Nasdaq Calypso

Acadia Integration Guide

Version 6.1.20

Revision 7.0

March 2025

Approved

Document History

Revision	Published	Summary of Changes
1.0	January 2024	First revision for version 6.1.6 (compatibility with version 18) The Callback mechanism has been removed and is replaced by the Polling mechanism. Please update your configuration accordingly, as described in the release notes.
2.0	April 2024	Updates for version 6.1.9 - Added audit information
3.0	May 2024	Updates for version 6.1.10 - Added auto reject criteria - Removed invalid entries from InterestBearing trade workflow
4.0	June 2024	Updates for version 6.1.11 - Added context attribute "Book Return From Counterparty to Source Book" - Auto dispute on non business days - Auto allocation of TRIPARTYALCT on Triparty/Acadia agreements.
5.0	July 2024	Updates for version 6.1.12 - Added Acadia message repository.
6.0	December 2024	Updates for version 6.1.16 - Added Transfers and Settlements panel to the Interest Manager window.
7.0	March 2025	Updates for version 6.1.20 - Added Account Config and Action buttons to the Interest Manager window.

Table of Contents

1. Overview

This document describes the configuration for the AcadiaSoft interface.

Calypso's integration with AcadiaSoft enables clients to lower cost by increasing STP of margin call messaging through an out of the box solution. It also unifies the format of the messaging and provides a single portal to view all margin call communications, eliminating the need to send various emails, calls and messages.

AcadiaSoft's MarginSphere solution provides a workflow with which Calypso will be able to:

- Send/Receive Margin Calls
- Agree/Dispute Margin Calls through dispute management workflows
- Provide history and reporting

[NOTE: The following is not supported - Acadia option to separate calls per currency and Substitution functionality (not an exhaustive list)]

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

2. Acadia Installation

2.1 Installation

The AcadiaSoft interface is installed as part of the Calypso Installer when you select the *AcadiaSoft MarginSphere* interface:

▶ Please refer to the Calypso Installation Guide for complete details on the Calypso Installer. If you are installing a Calypso Upgrade package, the instructions are also in the Calypso Installation Guide.

2.2 Architecture

The architecture is using a Polling mechanism that uses 3 main components:

1. Acadia Message Engine
2. Collateral Manager
3. Sender Engine

Th e polling mechanism is not a real-time process. The engine polls AcadiaSoft every X seconds via API in order to receive all messages with the status "PENDING_ACK". (This parameter is set up in the *acadia.polling.properties* file, using the property *acadia.polling.interval*.)

When the Acadia Message Engine starts:

- There is a connection with the following gateways:
  - AcadiaPolling - This gateway allows messages to be split into individual messages when AcadiaSoft sends multiple messages, then sends them to the JMS processor
  - PollingToAcadia - The polling task sends all messages to this queue, the Acadia Message Engine listens to this queue and processes messages.
- A polling task is initialized. This task sends an http GET request to AcadiaSoft and acknowledges all messages once they have been processed.

[NOTE: All properties referring to the polling are present in the *acadia.polling.properties file*]

Servers to Start

The following servers should be started in the order listed below:

- Auth Server
- Discovery Server
- Gateway Server
- Event Server
- Data Server
- Messaging Server
- Engine Server including AcadiaMessageEngine
- Calypso Navigator

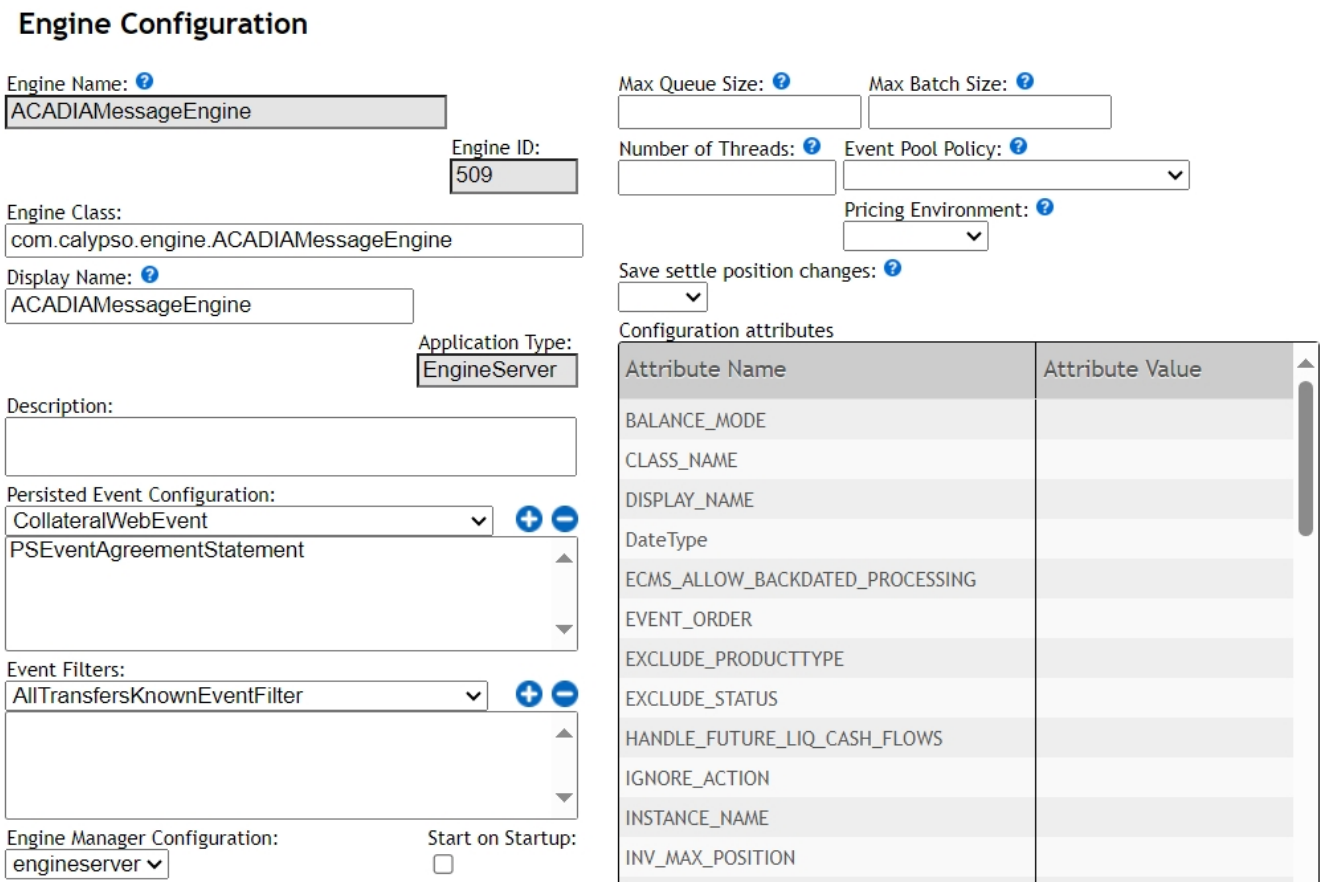
2.3 Acadia Message Engine

This engine processes all incoming messages.

This engine uses the following properties to run and process messages:

- AcadiaSoft error codes (*acadia_error_code.properties*) - Edit this file when AcadiaSoft adds new error codes
- AcadiaSoft reason codes (*acadia_reason_code.properties*) - Edit this file when AcadiaSoft adds new reason codes
- calypso_acadia_config.properties

The Acadia message engine needs to subscribe to *PSEventAgreementStatement* to create collateral agreements in AcadiaSoft Agreement Manager from Calypso as well as manage updates to the agreements in Calypso and send them to the Acadia Agreement Manager.



In *acadia.polling.properties*, change the value for the below properties:

polling.output.queue=queue/acadia

processor.input.queue=queue/acadia

2.4 Sender Engine

This engine is a core Calypso component, allowing messages to be sent to the AcadiaSoft MarginSphere.

2.5 Collateral Manager

The Acadia module has a dependency on the Collateral module. This component is the front end of the Acadia module. All incoming and outgoing messages are visible in the Notification tab when an entry is selected. This is also the interface available to view Margin Calls. It is possible to agree, dispute, accept or reject a pledge using Collateral Manager.

For more details, refer to the Collateral module documentation.

2.6 Password Encryption in Acadia Module

Acadia uses the Calypso solution provided in the *calypso-infosec* jar to decrypt the password.

Encryption in the Acadia engine properties file is mandatory for both Acadia Margin Call and Acadia Interest Statements.

The Acadia module manages three passwords:

- *jms.connection.password* for the connection to the JMS server
- *acadia.password* credentials to access and contact AcadiaSoft MarginSphere

2.6.1 How to Use Encryption in Acadia

In the *acadia.engine.properties* file, specify an encrypted password in the *acadia.password* property.

An encrypted password can be generated using *passwordProtectorCLI.bat/sh*. The Acadia password needs to be encrypted using the Acadia user as the key.

For example, in the calypso_acadia_config.properties file below, *acadia.user=userl*.

Run the command below to pass the plain text password to encrypt:

```
passwordProtectorCLi.bat --key userl
```

```
#Prop for using over FILE SYSTEM Service Provider
#AcadiaSoft Credential
acadia.user=user1
acadia.password=<password>
acadia.message.option=
acadia.message.version=3.7

#Your proxy configuration
acadia.proxy.host=
acadia.proxy.port=
acadia.proxy.user=
acadia.proxy.password=
#Dispatcher def
dispatcher.batchingSize=1
dispatcher.msgTimeout=1000
dispatcher.class=acadia.preprocessor.JMSMessagePreprocessor
dispatcher.delegator=acadia.preprocessor.ACADIADispatcher
#Processor def
processor.batchingSize=1
processor.msgTimeout=1000
processor.class=acadia.processor.JMSMessageProcessor
processor.delegator=acadia.processor.ACADIAProcessor
processor.count.reconnect=3
processor.interval.reconnect=10
```

2.6.2 Encrypting a Password with Calypso infosec jar

The encrypted password needs to be generated.

Refer to the Calypso Install Guide for details on how to encrypt a password.

When *acadia.crypt.password* is set to true, *jms.connection.password* needs to be encrypted with the key being the normal text password.

2.7 Acadia Deployment for Kubernetes / Containerization

To simplify Kubernetes deployment for Acadia, the properties are shipped as part of the distribution. This gives the Ops team the ability to set system IT properties using system properties or an environment variable without having to build the Docker image.

Some files are hidden in the distribution.

