

### 13.1 Setup

#### 13.1.1 Domain Values

Add value ACCOUNT\_SWEEPING to domain "flowType".

#### 13.1.2 Account Sweeping Configuration

From the Calypso Navigator, navigate to **Configuration > Accounting > Sweeping** (menu action `refdata.AccountSweepingConfigWindow`), or from the Account window choose **Utilities > Sweeping**.

Account Sweeping Configuration - Authorization mode OFF

Edit Browse

Config Detail

Rule Id (Version): 23049 (1) Config Type: NONE Active From: 8/12/08  
Priority: 0 Transfer Type: PRINCIPAL Active To: 8/12/22  
Balance Type:

Intraday Config

Source

Destination

Account Id Account Name By Book Usage  
23037 EUROCLRBXX\_EUR

Account: EUFIBO1 EUR SWEEP ACCT (23047)  
Book: BookEUFIBO1  
Pivot Account:

Aggregate

Threshold

Transfer Details

Minimum Balance Maximum Balance  
Balance: 0.00 Tolerance: 0.00 Balance: 0.00 Tolerance: 0.00  
Minimum Transfer: 0.00  
Tick: 0.00

Save as New Update

In the Config Detail section:

- » You can select a config type - Config types are defined in domain "AccountSweepingRuleType".  
For Active Sweeping configs (triggered manually from the Inventory Position), set Config Type = Internal.  
For Passive Sweeping configs (triggered by the incoming statement MT940), set Config Type = External.
- » Use the Priority field to manage "cascades" of sweepings. The lowest priority is 0.
- » Use the Active From/To fields to indicate that the rule is available between these dates. It allows you to manage changes in the rules and to enter new rules in advance.
- » The Balance Type is only available for "By Book" with Usage = Target Balance. It allows sweeping custom balances between a source account and its sweeping sub-account.  
▶ See [Custom Position Type](#) for information on setting custom balances.  
▶ See Inter PO Sweeping below for more details.
- » Select the transfer type ACCOUNT\_SWEEPING - Transfer types are defined in domain "flowType".

### Intraday Config

You can check "Intraday Config" to define a kickoff time and a cutoff time in a given timezone.

Intraday Config

Time Zone: America/New\_York Kick Off Time: 2:00 PM Cut Off Time: 4:00 PM

- » Select a timezone, enter a kick-off time, and a cut-off time as needed.

The configuration will only be applicable within the Kick Off / Cut Off period.

If multiple configurations apply to the same account, the Kick Off Time / Cut Off Time must be exclusive, and expressed in the same timezone. For example:

- Account A swept to Account B - Kick Off Time = 00:01AM / Cut Off Time = 04:00PM TimeZone = Europe/London
- Account A swept to Account C - Kick Off Time = 04:01PM / Cut Off Time = 00:00AM TimeZone = Europe/London

**[NOTE: The PO must be the same for the source account and the destination account, except for Inter PO Sweeping, see below]**

### Source Section

- » Click  to select the accounts to be transferred. You can configure the columns of the display as needed.

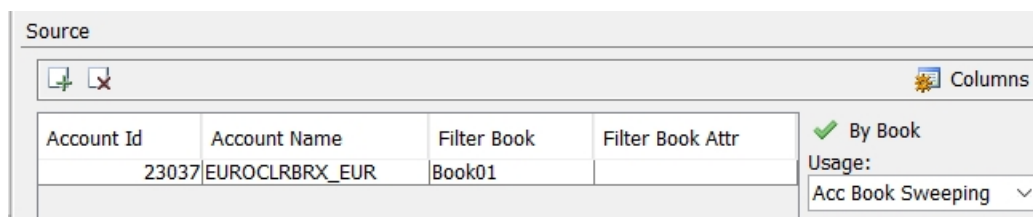
Note that you cannot add an account which is part of another sweeping rule.

You can double-click an account to open the Account Definition window.

If you select multiple accounts, you can check Aggregate to generate one sweep transfer for all the selected accounts. Otherwise, one sweep transfer is generated for each account.


If you check "By Book", you can select a book and book attributes to sweep only the related cash. When "By Book" is checked, you can also select the Usage:

- "Target Balance" - To use the TARGET\_BALANCE scheduled task to process the sweeping (see TARGET\_BALANCE scheduled task below). It generates simple transfer trades on the source book and the destination book rather than transfer agent trades.
- "Acc Book Sweeping" - To use the ACC\_BOOK\_SWEEPING scheduled task to process the sweeping



The screenshot shows the 'Source' section of the interface. It includes a table with columns: Account Id, Account Name, Filter Book, and Filter Book Attr. The first row contains the values: 23037, EUROCLBRX\_EUR, Book01, and an empty cell. To the right of the table, there is a 'Columns' button and a 'By Book' checkbox which is checked. Below the checkbox, there is a 'Usage:' label and a dropdown menu currently showing 'Acc Book Sweeping'.

### Destination Section

- » Click  next to the Account field and select a Settle Account using the Account Browser. It will be the destination account of the sweeping transfer.

This Account cannot be part of the Source Account(s) if the rule is related to single Account(s) e.g. single sweeping account or rule to "Apply to each account" (checkbox). Click the heading (displayed in blue) to reset the field.

- » Select a book as needed for the transfer trades.

The destination book is used only if its legal entity is the same as the Account Processing Org. But it is not used if its legal entity is a child of the Account Processing Org.

You can set book attribute CheckParentForSweeping = true on the destination book - In this case, the book legal entity can be a child of the Account Processing Org.

- » Select a pivot account as needed - This only applies if the sweeping rule is related to a group of accounts. The pivot account must be one of the selected accounts.

### Threshold Section

- » Enter the maximum and minimum limits and amounts you wish to achieve. You need to specify at least a minimum balance or a maximum balance.
- » Enter the rounding base of the transfer amount in the Tick field so that:  

$$\text{Rounded transfer amount} = \text{ceil}(\text{transfer amount} / \text{tick}) * \text{tick}$$
*(ceil rounds the decimal value to the next upper integer)*  
 Note that the tick cannot be signed.  
 Example - If you want to round to the next 50 dollars, set tick = 50. 243 will be rounded to 250.
- » Enter the minimum transfer amount. This amount cannot be signed.

When a Sweeping rule is set up for a group of accounts, the following scenarios may apply:

- If "Aggregate" is checked, the process applies the rule to the aggregated position of all the accounts:
  - If a Pivot account is selected, the transfer is generated with this account, regardless of the balance of each account.
  - If no Pivot account is selected, the transfer is generated with the account which has the most "interesting" amount: greatest creditor balance in case of maximum to apply or greatest debtor balance in case of minimum to apply.
- If "Aggregate" is not checked, the process applies the rule to each account individually:
  - If a Pivot account is selected, several transfers can be generated between all the accounts composing the group. The final transfer is generated between the Pivot account and the Destination account.
  - If no Pivot account is selected, all the transfers are generated with the Destination account.

### Intra PO Sweeping

The PO is the same but the accounts and books are different.

The recommended setup to perform Intra PO Sweeping is "By Book" with Usage = Target Balance.

It performs sweeping between the source account / source book and destination account / destination book using two simple transfer trades on the source book and the destination book.

The TargetAccountId and RelatedAccountId trade keywords are populated and allow selecting specific SDIs.

## Inter PO Sweeping

The POs, accounts and books are different.

The recommended setup to perform Inter PO Sweeping is "By Book" with Usage = Target Balance, and Balance Type = <custom balance>.

It performs sweeping between the source account / source book and destination account / destination book using two simple transfer trades on the source book and the destination book.

The TargetAccountId and RelatedAccountId trade keywords are populated and allow selecting specific SDIs.

If the domain "ProcessingConfig" contains Value = Sweeping.SweepSubAccount.IsActive and Comment = true, a transfer is generated for the custom balance between the source account and its sweeping sub account.

The sub account must be defined with PO = Destination PO, Legal Entity = Source PO, Role = Client and must be set on the source account in the field Sweep SubAccount:

Account Name	Nostro-INTL_EQUITY_SEC_EXTERNAL_JPM			<input type="checkbox"/> Call Account
Processing Org	INTL_EQUITY_SECTOR	Ccy	USD	Id 415738
Type	SETTLE	SubType		<input type="checkbox"/> Auto/Template Acc
External Name		Interface Rule	Aggregate	
Description				
Legal Entity (F2)	JPMORGAN CHASE & CO	Role	Agent	<input type="checkbox"/> Multi-Owner
Creation Date	29/11/21 11:33:39			
Closing Account		Last Closing Date		
Parent Account		Parent Id	0	
External Settl.		External Cash Account		
		Sweep SubAccount	ERNAL_USD@AUS_TREASURY	

Key	Value
AccountType	
CCP	
CCPOriginCode	
CCP_Account_Reference	
Product_Account_Reference	
Propagate	false
XferAgentAccount	

You also need to set INVENTORY\_POSITION\_CUSTODY\_MODE = true so that the ClientAccount trade keyword can be set to the sweeping sub account on the Simple Transfer trade of the destination book, in order to generate a transfer on the sweeping sub account for the custom balance.

### 13.1.3 Access Permission and Authorization

The access permissions relating to account sweeping are: AddModifyAccountSweeping and RemoveAccountSweeping. For further details on access permissions, please refer to the *Calypso Security User Guide*.

In order for Authorization mode to apply to sweeping configs, you need to add "AccountSweepingConfig" to the domain "classAuthMode".