A Property Provider is used to:

- Use an engine parameter override
- Fall back to use environment variable or system property override
- Fall back to values in the property files

For On Premise, the property files are located in the *<calypso_home>/docs/calypso-acadia/samples/props* directory and need to be manually put in the *<user_home> /Acadia/props* directory.

When using a Container, it is possible to use the engine parameter override.

2.7.1 System IT Properties / Deployment Properties

These properties are in the properties file but it is possible to override them by either providing a system property or an environment variable.

- acadia.server.name (default value https://uat.acadiahub.com/amp)
- acadia.amserver.name (default value https://uat.acadiahub.com/agreement-manager-api)
- acadia.user
- acadia.password
- acadia.proxy.host
- acadia.proxy.port
- acadia.proxy.user
- acadia.proxy.password
- acadia.crypt.password (boolean, default=false)
- acadia.crypt.key (encryption key, default=calypso)
- acadia.amp.mode = polling
- acadia.hostname.check (default=true)

- jms.url - points to CalypsoMessagingServer by default
- jms.initial.context.factory (not used)
- jms.queue.connection.factory (not used)
- jms.connection.password - password for CalypsoMessagingServer
- jms.connection.username - username for CalypsoMessagingServer

If acadia.proxy.host and acadia.proxy.port are not set, the system uses the system properties -Dhttps.proxyHost and -Dhttps.proxyPort if set.

2.7.2 Engine Properties / Application Administration

These properties are in an engine parameter and allow an application administrator to change the values without having to redeploy the entire application.

- acadia.polling.interval
- margincall.polling.auth.reConnect
- margincall.polling.filterAgreement
- margin.polling.referenceGroup
- interest.polling.interest.enabled
- dispatcher.batchingSize
- dispatcher.msgTimeout
- processor.batchingSize
- processor.msgTimeout
- processor.count.reconnect
- processor.interval.reconnect
- margincall.polling.retryConnect

2.7.3 Business Properties

These properties are not in a file but stored in the database as domain values.

- acadia.message.affectedOrganizationAmpId
- acadia.message.counterpartyContactEmail
- acadia.message.counterpartyContactInfo
- acadia.message.counterpartyContactName
- collateral.context

3. Setup Requirements

3.1 Acadia Domain Values

If you have run the Acadia schema data file in Execute SQL and chosen the synchronization of the Acadia data, all of the necessary domain values will be present in your system and no additional configuration is required. These include Message Template domain values and the *CollateralWFInterface* domain, with value ACADIA. This domain is necessary to enable pop up messages.

Data Audit

Data audit is provided for InterestStatementReconciliation details.

3.2 Workflow Setup for AcadiaSoft

From Calypso Navigator or (Main Entry), select **Configuration > Workflow**.

Below is a partial sample of an Acadia workflow.

The workflows can be imported using the Calypso Workflow window. It is located in the folder *<calypso home>/docs/calypso-acadia/samples/workflow*. When importing, make sure that the workflow name in the .wf file matches the name of the workflow configuration.

The available files are:

- *PSEventMessage_MC_NOTIFICATION.wf*
- *PSEventMessage_ACADIA_INCOMING.wf*
- *AcadiaSoft_Triparty.wf*
- *AcadiaSoft_SVA_Initial.wf*
- *AcadiaSoft_SVA.wf*
- *Acadiasoft_Expected.wf (for Expected Margin Calls)*
- *AcadiaSoft_CSA.wf*

The Acadia workflow contains some hard coded actions. In Calypso, in order to change the object status, an action needs to be applied to the object. The status can be customized or transitions added, but these action names cannot be modified.

The hard coded actions are as follows:

Name of Action	Triggered by	Direction	Description
AGREE_ EXPOSURE	AgreeMarginCallMessage	Incoming	When Calypso receives an AgreeMarginCall

Name of Action	Triggered by	Direction	Description
			message, the system saves the Agreed Amount and applies the AGREE_EXPOSURE action to the entry.
CANCEL_ DISPUTED	CancelDisputeMarginCallMessage	Incoming	When Calypso receives a CancelDisputeMarginCall message, the system resets all dispute columns, saves the cancel reason, reason code and comment and applies the CANCEL_DISPUTE action to the entry.
CANCEL_ AGREE	CancelAgreeMarginCallMessage	Incoming	When Calypso receives a CancelAgreeMarginCall message, the system applies the CANCEL_AGREE action to the entry.
CANCEL	CancelMarginCallMessage	Incoming	When Calypso receives a CancelMarginCall message, the system resets all columns and applies the CANCEL action to the entry.
DISPUTE	DisputeMarginCallMessage	Incoming	When Calypso receives a DisputeMarginCall message, the system creates the dispute with the status *fully_disputed*, saves the dispute attributes (code, reason, comment), updates columns (CptyMTM, disputeMTM) and applies the DISPUTE action to the entry.
RECEIVE	CreateMarginCallMessage	Incoming	When Calypso receives a ReceivedMarginCall message, the system creates a new Margin Call Entry with Cpty amount and applies the RECEIVE action to the entry.
PARTIAL_ AGREE	PartialAgreeMarginCallMessage	Incoming	When Calypso receives a Partial Agree Margin Call message, the system updates columns (Cpty Amount, MTM, Deliver Amount, Return Amount, Dispute Amount, Dispute Agreed Amount and Dispute MTM) and applies the PARTIAL_AGREE action to the entry.
PLEDGE_ ACCEPT	PledgeAcceptMarginCallMessage	Incoming	When Calypso receives a PledgeAcceptedMarginCallMessage, the system applies the PLEDGE_ACCEPT action to the entry.
PLEDGE_ REJECT	PledgeRejectMarginCallMessage	Incoming	When Calypso receives a PledgeRejectMarginCall message, the system saves the reject reason, reason code and reason comment on each pledge that is rejected, and applies the PLEDGE_REJECT action to the entry.
PLEDGE_	PledgeAmendMarginCallMessage	Incoming	When Calypso receives a

Name of Action	Triggered by	Direction	Description
AMEND			PledgeAmendedMarginCall message, the system removes old allocations, creates new allocations from pledges in the message and applies the PLEDGE_AMEND action to the entry.
PLEDGE_ CANCEL	PledgeCancelMarginCallMessage	Incoming	When Calypso receives a PledgeCancelMarginCall message, the system resets allocation attributes on each allocation (AMP_ID, AMP_MODIFYUSER, AMP_ VERSION) and applies the PLEDGE_CANCEL action to the entry.
PLEDGE	PledgeMarginCallMessage	Incoming	When Calypso receives a PledgeMarginCall message, the system creates an allocation, checks eligibility for each pledge in the message and applies the PLEDGE action to the entry. If the pledge is ineligible, a task exception is created.
PLEDGE_ AUTO	PledgeMarginCallMessage	Incoming	When Calypso receives a PledgeMarginCall message, if the pledgeSecurity type equals *ISIN* and the pledge_ID equals *TRIPARTYALCT*, the system does not create an allocation and applies a PLEDGE_ AUTO action to the entry.
INELIGIBLE_ COLLATERAL	PledgeMarginCallMessage	Incoming	When Calypso receives an ineligible pledge, the system creates a BO Message and applies the INELIGIBLE_COLLATERAL action to the message in order to separate technical errors (invalid status) and business errors (error status).
UNKNOWN_ SECURITY	PledgeMarginCallMessage	Incoming	When Calypso receives an unknown pledge, the system creates a BO message and applies the UNKNOWN_SECURITY action to this message, then the message moves to PENDING_SECURITY status.
UPDATE_ ALLOCATION	PledgeMarginCallMessage	Incoming	Once the user adds the ISIN for the security in Calypso, the user can then apply the action UPDATE_ALLOCATION on the message. Once the entry is re-loaded, the allocation appears in Collateral Manager and the message is moved to PROCESSED.
UPDATE	PartialDisputeMarginCallMessage	Incoming	When Calypso receives a PartialDisputedMarginCall message, the system creates the dispute with the status of *Partial Disputed*, updates all dispute attributes (Reason, Reason Code and Comment) and applies the UPDATE action to the entry in order

Name of Action	Triggered by	Direction	Description
			to save all these attributes.
FULLY_ DISPUTE	CreateMarginCallMessage	Incoming	When Calypso receives a CreateMarginCallMessage, if there is an entry already saved and the direction is the opposite of the Margin Call received, then the system creates a new margin call with the processing type FULLY_ DISPUTE and the margin call goes to FULLY_ DISPUTED status. A message dispute is automatically sent to the counterparty.
FULLY_ DISPUTE	DisputeMarginCallMessage	Incoming	When Calypso receives a DisputeMarginCallMessage, if the entry has the processing type FULLY_DISPUTE, then the system applies a FULLY_DISPUTE action to the entry and the entry moves to FULLY_DISPUTED_REC.
CANCEL	Manual Action	Outgoing	On the Calypso side, if the user applies the CANCEL action to the Margin Call Entry, the system displays a dialog window allowing the user can specify the cancel code, cancel reason and cancel comment. The attributes are saved on the entry and sent to Acadia in the CancelMargin message.
DISPUTE	Manual Action	Outgoing	On the Calypso side, if the user applies the DISPUTE action to the Margin Call Entry, the system displays a dialog window allowing the user can specify the dispute code, dispute reason and dispute comment. The attributes are saved on the entry and sent to Acadia in the DisputeMargin message.
PLEDGE_ CHECK_AND_ ACCEPT	Manual Action	Outgoing	On the Calypso side, if the user applies the PLEDGE_ CHECK_AND_ACCEPT action, the system displays a dialog window with all ineligible pledges, then the user can reject or accept the ineligible pledge.
PLEDGE_ REJECT	Manual Action	Outgoing	On the Calypso side, if the user applies the PLEDGE_ REJECT action to the Margin Call Entry, the system displays a dialog window allowing the user to specify the pledge reject code, reason and comment on each rejected pledge. The attributes are saved on the allocation and sent to Acadia in the PledgeRejectMargin message.
UPDATE_EMC	Manual Action	Outgoing	On the Calypso side, the system can use this action to update an Expected Margin Call message.

The action PLEDGE_CHECK_AND_ACCEPT can be used when ineligible collateral has been sent in a Pledge message from Acadia. It is an alternative to PLEDGE_ACCEPT. When this action is used, the user is prompted with a soft warning if ineligible collateral has been pledged by the counterparty in the Acadia workflow. The message displayed allows the user to choose whether to proceed or not with the ineligible collateral. If the user accepts, the entry moves to the next status. If the user rejects, the entry continues in the old status.

This action checks the validators defined in domain "ACADIAAllocationValidators".

You can set the following validators:

- AllocationPriceValidator
- ConcentrationLimitValidator to checks concentration limits.