## 13.2 Account Sweeping Process

### 13.2.1 Account Sweeping by Account

The scheduled task TARGET\_BALANCE creates a series of Transfer Agent trades to rearrange money across a set of nostro accounts. The Scheduled Tasks window is accessed using **Configuration > Scheduled Tasks** from the Calypso Navigator (menu action `scheduling.ScheduledTaskListWindow`).

It can also be used for sweeping configurations by book with usage "Target Balance" to create two Simple Transfer trades: one for the source book / source account and one for the destination book / destination account.

The Account Sweeping rules will be applied by this Scheduled Task which will do the following:

- Retrieve the available Sweeping Account rules and order them by priority from the highest to the lowest
- Retrieve the balances of all accounts concerned
- Priority by priority and starting by the highest, calculate the amounts to apply
- Create trades Transfer Agent or Simple Transfer
- When an account is concerned with transfers coming from sweeping rules that have highest priority, these transfers are taken into account in the calculated balance, before applying the sweeping rule.

Select a trade filter, a user, a pricing environment, and a processing organization.

Task Attributes	
Config Type	NONE
Retroactivity	true
Position Source	Inventory Position
Position Type	ACTUAL
Position Class	INTERNAL
Position Date	SETTLE
Context Position Filter	
Legal Entity	
Lock Accounts	
By Book	

Specify the following attributes as applicable:

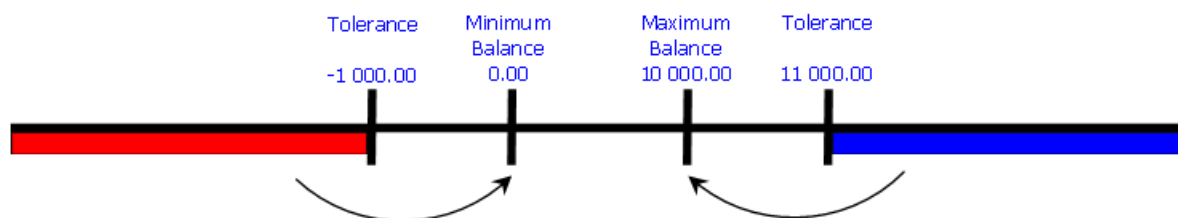
- Config Type – Select a sweeping config type as needed, or NONE.
- Retroactivity – Select true or false. Setting this field to true means that in case of back valued transfers, the sweeping process will generate Trade transfers related to the back valued amounts and dates, instead of the process date.
- Position Source - Select "Inventory Position" for account sweeping.
- Position Type – Select the type of position to retrieve the balances: ACTUAL, THEORETICAL, FAILED.
- Position Class – Select in the list the Position Class: INTERNAL, EXTERNAL, CLIENT.
- Position Date – Select the type of position in the list: TRADE, SETTLE, VALUE, AVAILABLE.



- Context Position Filter - Only applies to context position sweeping.
- Legal Entity – Enter the name of the Legal Entity or leave it blank for all Agents. The process will retrieve the sweeping rules that have accounts with this legal entity only.
- Lock Accounts - True or false.  
If “Lock Accounts” = true, the accounts used in the scheduled task cannot be used in manual sweeping. If another process is already using those accounts, the scheduled task cannot use them, and an exception task is generated for those accounts.  
If “Lock Accounts” = false, there is no check for locked accounts.
- By Book - Only applies for sweeping configurations by book with usage "Target Balance". Select True for such configurations.  
In this case, it creates two Simple transfers: One trade for the source book / source account and one trade for the destination book / destination account.

The transfer amount is calculated as follows:

- If a tolerance amount is set-up, no transfer is generated when the balance is between the Minimum Balance or Maximum Balance and its Tolerance amount.
- If the Balance is greater than the Maximum Balance + Tolerance, then  
Transfer Amount = Maximum Balance – ABS(Balance)
- If the Balance is less than the Minimum Balance + Tolerance, then  
Transfer Amount = Minimum Balance – ABS(Balance)
- The amounts are rounded to the nearest taking into account the Minimum and the Tick.



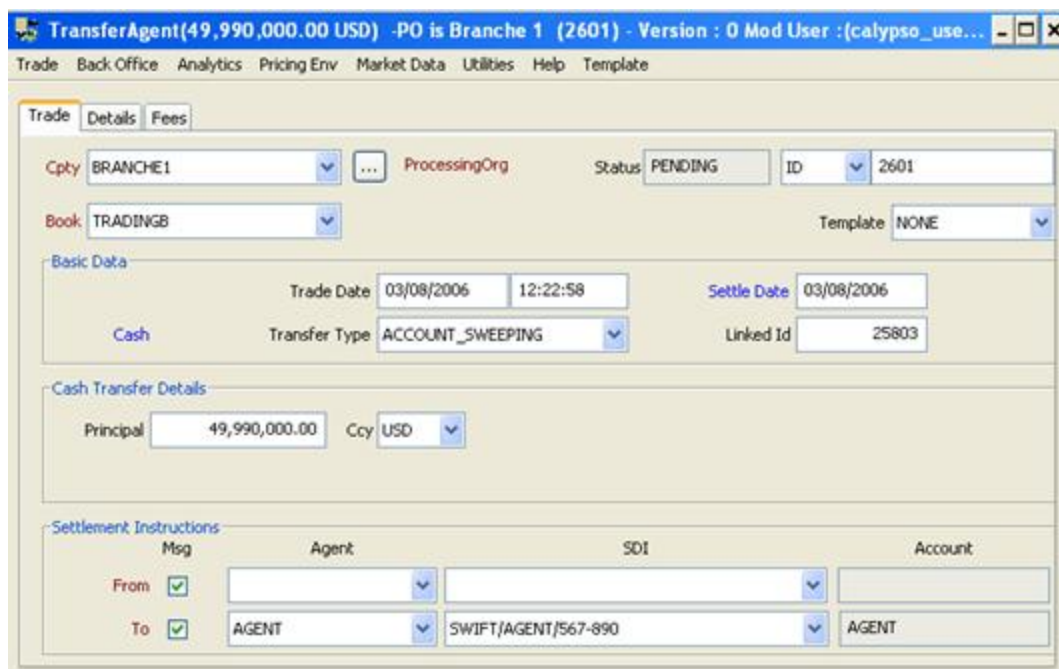
This process is based on the Inventory position. The result is the generation of:

- Transfer agent trades for Nostro Sweep
- Simple transfer trades for Client Account Sweep
- Customer transfer trades for Call Accounts

From the Calypso Navigator, navigate to **Processing > Accounting Operations > Transfer Agent > Trade > Open** to view the Transfer Agent trade.

It opens the trade selector.

- » Click **Show Trades** to view all transfer agent trades.
- » Double-click a trade to view its details.



The transfer type is ACCOUNT\_SWEEPING and the linked Id is the Account Sweeping Configuration.

### 13.2.2 Context Position Sweeping

Sweeping context positions is only supported for sweeping configurations by account.

The scheduled task TARGET\_BALANCE allows sweeping context positions using the following attributes:

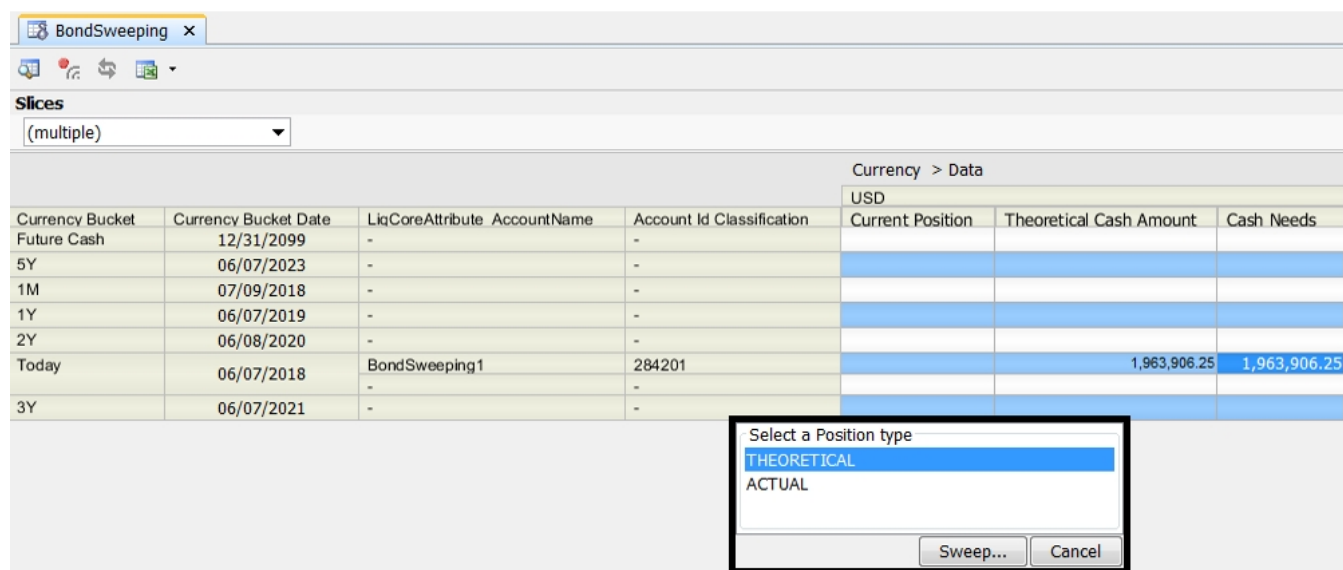
Task Attributes	
Config Type	NONE
Retroactivity	true
Position Source	Context Position
Position Type	THEORETICAL
Position Class	INTERNAL
Position Date	TRADE
Context Position Filter	FilterByAccount
Legal Entity	
Lock Accounts	
By Book	

- Position Source - Select "Context Position" for context position sweeping.
- Context Position Filter - Enter the name of a context position filter.