  Please note that concentration limit check is not performed on full return cases when exposure changes are in the PO's advantage.
- EligiblityAllocationValidator considers the cash allocations for validation. Allocations will be auto accepted / auto rejected only when the AutoAccept/AutoReject workflow rule is added to the workflow transitions. The criteria to auto accept or auto reject is defined in the Collateral Context window. But if the rules are not added to the workflow, the pledge needs to be manually rejected by checking its eligibility with the action PLEDGE_CHECK_AND_ACCEPT.
- FullAllocationValidator
- IncrementLotSizeValidator
- MinimumPurchaseAmountValidator
- SettleDateValidator
- TotalIssuedValidator

▶ Please refer to Calypso Collateral Configuration documentation - Collateral Context for details on all validators.

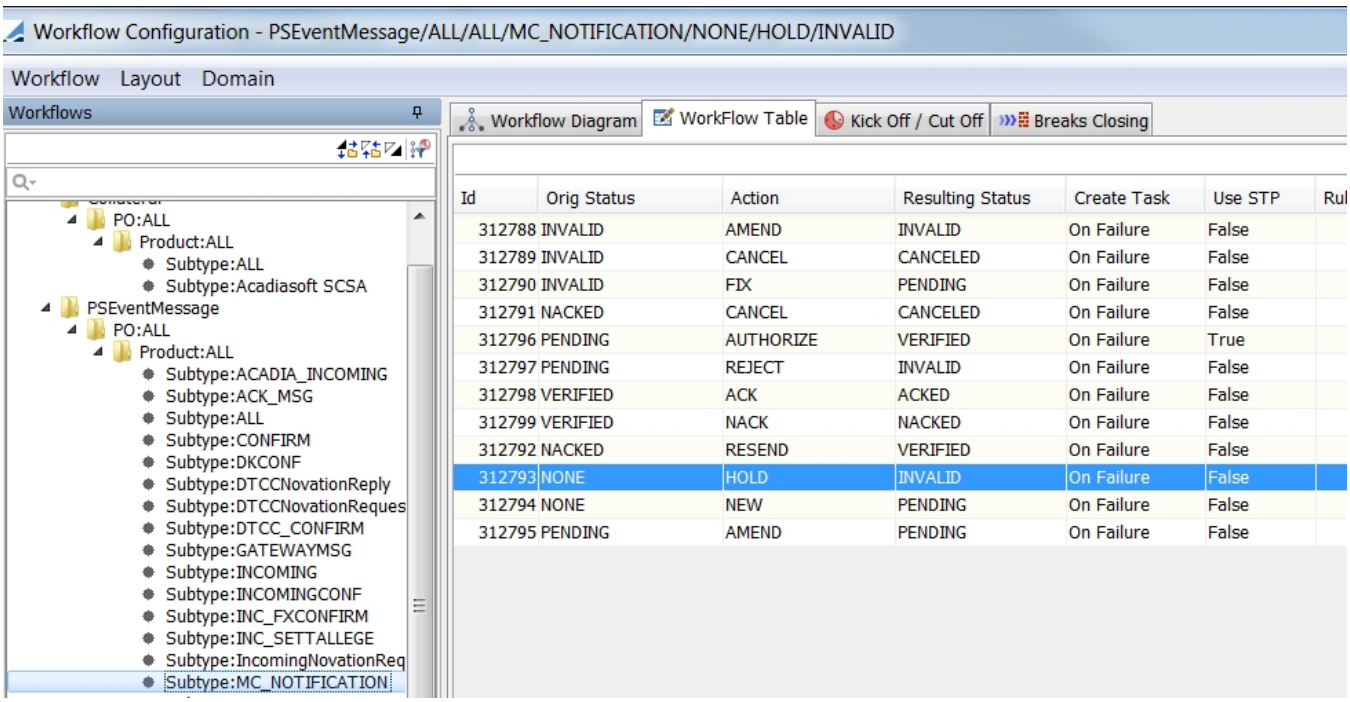
Multiple codes are supported for sending pledge messages. To determine which code to provide on the Acadia pledge message, the system follows this hierarchy:

- If ISIN is present, send ISIN, as ISIN is the international standard
- If no ISIN is present, look for CUSIP
- If no CUSIP, look for SEDOL

Instead of AGREE_EXPOSURE, you can choose AGREE_EXPOSURE_STP - with workflow rule AutoAgree - It checks that Collateral.Global_Required_Mrg = Collateral.Cpty_Amount or is within the specified tolerance if margin call contract attribute “Accept CP Amount in PO’s Favor” is checked.

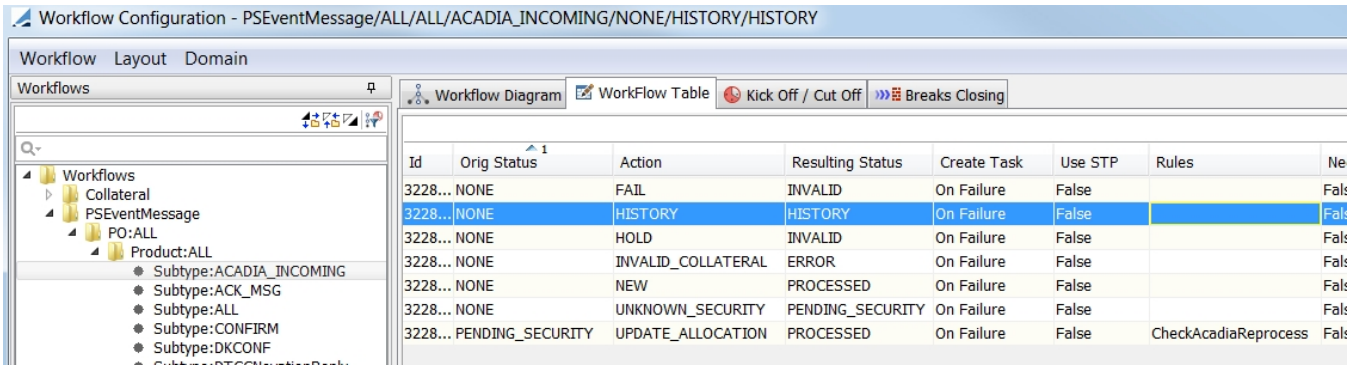
3.2.1 MC_NOTIFICATION Message Workflow

The MC_NOTIFICATION workflow is available from **Calypso Navigator > Configuration > Workflow > Workflow**.



3.2.2 ACADIA_INCOMING Message Workflow

The ACADIA_INCOMING workflow is available from **Calypso Navigator > Configuration > Workflow > Workflow**.



Acadia Message Repository

By default ACADIA_INCOMING messages are only stored if the corresponding margin call entries are priced.

You can configure the system to store any ACADIA_INCOMING message with the following setup.

1. You can use the domain "AcadiaMessageStorageStatuses" to define the status of the margin call entries for which incoming messages should be stored (example NONE, PRICING). In other words, if the margin call entry is in status NONE or PRICING, the ACADIA_INCOMING message will be stored.

2. New transitions must be added to the ACADIA_INCOMING workflow to store the messages.

NONE - STORE - PENDING, no rule

PENDING - PROCESS - PROCESSED, no rule

3. The COLLATERAL workflow must be modified to process the incoming messages once the margin call entries are priced.

The following transitions need to be modified as below:

PRICING - PRICE - PRICED_NO_CALL, STP, rule CheckNoCall, needs to be changed to PRICING - PRICE - PRICE_NO_CALL, STP, rule CheckNoCall

PRICING - PRICE - PRICED_PAY, STP, rule CheckPay, needs to be changed to PRICING - PRICE - PRICE_PAY, STP, rule CheckPay

PRICING - PRICE - PRICED_RECEIVE, STP, rule CheckReceive, needs to be changed to PRICING - PRICE - PRICE_RECEIVE, STP, rule CheckReceive

PRICED_PAY - RECEIVE - RECEIVED, STP, no rule, needs to be changed to PRICED_PAY - RECEIVE - RECEIVED, STP, rule CheckAcadiaReceivedMessages - In case the counterparty cancels the margin call entry before it is priced, this rule will map the message from the counterparty if it is RECEIVED and will not map the cancellation message.

The following transitions need to be added:

PRICE_NO_CALL - CHECK_AND_UPDATE - PRICED_NO_CALL, STP, rule CheckMessageRepository

PRICE_PAY - CHECK_AND_UPDATE - PRICED_PAY, STP, rule CheckMessageRepository

PRICE_RECEIVE - CHECK_AND_UPDATE - PRICED_RECEIVE, STP, rule CheckMessageRepository

NONE - CANCEL - CANCEL

Process:

If there is a stored message, it is processed and mapped to processing / fully disputed, once margin call entry moves to PRICED_PAY / PRICED_RECEIVE / PRICED_NO_CALL.

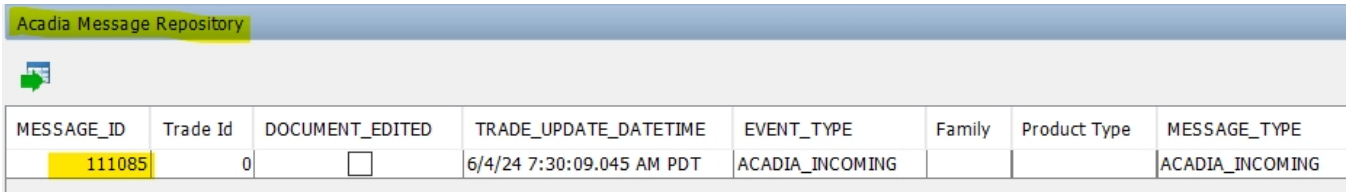
If there is no stored message, even though CheckMessageRepository fails, the margin call entry move to PRICED_PAY / PRICED_RECEIVE / PRICED_NO_CALL.

When stored messages are processed, the expected behavior of the margin call entries is as follows.

- PRICED_RECEIVE – Once stored the message is processed, pay margin call should get fully disputed. Margin call entry will move to CREATED status (PRICED_RECEIVE - CREATE - CREATED)
- PRICED_NO_CALL - Once the stored message is processed, pay margin call should get fully disputed. Margin call entry will remain in PRICED_NO_CALL status

- PRICED_PAY - Once stored the message is processed, margin call entry should move to RECEIVED status (PRICED_PAY - RECEIVE - RECEIVED)

4. The Acadia Message Repository panel has been added to the Collateral Manager to display stored messages.



You can set the following attribute in the Collateral Context > Acadia > Acadia Processing tab:

ACADIA_MESSAGE_HISTORY_DAYS: Number of business days for which to display stored messages. Default is 1 for current business day.