It generates Transfer Agent trades between the accounts defined in the sweeping configuration. The transfer type is ACCOUNT\_SWEEPING and the linked Id is the Account Sweeping Configuration.

Additionally, context position sweeping can be done via the Calypso Workstation from a Cash Ladder report. Up to two accounts may be selected. Right-click on the row to choose between Actual and Theoretical sweeping, then click

**Sweep.**



Currency Bucket	Currency Bucket Date	LiqCoreAttribute	AccountName	Account Id	Classification	Current Position	Theoretical Cash Amount	Cash Needs
Future Cash	12/31/2099	-	-	-	-			
5Y	06/07/2023	-	-	-	-			
1M	07/09/2018	-	-	-	-			
1Y	06/07/2019	-	-	-	-			
2Y	06/08/2020	-	-	-	-			
Today	06/07/2018	BondSweeping1	-	284201	-		1,963,906.25	1,963,906.25
3Y	06/07/2021	-	-	-	-			

### 13.2.3 Account Sweeping by Book

The scheduled task ACC\_BOOK\_SWEEPING will select all sweeping configurations flagged "By Book" and process them in two steps:

- The system will first create Transfer Agent trades to put all account/book positions to 0, using the trading book of the position.
- Then the system will maintain the min/max defined on the sweeping configuration using the destination book.

Select a trade filter, a user, a pricing environment, and a processing organization.

Task Attributes	
Config Type	
Book Position Type	
Position Type	
Book Position Date	
Position Date	
Legal Entity	
Config Id	

Specify the following attributes as applicable:

- Config Type – Select a sweeping config type as needed.
- Book Position Type – Select the position type (ACTUAL or THEORETICAL for example) that needs to be set to 0.
- Position Type – Select the position type (ACTUAL or THEORETICAL for example) to be used to maintain the min/max amounts.
- Book Position Date – Select the position date (TRADE or SETTLE for example) to be used to put the book/account balance to 0.
- Position Date – Select the position date (TRADE or SETTLE for example) to be used to maintain the min/max amounts.
- Legal Entity – Enter the name of the Legal Entity or leave it blank for all Agents. The process will retrieve the sweeping rules that have accounts with this legal entity only.
- Config Id – you can select a config id to run the scheduled task for a single config.

It is possible to define a specific trade workflow (or workflow transition) for the transfer agent trades created from the account sweeping process using a static data filter based on the attribute "KEYWORD.TradeSource" IN AccountSweeping.

### 13.3 Active Sweeping vs. Passive Sweeping

Active Sweeping configs (triggered manually from the Inventory Position) have to be defined using the Config Type = Internal.

Passive Sweeping configs (triggered by the incoming statement MT940) have to be defined using the Config Type = External.

An example is presented below. Please note that when the same account belongs to two account sweeping configs (one active/one passive), you must set a higher priority for Config Type = External.

Example with the following scenario:

- GUARFEES-EUR account is passively (External) swept to LOCAL-EUR account - Since LOCAL-EUR account is involved in another sweeping config, the priority set on the External sweeping config is higher than the one defined as Internal.

**Account Sweeping Configuration - Authorization mode OFF (User: calypso\_user)**

Edit | Browse |

Config Detail

Rule Id (Version): 62184 (1) Config Type: External Active From:   
 Priority: 1 Transfer Type: ACCOUNT\_SWEEPING Active To:

Source Destination

Account: LOCAL-EUR (621...  
 Book: ABC123  
 Pivot Account:

Account Id	Account Name	Currency	Account Description
62181	GUARFEES-EUR	USD	

By Book  
 Aggregate

- LOCAL-EUR account is actively (Internal) swept to MASTER-EUR account.

**Account Sweeping Configuration - Authorization mode OFF (User: calypso\_user)**

Edit | Browse |

Config Detail

Rule Id (Version): 62185 (0) Config Type: Internal Active From:   
 Priority: 0 Transfer Type: ACCOUNT\_SWEEPING Active To:

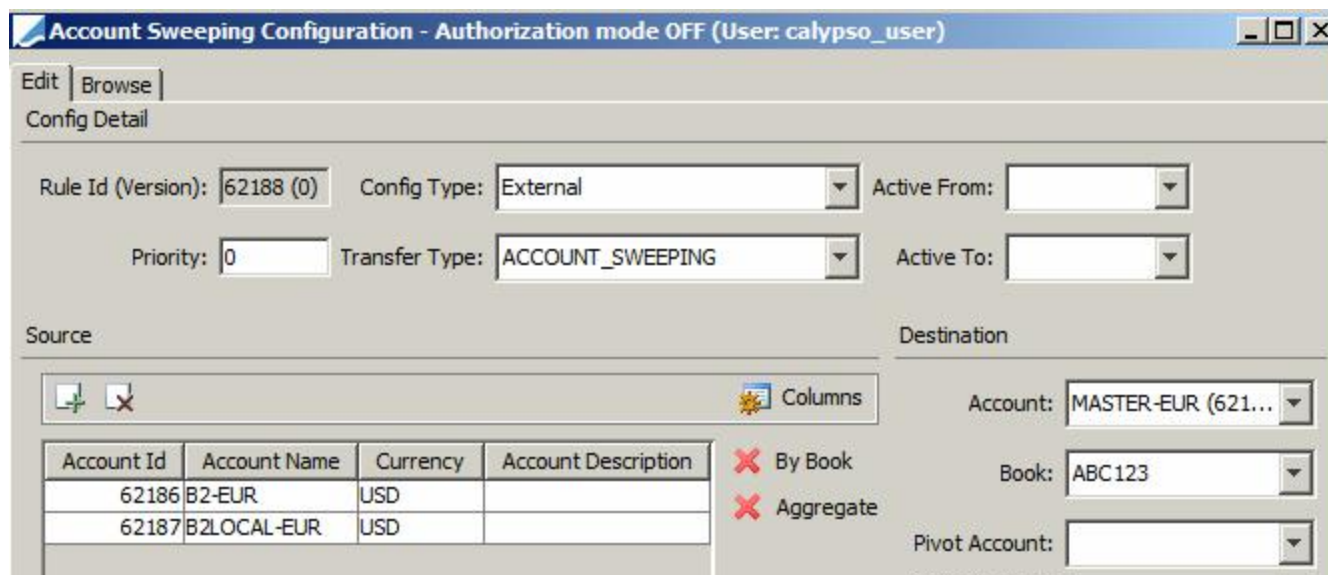
Source Destination

Account: MASTER-EUR (621...  
 Book: ABC123  
 Pivot Account:

Account Id	Account Name	Currency	Account Description
62182	LOCAL-EUR	USD	

By Book  
 Aggregate

- B2-EUR account and B2LOCAL-EUR account are passively swept (External) to MASTER-EUR account



You can perform manual sweeping from the Inventory Position report.

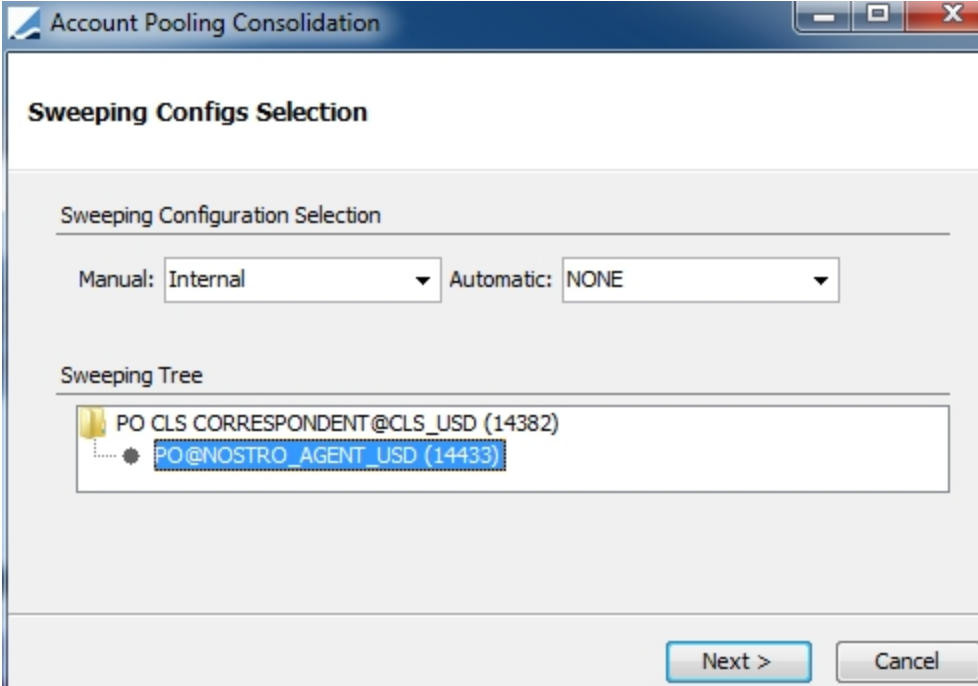
Configure the columns as follows:

- Add the columns "Sweeping Hierarchy.1" and "Sweeping Hierarchy.2" to the display.
- Add those columns to the sort columns and to the grouping columns.
- Display the results by Aggregation (**View > Set Table > Aggregation**).
- Set subtotals by Dates.

LOCAL-EUR (62182)				21,258.36	21,258.36
	CashPosition	GUARFEES-EUR	THEORETICAL	21,258.36	21,258.36
MASTER-EUR (62183)				1,851.12	1,851.12
	CashPosition	B2-EUR	THEORETICAL	0.00	0.00
	CashPosition	B2LOCAL-EUR	THEORETICAL	1,851.12	1,851.12

To sweep an aggregation node, select the node's subtotal, right-click and choose **Process > Pool Consolidation**.