3.2.3 Acadia Exceptions

You can configure the Task Station to view ACADIA_ERROR exceptions.

3.2.4 Triparty Acadia Workflow

A separate workflow should be created for Triparty Acadia contracts. The workflow is the same for Triparty and non-Triparty contracts until the pledge state.

Once the exposure has been agreed/partial agreed, the entry moves to:

AGREED_REC/AGREED – TRIPARTY_AUTO_PLEDGE – TRIPARTY_AUTO_PLEDGED (STP)

TRIPARTY_AUTO_PLEDGED – EXECUTE – EXECUTED (not STP, it is however possible to have intermediary steps to import allocations from the agent)

3.2.5 SVA Workflow

In the case where the SVA (Sole Valuation Agent) is PO, notification (expected call) messages are sent when the collateral is owed to the counterparty (message template *CreateExpectedMarginCall*).

If the counterparty owes collateral to the PO, the regular margin call message process applies (message template *CreateMarginCall*).

(1) PRICED_PAY – SEND_EMC – EMC_SENT (The notification is sent to the counterparty with numbers from the counterparty perspective.)

(2) EMC_SENT – UPDATE_EMC – EMC_SENT

(3) EMC_SENT – RECEIVE – RECEIVED (the CreateMarginCall message that the counterparty generates off the notification is sent to the PO)

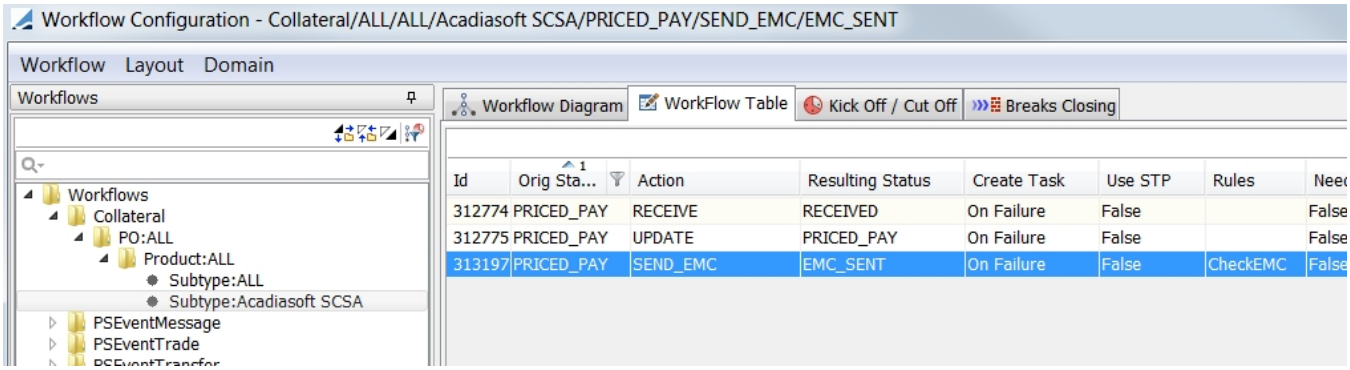
(4) EMC_SENT – CANCEL_EMC – EMC_CANCELLED

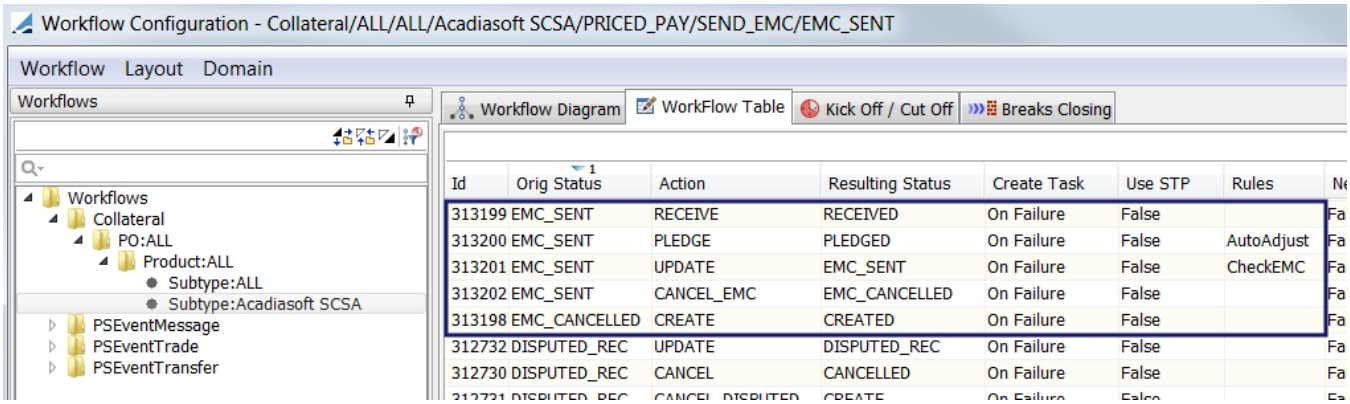
(5) EMC_CANCELLED – PRICE - PRICING

Additionally, the following workflow rules can be used:

CheckEMC on transitions 1 & 2 – returns true if the PO is the Sole Valuation Agent and the GRM <0

CheckCreate on transition 5 – check the combination Direction/SVA to determine if the user is allowed to create a Margin Call

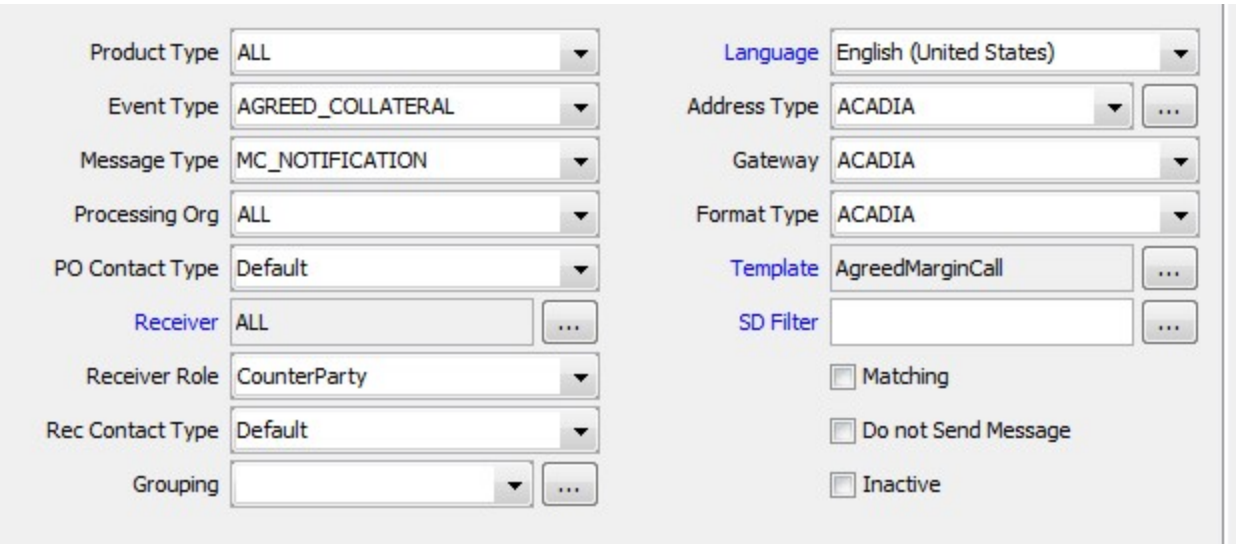


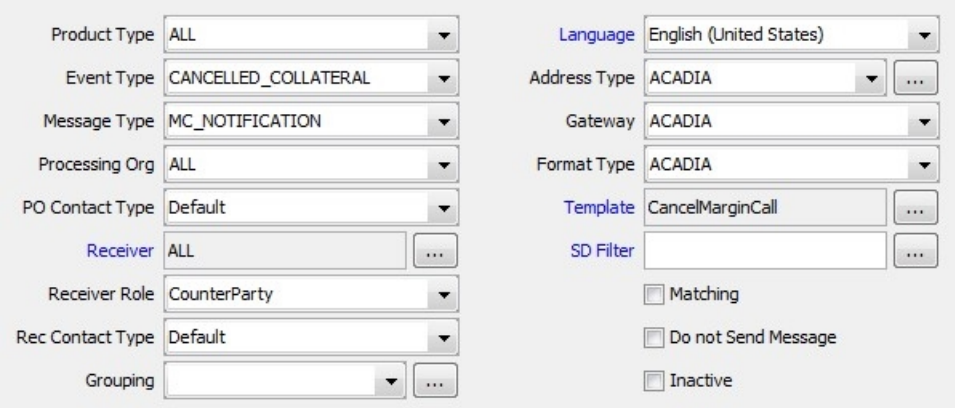


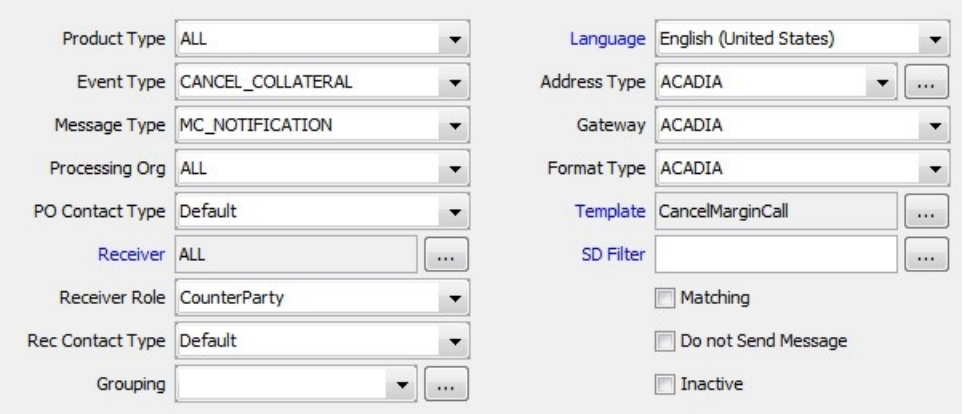
3.3 Message Setup

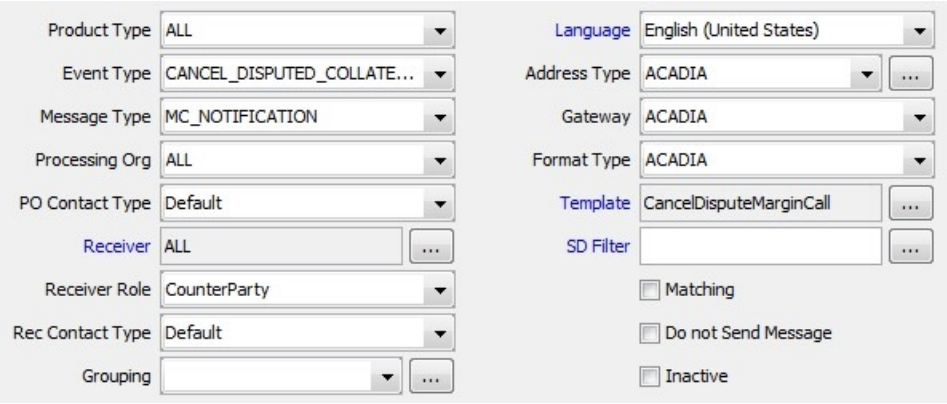
Below are samples of Acadia messages setup. To configure messages, from Calypso Navigator, select **Configuration > Messages & Matching > Message Set-up**.