You will be prompted to select an account sweeping configuration:



**Account Pooling Consolidation**

**Sweeping Configs Selection**

Sweeping Configuration Selection

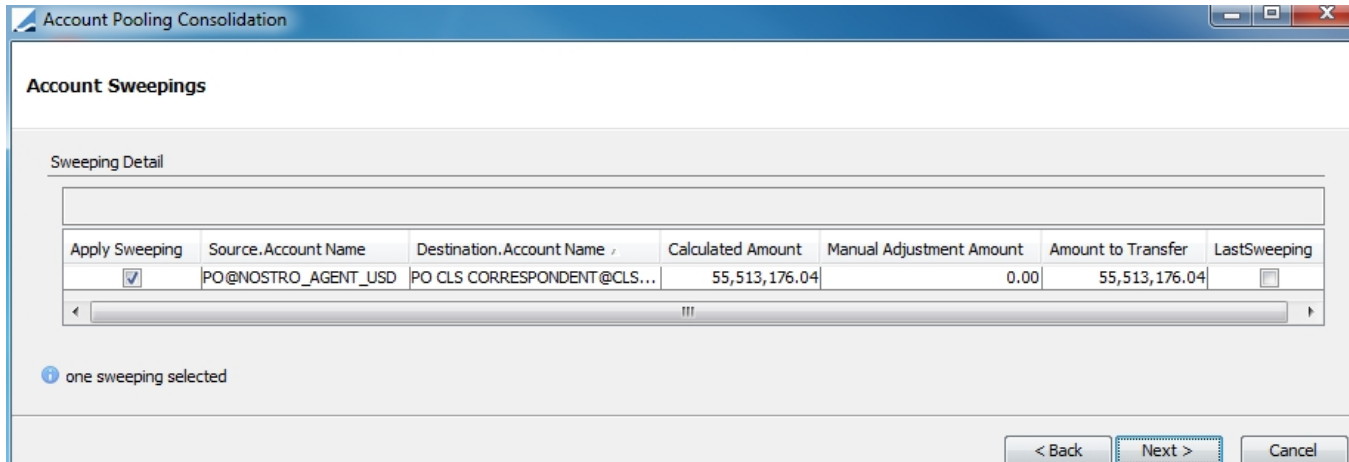
Manual:  Automatic:

Sweeping Tree

- PO CLS CORRESPONDENT@CLS\_USD (14382)
  - PO@NOSTRO\_AGENT\_USD (14433)

- » Select a configuration and click **Next**.

The Account Pooling Consolidation window is displayed.



**Account Pooling Consolidation**

**Account Sweepings**

Sweeping Detail

Apply Sweeping	Source.Account Name	Destination.Account Name	Calculated Amount	Manual Adjustment Amount	Amount to Transfer	LastSweeping
<input checked="" type="checkbox"/>	PO@NOSTRO_AGENT_USD	PO CLS CORRESPONDENT@CLS...	55,513,176.04	0.00	55,513,176.04	<input type="checkbox"/>

one sweeping selected

Check "Apply Sweeping" for the account sweepings you want to process.

You can check "LastSweeping" to prevent the creation of additional sweeping trades for the same accounts and the same date, including from the scheduled task TARGET\_BALANCE. It sets the trade keyword LastSweeping=true on the sweeping trades.

Click **Next** to process the account sweeping.

You can view the sweeping trades from the Trade Browser.



TransferAgent(55,513,176.04 USD) -PO is Default Processing Organisation (20934) - Version : 0 Mod User :...

Trade Back Office Analytics Pricing Env Market Data Utilities Help Template

Trade Details Fees

Cpty
PO
...
ProcessingOrg
Status
PENDING
ID
20934

Book
BookNYC
...
Template
NONE

Basic Data

Trade Date
08/23/2017
1:48:46 PM
Settle Date
08/28/2017

Cash
Transfer Type
PRINCIPAL
Linked Id
79697

Cash Transfer Details

Principal
55,513,176.04
Ccy
USD

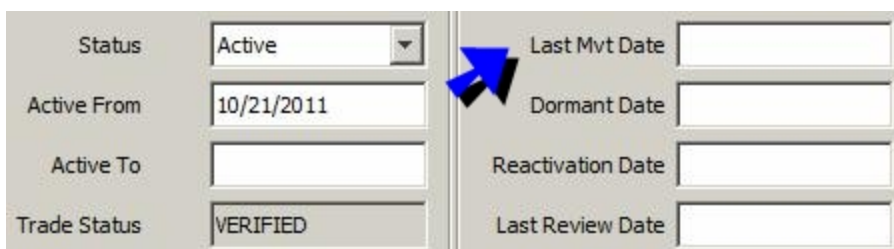


## 14. Settle Accounts Dormant Process

The scheduled task ACCOUNT\_DORMANT moves an account to the Dormant status if there is no activity (except interest capitalization) for the last year (or using the "From Days" field) based on the "last movement date". It can also be used to re-activate a dormant account.

To activate the dormant process for settle accounts, you need to add the transfer workflow rule SetAccountMvtDate on the "SETTLE" transition in the transfer workflow. It sets the "last movement date" each time an account is debited / credited as the Last Calendar Day of the month of the settle date of the transfer when the movement is settled.

The "last movement date" is displayed in the Account window.



Status	Active	Last Mvt Date	
Active From	10/21/2011	Dormant Date	
Active To		Reactivation Date	
Trade Status	VERIFIED	Last Review Date	

A user can amend this date provided the user has the access permission UpdateAccountDormantDates.

You also need to set the account attribute DORMANT\_ELIGIBLE = true on the settle accounts for which you want to apply the dormant process.

When attribute DORMANT PROCESS = true, the system checks the CLIENT-ACTUAL-SETTLE position for which Agent Id = Account PO Id. If the position is short, the account is ignored from the dormant process and its status does not change.

Scheduled task attributes:

Task Attributes	
DORMANT PROCESS	true
ACCOUNT STATUS	Dormant
DORMANCY TASK	
ACCOUNT TYPE	SETTLE_ACCOUNTS

- DORMANT PROCESS - true or false. Select true to run the Dormant process, and false to run the re-activation process.
- ACCOUNT STATUS - Resulting status of the process (Dormant if DORMANT PROCESS is true, or Active if DORMANT PROCESS is false).
- DORMANCY TASK - true or false. Select true to run the Dormant process in Authorization mode. It will create an authorization task.

You can use **Process > Dormant Process > Accept Dormancy** to accept the authorization task, if any, or **Process > Dormant Process > Reject Dormancy** to reject it.

- ACCOUNT TYPE - Select SETTLE\_ACCOUNTS.

You can use [Process > Dormant Process > Re-Activate](#) to re-activate a dormant account.

## 15. Viewing Account Activity

The Account Activity report shows the activity that occurs on a given client / nostro account including:

- The balances – Positions computed by the inventory engine
- All the transfers on behalf of a given client or against a given nostro account
- The interest computed on the balances

From the Calypso Navigator, navigate to **Reports > Nostro/Custodian Positions > Account Activity**.

AccountActivity Report (20/03/23 16:13:39) / Base\_CCY

Report Data View Export Market Data Process Utilities Help

Criteria

Template Description

Start 14/03/2023 End 16/03/2023

Position Date Settle ProcessingOrg Cash/Sec Cash Account Template

Position Class Internal Agent Id Currency

Position Type Theoretical Account Id 59

Position Detail Start/End

Position Value Nominal

Detail by Account


ISIN

Show Only Positions Netting Aggregation

Exclude Unchanged Positions Display Past Prepaid Transfers Base Amount as of Value Date

Account Id	Transfer Id	Value Date	Activity Type	Currency	Book Base Ccy	Money Amount	Money Amt (Base)	Real Cash Amount	Real Cash Amt (Base)	Xfer Money Diff	Xfer Money Diff (Base)	Date
59			Starting Balance	EUR								14/03/2023
59	2200010023	15/03/2023	PRINCIPAL	EUR	USD	(100,000.00)	(112,359.55)	(100,000.00)	(112,359.55)	0.00	0.00	15/03/2023

### Partial picture of Account Activity report

- » 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.
- » You can check / uncheck **View > Show Frame > Criteria** to display / hide the search criteria.
- » Enter selection criteria and click .

You need to select the position criteria: Position Date, Position Class, and Position Type.

Select the Position Detail:

- Start/End – Displays the start and end balances, and the activity between the start and end dates.
- Daily – Displays daily balances and activity.
- Monthly – Display the start and end balances, monthly balances, and the activity between the start and end dates.


You can select multiple processing organizations and accounts, and check “Detail by Account” to show the opening /closing balances and movements by account.


You can select a custom aggregation config as needed, and you can specify the individual criteria.

[NOTE: You can only select a custom aggregation config if you have configured the Inventory engine to compute custom positions – Refer to Calypso Inventory Engine documentation for details]

Under the "Detail by Account" checkbox, you can select an Account Selector template as needed. When selected, the underlying accounts are loaded.



You can click  next to the drop down list to define Account Selector templates. It opens the Account Selector Templates window where you can manage the templates.

» You can select a template and click  to display the number of objects that will be loaded from the database before loading the report.

» You can click  to print the report results.

Note that for the Pivot view and the Aggregation view, the print icon is disabled.

You can use [Ctrl+P] or [Ctrl+L] to print the report, or you can export the report to Excel and print it from there.

» You can select the checkbox "Base Amount as of Value Date" as needed.

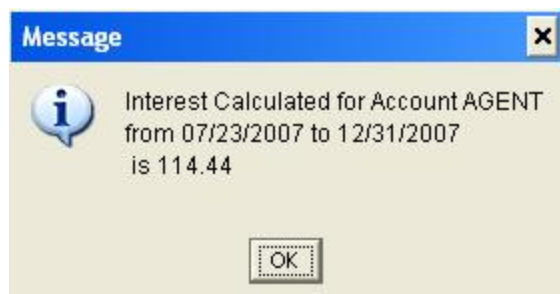
When checked, the following transfer fields are calculated based on the exchange rate for the Transfer Value Date.

- Money Amt (Base)
- Real Cash Amt (Base)
- Xfer Money Diff (base)

When unchecked, the transfer fields are calculated based on the exchange rate of the valuation date set in the report.

## Activity Results

You can select a balance row and choose **Process > Project Interest** to compute the interest between the date of the selected balance and a To Date. You will be prompted to select a To Date.



The Interest Amount is the projected amount for a given balance.

The Real Interest Amount is based on the Interest Bearing trades that have been generated for a given balance. The columns Real Interest Amount and Total Real Interest Amount are calculated only when a single account is selected for performance purposes.

The Available Balance is the Balance + Overdraft Limit on the Account.

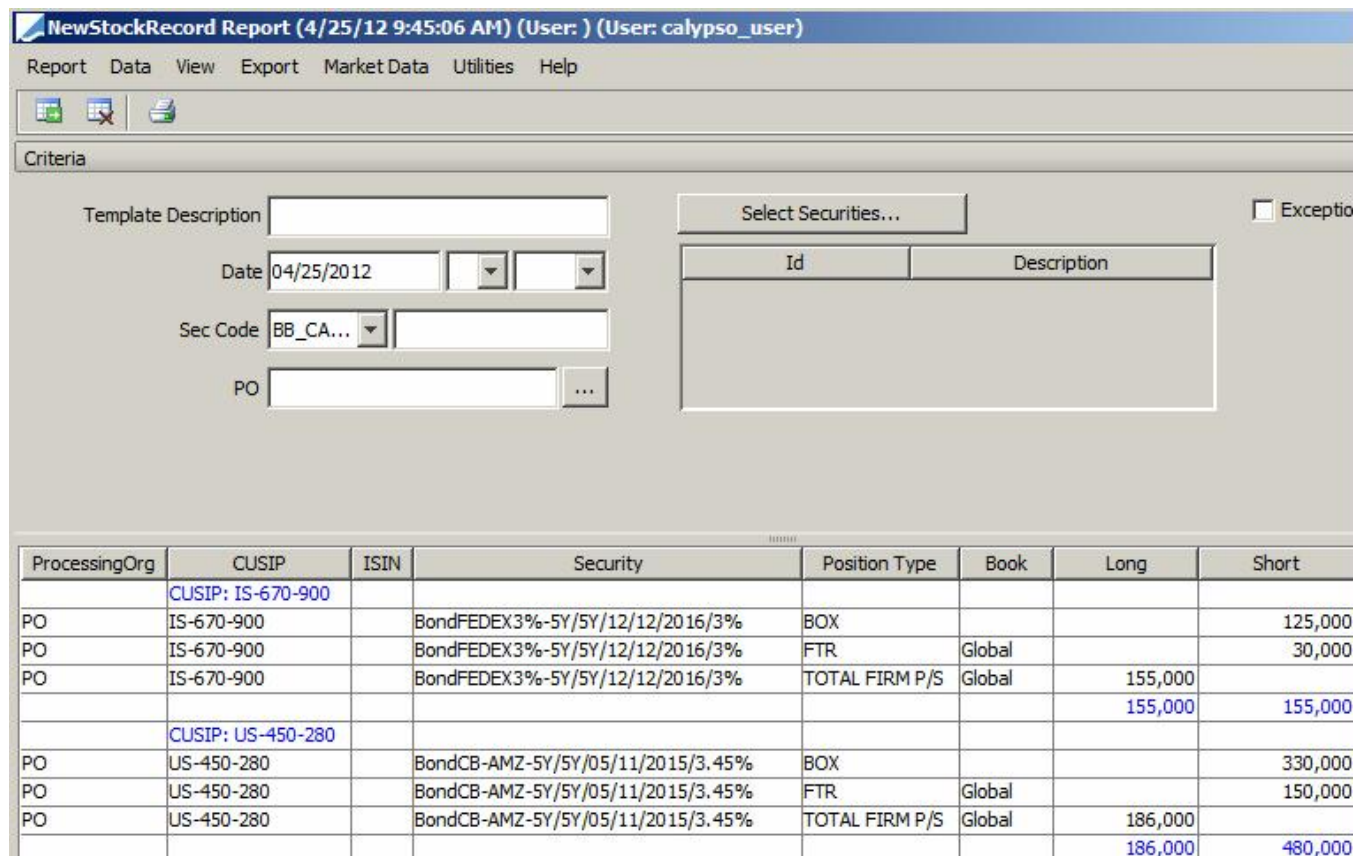
## 16. Stock Record Report

The Stock Record report shows Long and Short positions in each CUSIP, based on the inventory positions computed by the inventory engine. Long positions represent ownership or 'source' of securities, and Short positions represent location or 'use' of securities. The sum of the Long positions in a given CUSIP should always exactly equal the sum of the Short positions in that CUSIP.


Stock Record positions can arise from ANY securities activity, including (but not limited to) all of the following: Purchases and Sales, Repos and Reverse Repos, Securities Lending vs Cash, Securities Lending 'Free', Securities Lending vs Collateral, Buy/Sellbacks, Pledges, Free Deliveries of securities, etc.

Stock Record positions are settlement date positions - All trades/transactions with a 'value date' greater than the current business date will be ignored.

From the Calypso Navigator, navigate to **Reports > Nostro / Custodian Positions > Stock Record Report** (menu action `reporting.ReportWindow$NewStockRecord`) to bring up the report.





ProcessingOrg	CUSIP	ISIN	Security	Position Type	Book	Long	Short
	<a href="#">CUSIP: IS-670-900</a>						
PO	IS-670-900		BondFEDEX3%-5Y/5Y/12/12/2016/3%	BOX			125,000
PO	IS-670-900		BondFEDEX3%-5Y/5Y/12/12/2016/3%	FTR	Global		30,000
PO	IS-670-900		BondFEDEX3%-5Y/5Y/12/12/2016/3%	TOTAL FIRM P/S	Global	155,000	
						155,000	155,000
	<a href="#">CUSIP: US-450-280</a>						
PO	US-450-280		BondCB-AMZ-5Y/5Y/05/11/2015/3.45%	BOX			330,000
PO	US-450-280		BondCB-AMZ-5Y/5Y/05/11/2015/3.45%	FTR	Global		150,000
PO	US-450-280		BondCB-AMZ-5Y/5Y/05/11/2015/3.45%	TOTAL FIRM P/S	Global	186,000	
						186,000	480,000

- » You can check / uncheck **View > Show Frame > Criteria** to display / hide the search criteria.
- » 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.
- » Enter search criteria as needed and click .

By default, the report loads the full version, including every CUSIP in which a non-zero position exists.

You can check "Exception Report" to load only those CUSIPS where there is a "break" (the total of the LONG positions does not equal the total of the SHORT positions).

- » You can select a template and click  to display the number of objects that will be loaded from the database before loading the report.
- » You can click  to print the report results.

Note that for the Pivot view and the Aggregation view, the print icon is disabled.

You can use [Ctrl+P] or [Ctrl+L] to print the report, or you can export the report to Excel and print it from there.

Each Stock Record position can be categorized as being one of the following types.

### ***FIRM P/S Position***

This represents a Firm Position resulting from P/S trades. Firm P/S positions may be either Long or Short. They are computed by the inventory engine: THEORETICAL positions.

Firm securities (i.e. those owned by your firm) are fungible and shown by book.

### ***FAIL Position***

This represents a position of transfers in Failed status.

It is identified by FTD (failed to deliver) and FTR (failed to receive).

### ***COLLATERAL Position***

A collateral position is represented by individual financing trades (Repo, Reverse Repo, etc.), as well as margin call positions computed by the inventory engine.

Note that for netted GCF Repo positions, the book is set to GCF - Original GCF Repo trade positions (i.e. against the GCF Generic CUSIPS) are EXCLUDED from the Stock Record.