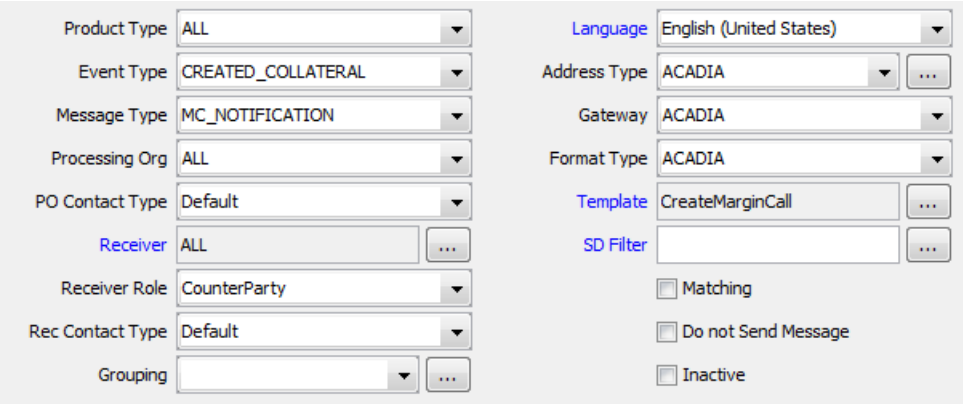
Make sure that these messages are configured in your system.

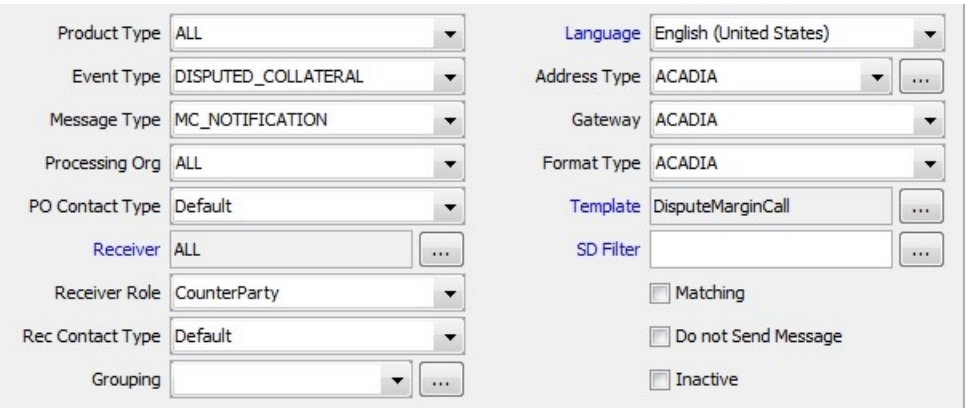

Product Type
ALL
Event Type
AGREED_COLLATERAL
Message Type
MC_NOTIFICATION
Processing Org
ALL
PO Contact Type
Default
Receiver
ALL
Receiver Role
CounterParty
Rec Contact Type
Default
Grouping
Language
English (United States)
Address Type
ACADIA
Gateway
ACADIA
Format Type
ACADIA
Template
AgreedMarginCall
SD Filter
Matching
Do not Send Message
Inactive

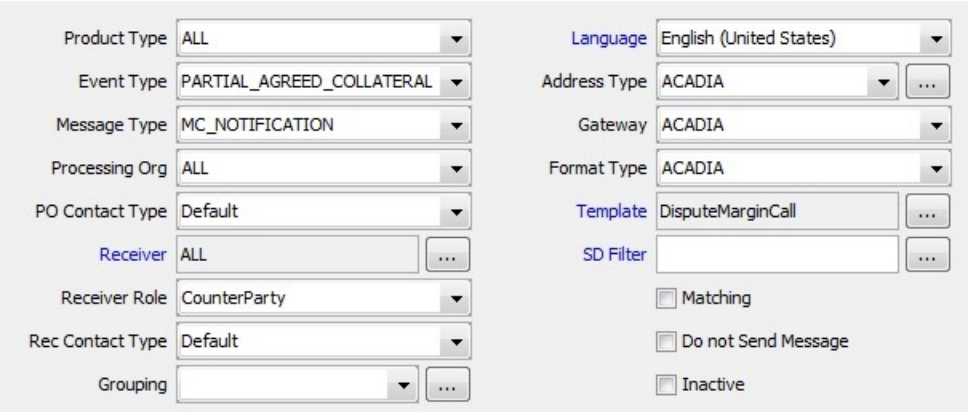

Product Type
ALL
Event Type
CANCELLED_COLLATERAL
Message Type
MC_NOTIFICATION
Processing Org
ALL
PO Contact Type
Default
Receiver
ALL
Receiver Role
CounterParty
Rec Contact Type
Default
Grouping
Language
English (United States)
Address Type
ACADIA
Gateway
ACADIA
Format Type
ACADIA
Template
CancelMarginCall
SD Filter
Matching
Do not Send Message
Inactive

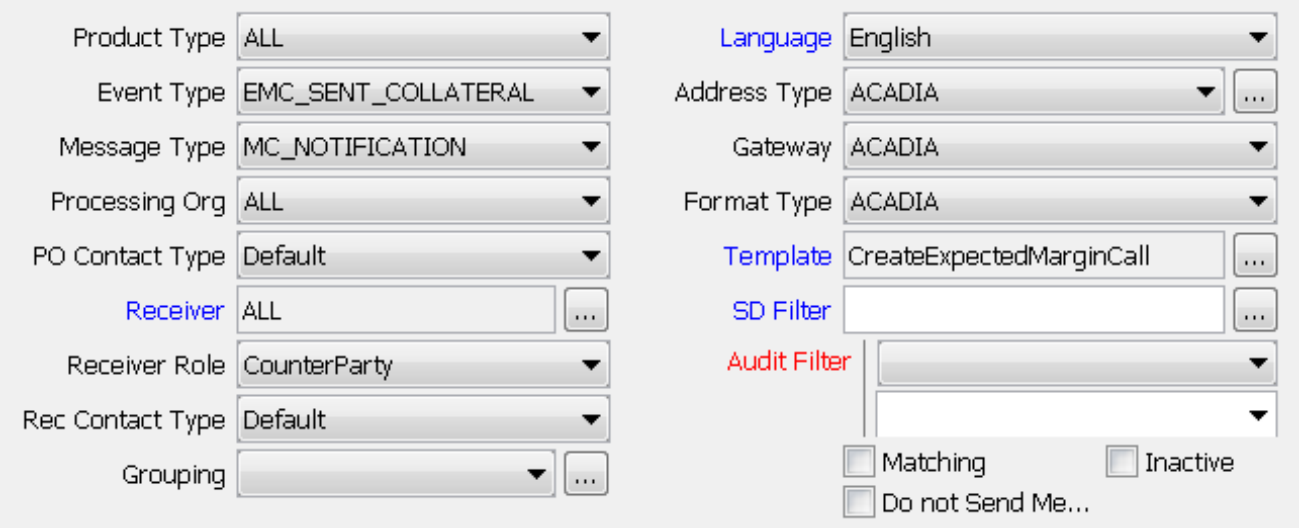

Product Type
ALL
Event Type
CANCEL_COLLATERAL
Message Type
MC_NOTIFICATION
Processing Org
ALL
PO Contact Type
Default
Receiver
ALL
Receiver Role
CounterParty
Rec Contact Type
Default
Grouping
Language
English (United States)
Address Type
ACADIA
Gateway
ACADIA
Format Type
ACADIA
Template
CancelMarginCall
SD Filter
Matching
Do not Send Message
Inactive

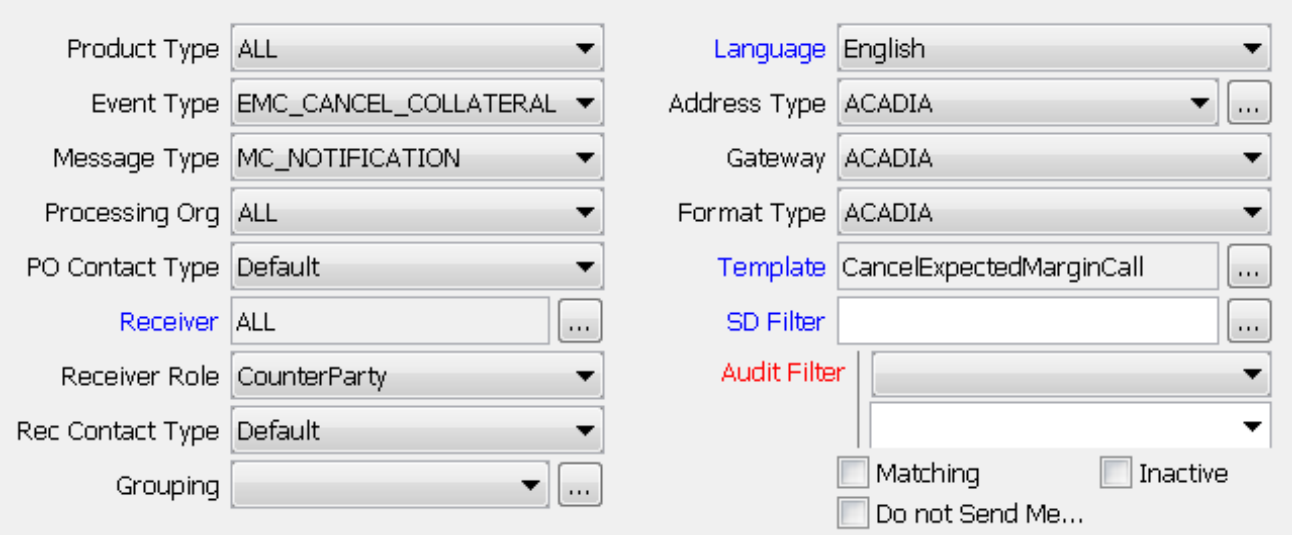

Product Type ALL
Event Type CANCEL_DISPUTED_COLLATE...
Message Type MC_NOTIFICATION
Processing Org ALL
PO Contact Type Default
Receiver ALL
Receiver Role CounterParty
Rec Contact Type Default
Grouping
Language English (United States)
Address Type ACADIA
Gateway ACADIA
Format Type ACADIA
Template CancelDisputeMarginCall
SD Filter
Matching
Do not Send Message
Inactive