### ***BOX Position***

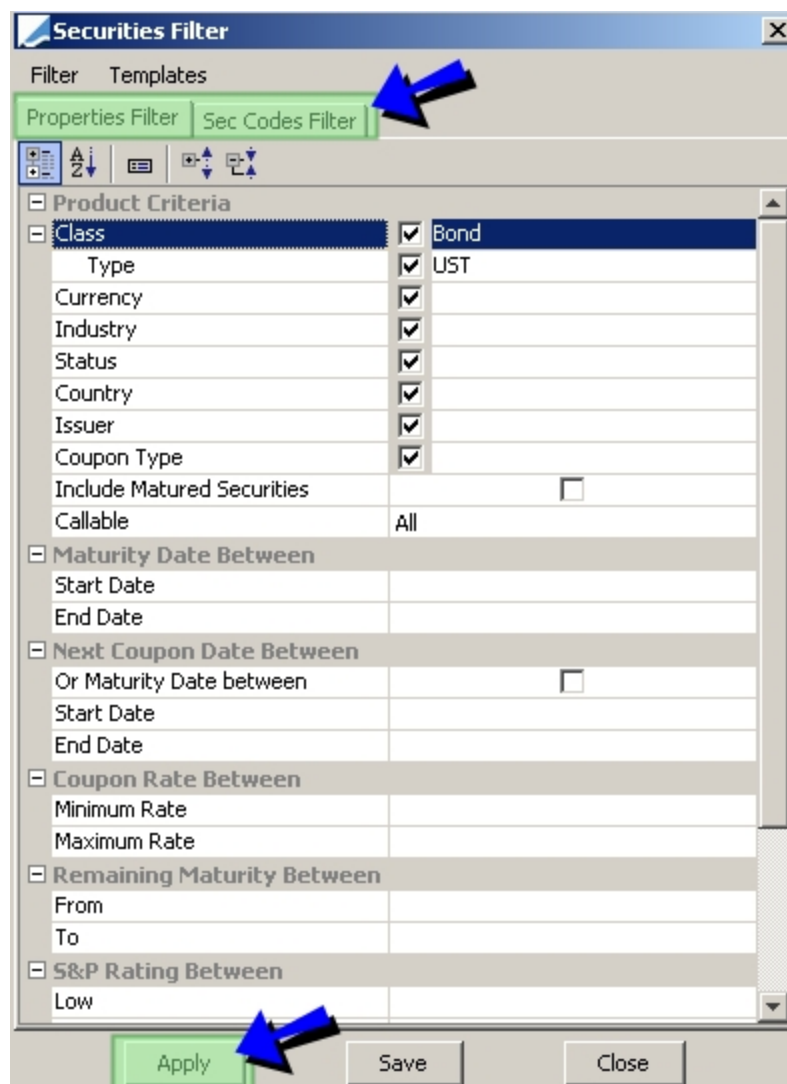
Position at a Depository ('Agent') Account computed by the inventory engine: ACTUAL positions.

- See [Inventory Position](#) for information on computing inventory positions using the inventory engine.

## 17. Securities Filter

The Securities Filter allows defining search criteria to filter bonds.

You can save the filter, it will be saved as a Bond Report template that can be used anywhere a Bond Report template can be used.



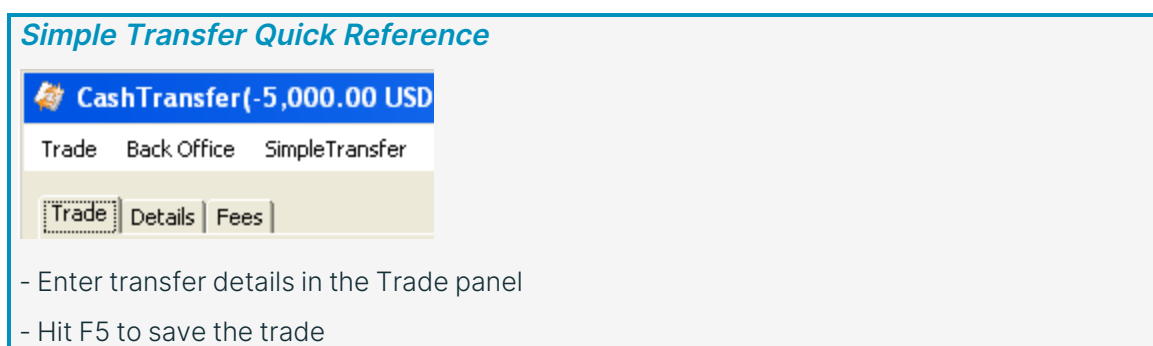
- » Enter search criteria in the Properties Filter panel and Sec Codes Filter panel as applicable. Then click **Apply** to apply the search criteria and load the corresponding bonds.
- » You can click **Save** to save the filter as a Bond Report template. You will be prompted to enter a filter name.  
The Template menu allows loading / saving bond report templates.



## 18. Capturing Simple Transfer Trades

From the Calypso Navigator, navigate to **Processing > Accounting Operations > Simple Transfer** configure transfer agent trades as shown below for a Cash transfer (menu action `trading.TradeWindow.SimpleTransfer`).

Simple Transfers allow users to exchange cash or security between two entities. These entities can be internal (two Processing Organizations, two clients), or external (one Processing Organization versus an external counterparty, or one Client versus an external entity).



### 18.1 Capturing Simple Transfers

When you open a Simple Agent worksheet, the Trade panel is selected by default.

#### 18.1.1 Entering Trade Details

- » You can select a template from the Template field to populate the worksheet with default values. Then modify the fields as applicable.
  - See [Simple Transfer Menu](#) for information on saving templates.
 Or you can enter the trade fields directly. They are described below.
- » Proceed to the other panels as applicable.

#### 18.1.2 Saving a Trade

- » Hit F5 to save the trade, or choose **Trade > Save**.

You can also hit F3 to save the current trade as a new trade, or choose **Trade > Save As New**.

A description appears in the title bar of the trade worksheet, a trade id assigned to the trade, and the status of the trade modifies according to the workflow configuration.

### 18.1.3 Fields Details


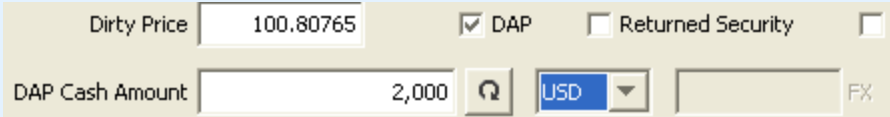
Fields	Description
To	<p>Click  to select a legal entity of specified role – This is the receiver of the transfer.</p> <p>The default role appears next to the To field. It is specified using <a href="#">Utilities &gt; Set Default Role</a>. However, you can change it as applicable. Double-click the role to change it.</p>
From	<p>Click  to select a legal entity of specified role – This is the sender of the transfer.</p> <p>The default role appears next to the From field. You can change it as applicable. Double-click the role to change it.</p>
Book	<p>Trading book to which the trade belongs. Defaults to the book selected in the User Defaults. You can modify as applicable.</p> <p>The processing org of the book identifies the processing org of the trade.</p>
Status	<p>Current status of the trade. The status is automatically assigned by the system based on the workflow configuration.</p> <p>The status changes over the lifetime of the trade according to the workflow configuration and the actions performed on the trade.</p>
Id Ext Ref Int Ref	<p>Unique identification number of the trade. The trade id is automatically assigned by the system when the trade is saved.</p> <p>You can load an existing trade by typing the trade id into this field, and pressing [Enter].</p> <p>You can also display the internal reference of external reference. The default trade reference to be displayed can be selected in the User Defaults.</p> <p>The internal reference and external reference can be set in the Details panel of the trade.</p>
Trade Date	Enter the trade date and time. It defaults to today.
Settle Date	<p>The settle date defaults to the spot date (number of spot days specified in the currency defaults applied to the trade date).</p> <p>You can modify the settle date as applicable.</p> <p>Double-click the Settle Date label to adjust the settle date if the trade date is modified.</p>
Pay/Receive	Direction of the trade from the perspective of the From legal entity. Double-click the Pay label to change to Receive as applicable.
Cash/Security	<p>Type of simple transfer. Double-click the Cash label to change to Security as applicable.</p> <p>The rest of the fields will be different based on the Cash or Security.</p>
Transfer Type	<p>Select the type of transfer.</p> <p>Note that for a Security transfer, the transfer type must be set to SECURITY.</p> <p>You can limit the list of transfer types by adding the transfer types you want to display to the domain “SimpleTransfer.subtype”.</p>
Linked Id	Enter a trade id to which you want to link the simple transfer as applicable.

Fields	Description
Template	You can select a template from the Template field to populate the worksheet with default values. Then modify the fields as applicable.

### Cash

Fields	Description
Principal	Enter the amount of cash to be transferred.
Currency	Select the currency of the cash amount.

### Security

Fields	Description
Security	You first need to select a security. Click  to select the security. The security currency will be displayed next to the SecCode field.
Quantity	Enter the number of securities to be transferred, and the nominal will be computed accordingly. Or enter the nominal.
Nominal	Enter the amount of nominal to be transferred, and the quantity will be computed accordingly. Or enter the quantity.
Price Accrual Dirty Price	Enter the clean Price of the security. The other fields will be computed accordingly.
SecCode	Defaults to the security code specified in the User Defaults. You can select another product code as applicable.
DAP	<p>Check the DAP checkbox if you want to associate an amount with the security transfer. In that, case you can enter the following additional fields.</p>  <p>» Enter the DAP Cash Amount and select a settlement currency as needed. It defaults to the bond's currency.</p> <p>» If the currency is different from the bond's currency, you can enter the FX rate.</p> <p>The transfer will be DAP only if the SDI handles DAP transfers for the selected settlement currency (DAP_CCY attribute must be set to a comma-separated list of currencies, or ANY).</p>
Returned Security Pledged Security	<p>Purpose of the transfer used in combination with the Pay/Receive direction for confirmations.</p> <p>Check the Returned Security checkbox OR the Pledged Security checkbox.</p> <ul style="list-style-type: none"> <li>Pay Pledged Security — pledging out a security.</li> </ul>

Fields	Description
	<ul style="list-style-type: none"> <li>Receive Pledged Security — taking in a pledged security.</li> <li>Pay Returned Security — giving back a security originally pledged to us.</li> <li>Receive Returned Security —taking back a security originally pledged out.</li> </ul>

## 18.2 Simple Transfer Menu

The menu items of the Simple Transfer menu are described below.