Product Type ALL
Event Type CREATED_COLLATERAL
Message Type MC_NOTIFICATION
Processing Org ALL
PO Contact Type Default
Receiver ALL
Receiver Role CounterParty
Rec Contact Type Default
Grouping
Language English (United States)
Address Type ACADIA
Gateway ACADIA
Format Type ACADIA
Template CreateMarginCall
SD Filter
Matching
Do not Send Message
Inactive


Product Type ALL
Event Type DISPUTED_COLLATERAL
Message Type MC_NOTIFICATION
Processing Org ALL
PO Contact Type Default
Receiver ALL
Receiver Role CounterParty
Rec Contact Type Default
Grouping
Language English (United States)
Address Type ACADIA
Gateway ACADIA
Format Type ACADIA
Template DisputeMarginCall
SD Filter
Matching
Do not Send Message
Inactive

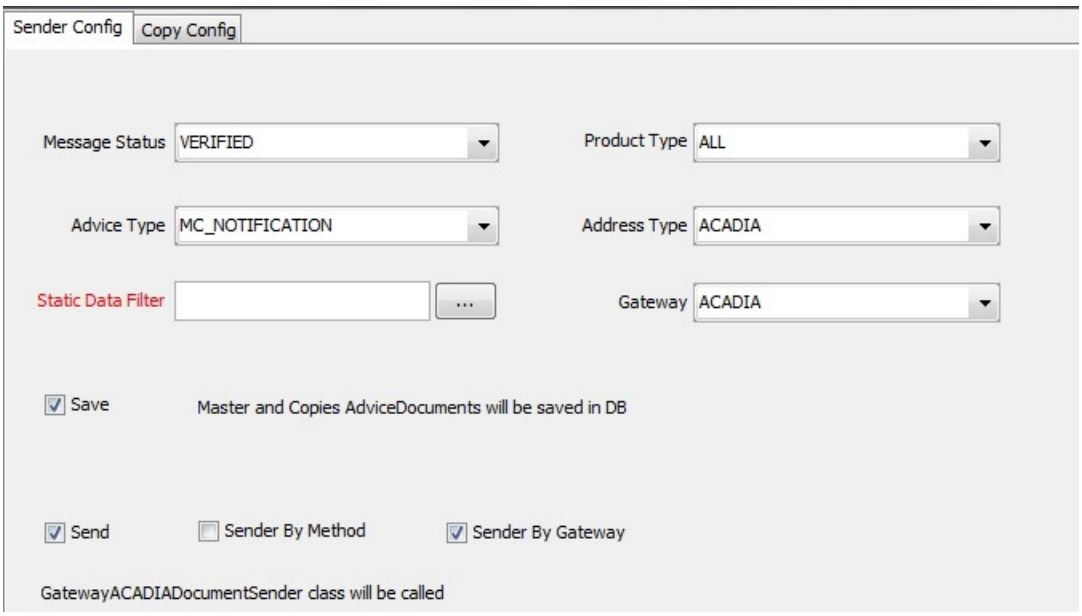

Product Type
ALL
Event Type
PARTIAL_AGREED_COLLATERAL
Message Type
MC_NOTIFICATION
Processing Org
ALL
PO Contact Type
Default
Receiver
ALL
Receiver Role
CounterParty
Rec Contact Type
Default
Grouping
Language
English (United States)
Address Type
ACADIA
Gateway
ACADIA
Format Type
ACADIA
Template
DisputeMarginCall
SD Filter
Matching
Do not Send Message
Inactive


Product Type
ALL
Event Type
EMC_SENT_COLLATERAL
Message Type
MC_NOTIFICATION
Processing Org
ALL
PO Contact Type
Default
Receiver
ALL
Receiver Role
CounterParty
Rec Contact Type
Default
Grouping
Language
English
Address Type
ACADIA
Gateway
ACADIA
Format Type
ACADIA
Template
CreateExpectedMarginCall
SD Filter
Audit Filter
Matching
Inactive
Do not Send Me...


Product Type
ALL
Event Type
EMC_CANCEL_COLLATERAL
Message Type
MC_NOTIFICATION
Processing Org
ALL
PO Contact Type
Default
Receiver
ALL
Receiver Role
CounterParty
Rec Contact Type
Default
Grouping
Language
English
Address Type
ACADIA
Gateway
ACADIA
Format Type
ACADIA
Template
CancelExpectedMarginCall
SD Filter
Audit Filter
Matching
Inactive
Do not Send Me...

3.4 Message Sender Setup

To view the Message Sender Configuration window, from Navigator, select **Configuration > Messages & Matching > Message Sender**.



4. Acadia SVA Margin Call Contracts

Acadia MarginSphere supports Sole Calculation Valuation Agent margin events between counterparties using the Margin API Expected Margin Call xsd with notification flag.

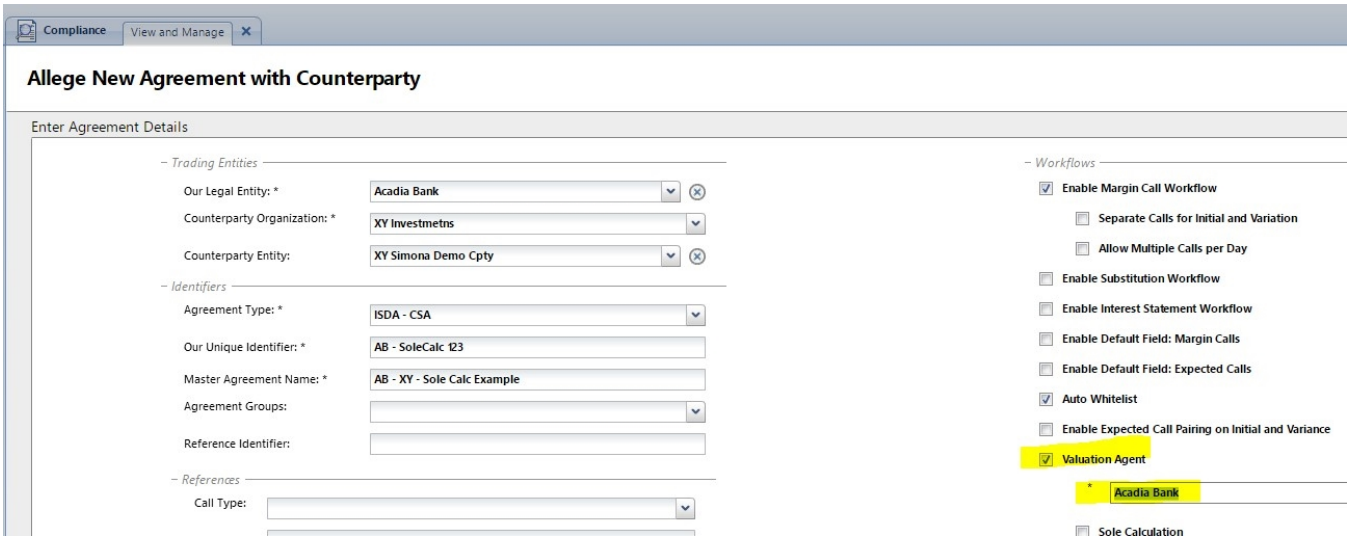
When a Notification is sent via MarginSphere, the counterparty can automatically create a Margin Call from that notification. An Expected Call will be processed as a notification.

NOTE: This does not affect Margin Calls on the agreement.

4.1 Configuration

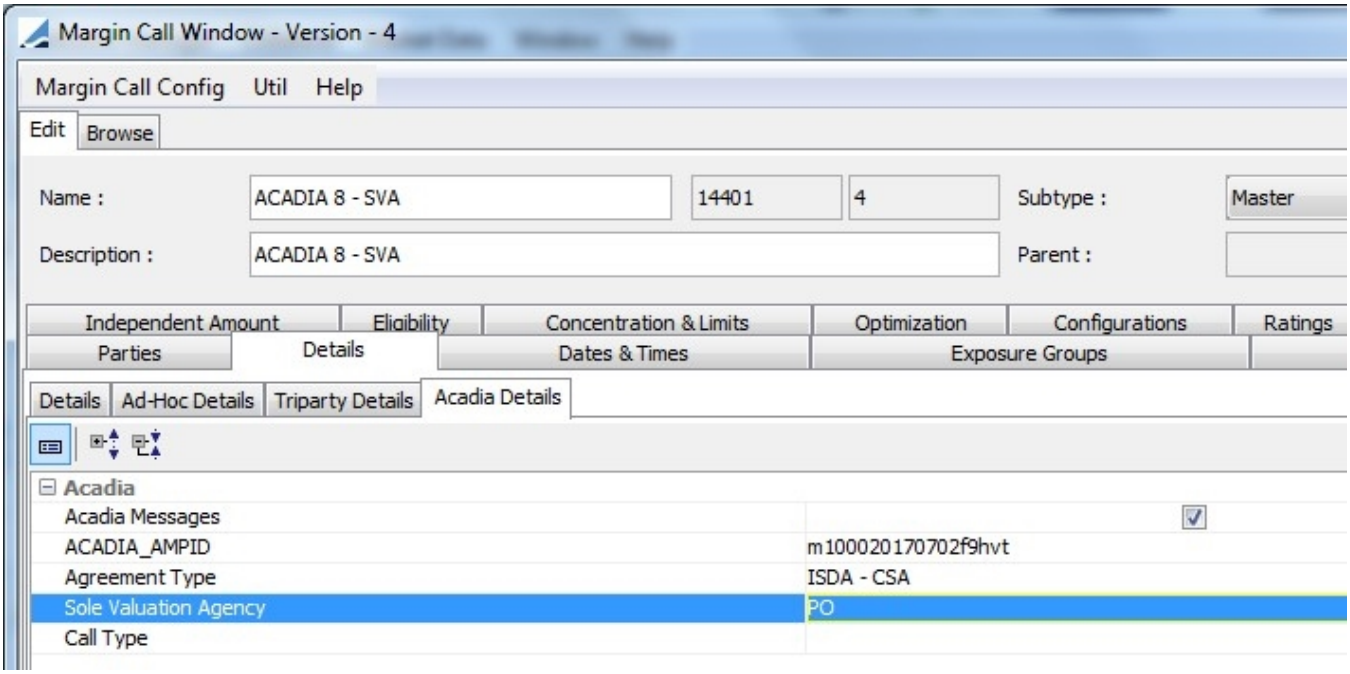
4.1.1 Agreements in Acadia

In Acadia, there is a Notification field in the agreement. In this field, on e party must be defined as the Sole Calculation Agent on agreements where notifications will be used. The party sending the Notifications is considered to be the Sole Calculation Agent.