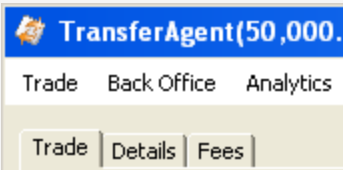
Menu Items	Description
Price (F4)	To price the trade.
Solve (F9)	The Solve function is not implemented by default. However, you can create a custom Solver. Refer to the <i>Calypso Developer's Guide</i> for details.
Configure Results	To configure the pricer measures for the Results panel. You will be prompted to select pricer measures.
Save Result Config	To save the pricer measures configuration.
Save As Template	To save the trade as a template. You are prompted to enter a template name and specify whether the template is private or public. Other users will not be able to use private templates.
Delete Template	<p>To delete a template. You will be prompted to select a template.</p> <p>Only the user who created a template (whether it is public or private) can delete it.</p> <p>You can also delete templates using <b>Utilities &gt; Maintenance &gt; Monitoring &gt; Clean-up &gt; Clean-up Database</b> - Products panel.</p> <p>► Please refer to Calypso Main Entry Utilities documentation for details.</p>
Custom Product Data	<p>To open a custom data window provided product custom data are specified, and a custom data window is implemented for this type of product.</p> <p>► Please refer to the <i>Calypso Developer's Guide</i> for information on handling product custom data.</p>

## 19. Capturing Transfer Agent Trades

From the Calypso Navigator, navigate to **Processing > Accounting Operations > Transfer Agent** to configure transfer agent trades as shown below for a Cash transfer (menu action `trading.TradeTransferAgentWindow`).

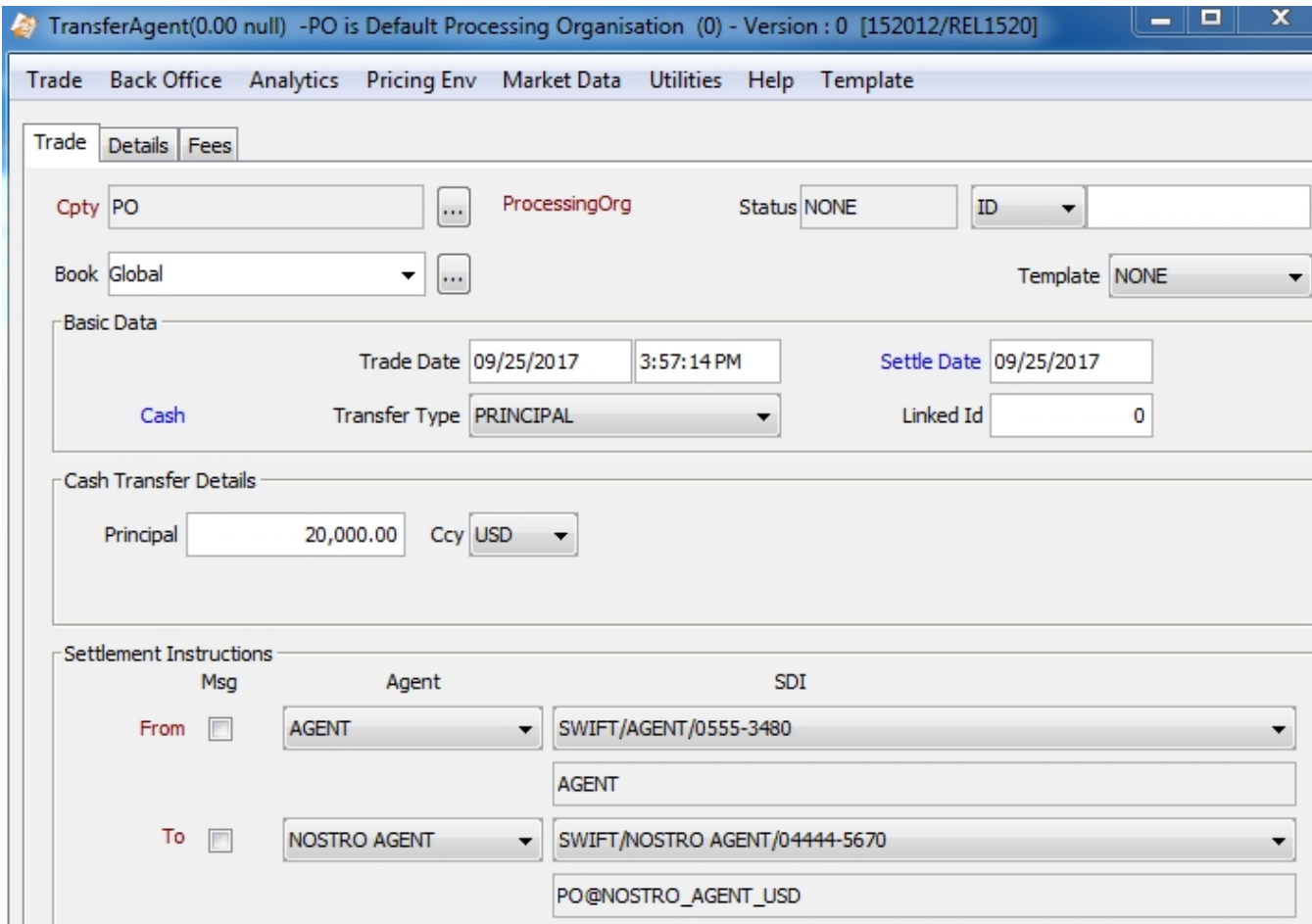
A Transfer Agent trade is used to transfer Security or Cash from one Agent's account to another. It is always carried out from the perspective of the Processing Organization.

**Transfer Agent Quick Reference**



- Enter agent transfer details in the Trade panel
- Hit F5 to save the trade

## 19.1 Sample Transfer Agent Trade



The screenshot shows the 'TransferAgent(0.00 null)' window with the following configuration:

- Trade Tab:** Cpty: PO, ProcessingOrg: (empty), Status: NONE, ID: (empty), Book: Global, Template: NONE.
- Basic Data:** Trade Date: 09/25/2017, 3:57:14 PM, Settle Date: 09/25/2017, Cash: (checked), Transfer Type: PRINCIPAL, Linked Id: 0.
- Cash Transfer Details:** Principal: 20,000.00, Ccy: USD.
- Settlement Instructions:**
  - From:** Agent: AGENT, SDI: SWIFT/AGENT/0555-3480.
  - To:** Agent: NOSTRO AGENT, SDI: SWIFT/NOSTRO AGENT/04444-5670.
  - PO@NOSTRO\_AGENT\_USD**

- » Select the Processing Organization in the Cpty field and the book.
- » Select the Transfer Type.
- » Enter the Principal amount and the currency.
- » Select the From and To agents. The corresponding SDIs will be displayed, along with the debited account (From) and the credited account (To).

For SECURITY Transfer Agent trades, you can use a specific SDI for the external side.

You need to add the role POExternalParty to the PO.

On the PO SDI, set the SDI attribute POSdiExternalReference.

When SDI attribute POSdiExternalReference is set on the PO SDI, the system looks for an SDI with role POExternalParty for the same PO and the same value of SDI attribute POSdiExternalReference for the external side SDI.

Example:

## PO SDI

Settlement Delivery Instructions [17221203/BIAB1520M\_19C/template: Administrator]

Utilities Help

Edit Attributes & Notes Browse		Edit Attributes & Notes Browse	
<b>SDI Id</b>	2013511		
<b>Reference</b>	2013511	<b>Cash/Security</b>	SECURITY
<b>Role</b>	ProcessingOrg	<b>Contact</b>	Default
<b>Beneficiary</b>	CALYPSO_SFO	<b>Processing Org</b>	ALL
<b>Benef. Na...</b>		<b>Products</b>	ANY
<b>Ccy</b>	ANY	<b>SD Filter</b>	
<b>Pay/Rec</b>	BOTH	<b>Trade CounterParty</b>	ALL
<b>Description</b>	DTC/JPMORGAN CHASE & CO/54321JPM	<input checked="" type="checkbox"/> Preferred	
<input type="checkbox"/> Link SDI			
<b>Method</b>	DTC	<b>Effective From</b>	
<b>Identifier</b>		<b>Effective To</b>	
		<input type="checkbox"/> by Trade Date	
<b>Agent:</b> JPMORGAN CHASE & CO [intermediary] [intermediary2] Direct			
<b>Code</b>	JPMORGAN CHASE & CO	<b>A/C</b>	54321JPM
<b>Contact</b>	Settlement	<b>GL A...</b>	PO NOSTRO Account -DTC

Attributes	
Name	Value
AccountMapping	
Agent	
Beneficiary	
CHATSStlmPrty	
ClsUsage	
CutOffTime	
DAP_CCY	
Eligibility Set	
IBAN.Agent	
IBAN.Intermediary	
IBAN.Intermediary2	
Intermediary	
LiquidityReportingCurrency	
MY BAN BusinessService	
POSDiExternalReference	DTC Account 1456

As POSdiExternalReference is set, the system looks for an SDI with role POExternalParty for the same PO and the same value of SDI attribute POSdiExternalReference.

POExternalParty SDI

Settlement Delivery Instructions [17221203/BIAB1520M\_19C/template: Administrat...

Utilities Help

Edit
Attributes & Notes
Browse

SDI Id

2071826

Reference

2071826

Cash/Security

SECURITY

Role

POExternalParty

Contact

Default

Beneficiary

CALYPSO\_SFO

Processing Org

ALL

Benef. Na...

Products

TransferAgent

Ccy

ANY

SD Filter

Pay/Rec

BOTH

Trade CounterParty

ALL

Description

DTC/JPMORGAN CHASE & CO

☒ Preferred

☐ Link SDI

Method

DTC

Add

☐ Direct

Identifier

Effective From

Effective To

☐ by Trade Date

Agent: JPMORGAN CHASE & CO

[intermediary]

[intermediary2]

Direct

Code

JPMORGAN CHASE & CO

A/C

☐ Msg

Contact

Settlement

GL A...