4.1.2 Margin Call Contracts In Calypso

The Sole Valuation Agency designation is found in the **Details > Acadia Details** panel of the contract.



The *Sole Valuation Agency* field has the options of PO or none. If PO is selected, a notification is automatically sent to the counterparty if the Global Required Margin is less than 0.

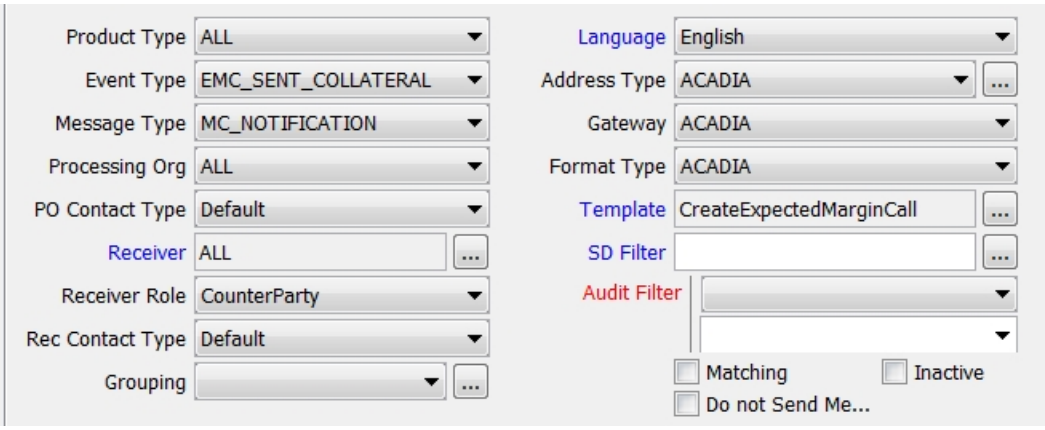
4.2 Acadia SVA Workflow

▶ For details on the SVA workflow, see Acadia Configuration SVA Workflow.

4.3 Notification

4.3.1 Message Setup

The fields supplied in the Notification are turned into Margin Call fields by the counterparty. Certain fields are required and signage must be correct.



4.3.2 Field Details

XML Field	Description	Notes	Calypso Column
marginAgreement AmpId	Specifies the AmpId of the associated margin agreement. Either AmpId or Agreement Short Name can be provided	Either Agreement AmpId or Short Name must be provided	Margin Call Contract > Details > Acadia Details > ACADIA_AMPID
marginAgreement ShortName	Enter the margin agreement short name. From this value, AMP can derive the Legal Entity, Organization and Counterparty information required to create a new margin call. Either the AmpId or Agreement Short Name can be provided	Either Agreement AmpId or Short Name must be provided	Found in the table mrgcall_config, description column. Alternatively, this can be an attribute on the margin call contract
callType	Specifies the MarginSphere defined type of the margin call. Call type defines weather the call is netted, non-netted or segregated (see buy-side workflows).	Values: Netted, Initial and Variation	
valuationDate	The date on which the asset is valued. Typically this is based on the valuations and prices at the end of the day for the previous business day (T-1).		Table margin_call_entries, trade_datetime column
currency	The currency of the margin call	Values: ISO Currency Code	Table margin_call_entires, contract_currency column
totalCallAmount	Value of the collateral required to satisfy the margin call	Absolute value	Collateral Manager Results panel, Global Required

XML Field	Description	Notes	Calypso Column
			Margin field
exposure	This is the total collateral requirement amount which is the net of the independent amount plus the mark to market exposure	from the caller's perspective	Collateral Manager Results panel, Net Exposure field
collateralValue	This is the collateral, net of haircut for the collateral already in custody by the party making the call	from the caller's perspective	Table margin_call_ entries, total_ collateral_value column
threshold	Amount of unsecured exposure a counterparty is prepared to accept before calling for collateral		Table mrgcall_ config, columns po_ thres_amt and le_ thres_amt
deliverAmount	Specifies the amount to be delivered by the party being called	Absolute value	Collateral Manager Results panel, New Margin field
returnAmount	Specifies the amount to be returned by the party being called	Absolute value	Collateral Manager Results panel, Return Margin field
pendingCollateral	The collateral value, net of haircut, for the collateral that has been pledged but has not settled yet	from the caller's perspective	found in Total Collateral field
counterpartyMarkToMarket	Mark to market value of the trades under the agreement, negation of Variation Exposure	For the counterparty on the call, these are from the Sole Calculation Agent's perspective	Collateral Manager Results panel, Net Balance field
counterpartyCollateralBalance	Collateral value, net of haircut, for the collateral held or posted		Collateral Manager Results panel, Total Prev Margin
counterpartyInitialMargin	Independent amount required		Collateral Manager Results panel, IA field
notificaiton	Boolean value that determines whether to make this message an Expected Call or Notificaiton	true	
noAction	If true, indicates that you are not expecting a margin call on the valuation date, and if one is received, it should be disputed		True if GRM > 0 False if GRM < 0

4.3.3 Exposure Direction

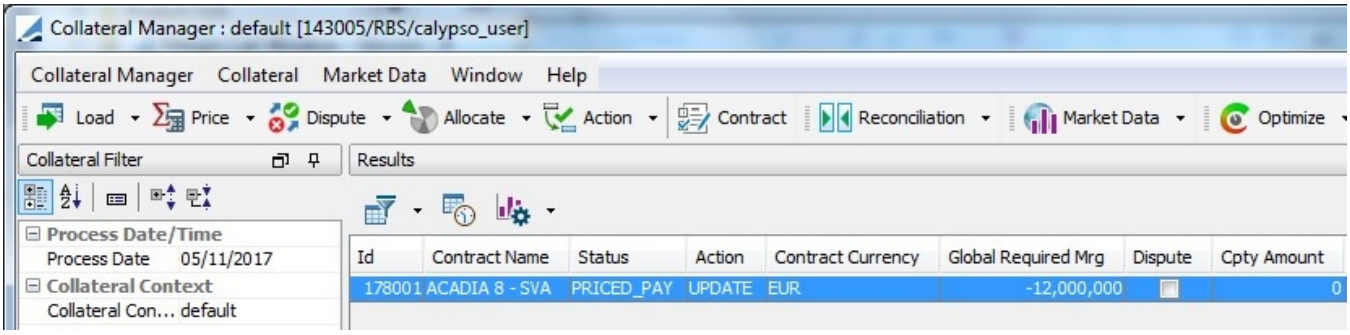
Directions are reversed for the following fields:

- Exposure
- Total Collateral
- Pending Collateral

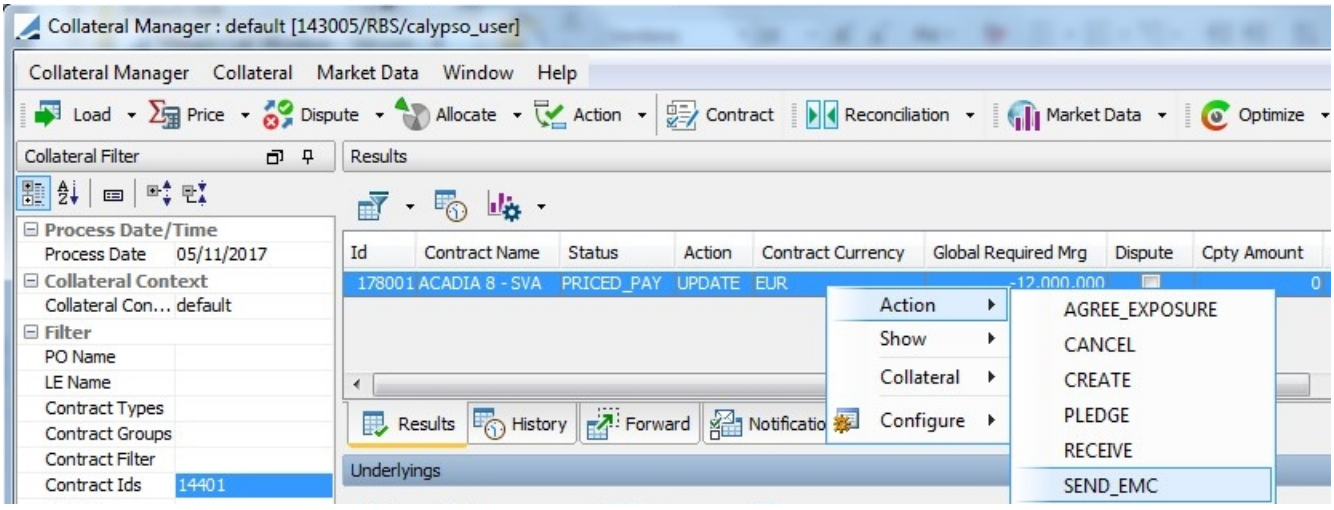
Because it must appear from the caller's (counterparty) perspective , if PO calculates a negative exposure, on the expected margin message it appears as positive.