Edit

Attributes & Notes

Browse

Attributes

Name	Value
AccountMapping	
Agent	
Beneficiary	
CHATSSstlmPrty	
ClsUsage	
CutOffTime	
DAP_CCY	
Eligibility Set	
IBAN.Agent	
IBAN.Intermediary	
IBAN.Intermediary2	
Intermediary	
LiquidityReportingCurrency	
MDR.BAL.BusinessService	
POSDiExternalReference	DTC Account 1456

SDIs



Id	Name	Beneficiary	Agent	Intermediary	Direct	Roles	ProcessingOrg	Currencies	Products
2071826	DTC/JPMORGAN CHASE & CO	CALYPSO_SFO	JPMORGAN CHASE & CO			POExternalParty	ALL	ANY	TransferAgent
2071830	CLEARSTREAM/CITIBANK	CALYPSO_SFO	CITIBANK			POExternalParty	ALL	ANY	TransferAgent
2013511	DTC/JPMORGAN CHASE & CO/54321JPM	CALYPSO_SFO	JPMORGAN CHASE & CO			ProcessingOrg	ALL	ANY	ANY
2071829	CLEARSTREAM/CITIBANK/000	CALYPSO_SFO	CITIBANK			ProcessingOrg	ALL	ANY	ANY

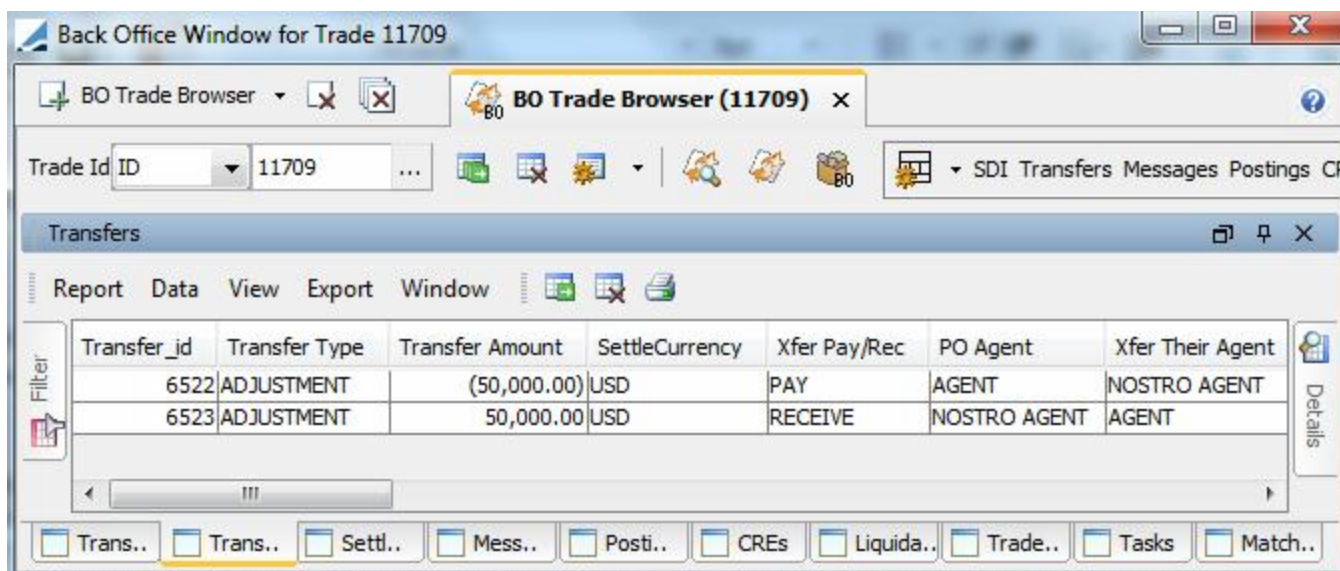
### 19.1.1 BO Browser

Once the Transfer Agent trade is entered and saved, you can view the transfers in the BO Browser by clicking **Back Office** in the Details panel. You can also choose **Back Office > BO Browser**.


Select the Transfers panel to view the transfers.

**[NOTE: The Transfer engine should be running]**





### 19.1.2 Trade Details

Fields	Description
Cpty	<p>Displays the trading counterparty. The counterparty is a legal entity. The default role appears next to the Cpty field. The default role is specified using <a href="#">Utilities &gt; Set Default Role</a>. However, you can change it as applicable. Double-click the role to change it.</p> <p>You can select a legal entity of specified role from the Cpty field provided you have setup favorite counterparties. You can also type in a character to display the favorite counterparties that start with that character. Favorite counterparties are specified using <a href="#">Utilities &gt; Configure Favorite Counterparties</a>. You can also double-click the Cpty label.</p> <p>Otherwise, click  to select a counterparty of specified role from the Legal Entity Chooser. You can also type [Ctrl-F] to invoke the Legal Entity Chooser.</p>
Status	<p>Current status of the trade. The status is automatically assigned by the system based on the workflow configuration.</p> <p>The status changes over the lifetime of the trade according to the workflow configuration and the actions performed on the trade.</p>
Id Ext Ref Int Ref	<p>Unique identification number of the trade. The trade id is automatically assigned by the system when the trade is saved.</p> <p>You can load a specific trade by entering the trade id in this field and pressing [Enter].</p> <p>You can also load a specific trade by the external or internal reference. Select Ext Ref or Int Ref, respectively, from the drop-down menu. Enter the reference in the adjacent field and press [Enter] to load the trade.</p>
Book	Trading book to which the trade belongs. Defaults to the book selected in the User Defaults.

Fields	Description
	<p>You can modify as applicable.</p> <p>You can also select a book provided you have setup favorite books. Favorite books are specified using <a href="#">Utilities &gt; Configure Favorite Books</a>.</p> <p>The processing org of the book identifies the processing org of the trade.</p>
Template	You can select a template from the Template field to populate the worksheet with default values. Then modify the fields as applicable.
Cash / Security	<p>Double-click the Cash label to change to Security as applicable.</p> <p>The fields are different for a cash transfer and for a security transfer. See Cash Transfer Details and Security Transfer Details below.</p>
Trade Date	Enter the trade date and time. It defaults to today.
Settle Date	<p>The settle date defaults to the spot date (number of spot days specified in the currency defaults applied to the trade date).</p> <p>You can modify the settle date as applicable.</p> <p>Double-click the Settle Date label to adjust the settle date if the trade date is modified.</p>
Transfer Type	<p>For a cash transfer, you can select the transfer type.</p> <p>For a security transfer, it is set to SECURITY.</p> <p>You can limit the list of transfer types by adding the transfer types you want to display to the domain "TransferAgent.subtype".</p>
Linked Id	Enter a trade id to which you want to link the agent transfer as applicable.

### Cash Transfer Details

Principal	Enter the cash amount you want to transfer.
Ccy	Select the currency of the cash amount.

### Security Transfer Details

Security	Click <input type="button" value="..."/> to select the security.
Nominal	Enter the nominal of transferred security, and the quantity will be computed accordingly. Or enter the quantity.
SecCode	<p>Defaults to the product code selected in the user defaults.</p> <p>You can select another product code as applicable.</p> <p>Product Codes are defined using <a href="#">Static Data &gt; Reference Data &gt; Product Code</a> from the Calypso Navigator.</p>
Quantity	Enter the quantity of transferred security, and the nominal will be computed accordingly. Or enter the nominal.

DAP	<p>Check the DAP checkbox if you want to associate a cash amount with the security transfer. In that, case you can enter the following additional fields.</p> <div> <input checked="" type="checkbox"/> DAP <input type="checkbox"/> Same side delivery Cash Amount <input type="text" value="200.00"/> <input type="text" value="USD"/> </div> <ul style="list-style-type: none"> <li>» Enter the Cash Amount and select a settlement currency as needed. It defaults to the security's currency.</li> <li>» Check "Same side delivery" to deliver the cash amount in the same direction as the security (Example: PAY Sec / PAY Cash).</li> </ul> <p>The transfer will be DAP only if the SDI handles DAP transfers for the selected settlement currency (DAP_CCY attribute must be set to a comma-separated list of currencies, or ANY).</p>
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### Settlement Instructions

From To	<p>Select the From and To agents. The corresponding SDIs will be displayed, along with the debited account (From) and the credited account (To). You can modify the SDIs as applicable.</p> <p>You can check the From or To "Msg" checkbox to send a message to the agent provided the corresponding message setup is configured.</p> <p>If From or To "Msg" checkbox is checked, a payment message can be generated for Role = Addressee, provided the corresponding message setup is configured.</p>
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### 19.1.3 Payment Message

The message template MT103XferAgent allows producing MT103 messages with tag 53B (Sender's Correspondent) when "Msg" is checked in the SDIs.

You can use the message templates "Payment.selector" or "PaymentCOV.selector" otherwise.

► Please refer to Calypso Settlements documentation for details.

## 19.2 Template Menu

The menu items of the Template menu are described below.

Menu Items	Description
Save As Template	To save the trade as a template. You are prompted to enter a template name and specify whether the template is private or public. Other users will not be able to use private templates.
Delete Template	<p>To delete a template. You will be prompted to select a template.</p> <p>Only the user who created a template (whether it is public or private) can delete it.</p> <p>You can also delete templates using <a href="#">Utilities &gt; Maintenance &gt; monitoring &gt; Clean-up &gt; Clean-up Database</a>, Products panel.</p>

Menu Items	Description
	▶ Please refer to Calypso Main Entry Utilities documentation for details.