4.4 Acadia SVA Example

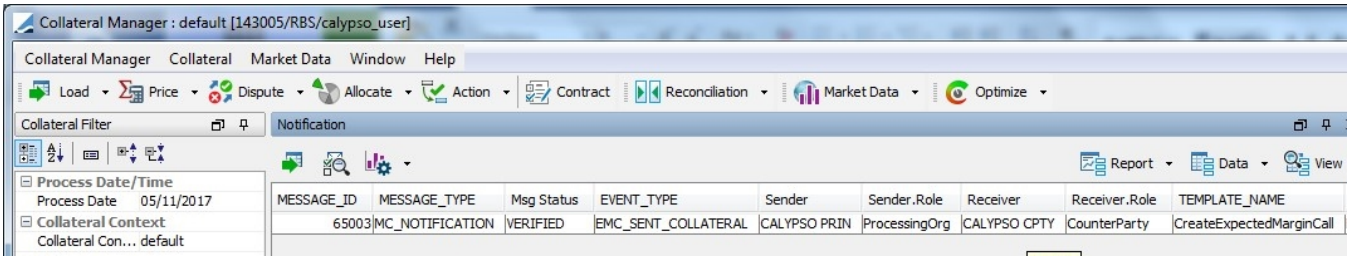
The entry is in PRICED_PAY:



From there, the user would apply SEND_EMC:

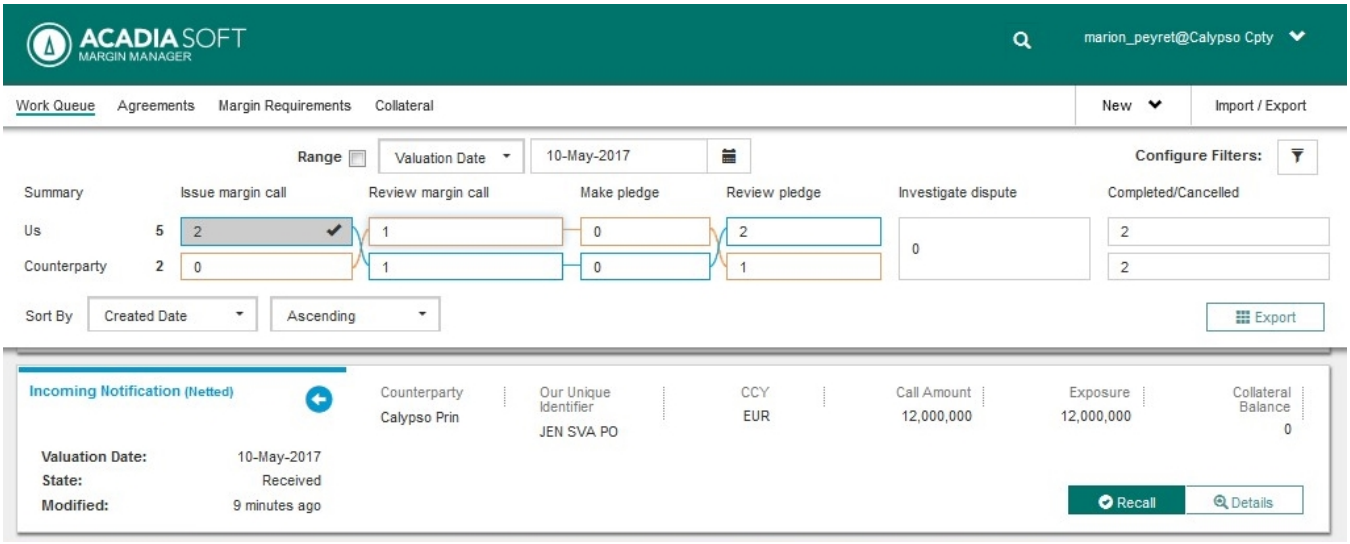


This would generate the following message:

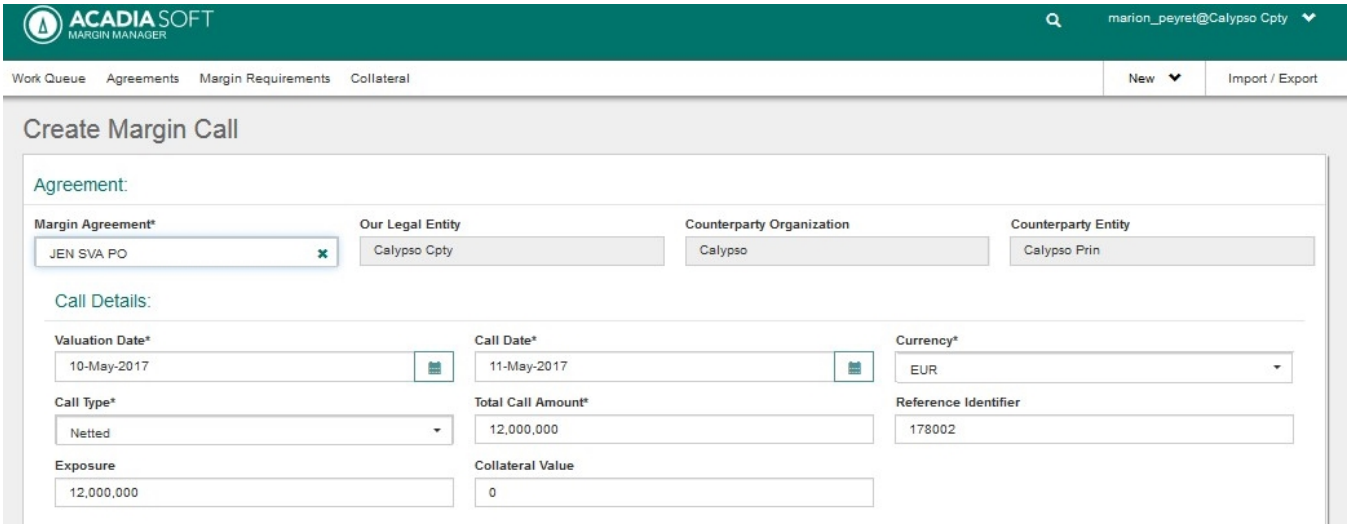



```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<amp:expectedMarginCalls xmlns:amp="create.expectedmargincall.api.acadiasoft.com">
<amp:expectedMarginCall>
<amp:collateralValue>0.0</amp:collateralValue>
<amp:currency>EUR</amp:currency>
<amp:deliverAmount>12000000</amp:deliverAmount>
<amp:deliverMinimumTransferAmount>0.0</amp:deliverMinimumTransferAmount>
<amp:deliverRoundingAmount>0.0</amp:deliverRoundingAmount>
<amp:exposure>12000000</amp:exposure>
<amp:initialExposure>0.0</amp:initialExposure>
<amp:minimumTransferAmount>0.0</amp:minimumTransferAmount>
<amp:netRequiredAmount>12000000</amp:netRequiredAmount>
<amp:returnAmount>0.0</amp:returnAmount>
<amp:pendingCollateral>0.0</amp:pendingCollateral>
<amp:returnMinimumTransferAmount>0.0</amp:returnMinimumTransferAmount>
<amp:returnRoundingAmount>0.0</amp:returnRoundingAmount>
<amp:roundingAmount>0.0</amp:roundingAmount>
<amp:threshold>0.0</amp:threshold>
<amp:totalCallAmount>12000000</amp:totalCallAmount>
<amp:callType>Netted</amp:callType>
<amp:valuationDate>
<amp:day>10</amp:day>
<amp:month>5</amp:month>
<amp:year>2017</amp:year>
</amp:valuationDate>
<amp:initialPendingCollateral>0.0</amp:initialPendingCollateral>
<amp:counterpartyMarkToMarket>-12000000</amp:counterpartyMarkToMarket>
<amp:counterpartyCollateralBalance>0.0</amp:counterpartyCollateralBalance>
<amp:counterpartyInitialMargin>0.0</amp:counterpartyInitialMargin>
<amp:notification>true</amp:notification>
<amp:noAction>false</amp:noAction>
<amp:externalReference>178002</amp:externalReference>
<amp:marginAgreementAmpId>m100020170702f9hvt</amp:marginAgreementAmpId>
<amp:marginAgreementType>CSA</amp:marginAgreementType>
<amp:marginAgreementShortName>
</amp:marginAgreementShortName>
</amp:expectedMarginCall>
</amp:expectedMarginCalls>
```

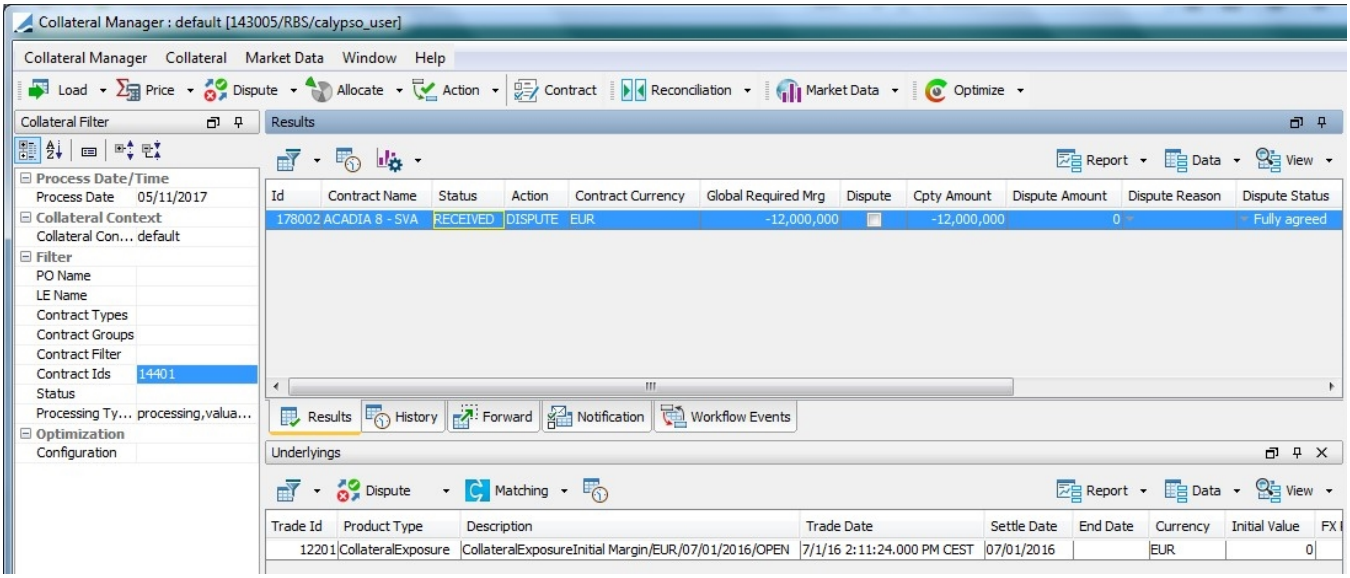
As a result, the following will appear on the Acadia MarginSphere portal:



The counterparty would do a recall:



The entry moves to RECEIVED on the Calypso side:



From there, the processing org will pledge and the regular process will apply.

5. Margin Call Contract Mapping

A Margin Call Contract and an AcadiaSoft agreement are mapped to each other using the agreement reference (*identifier* in Calypso, which maps to the message field *short name*). If there is no identifier, the contract AmpId (see below for more details) is used. If there is more than one contract or one exposure group with the same AmpId, the system looks at a combination of AmpId, call type, roll, etc...to map.

The AmpId is a unique identifier that MarginSphere assigns to an object in the system (agreement, margin call, etc...). An agreement is assigned an AmpId when it is created in MarginSphere.

In other words, the Create message requires that either the agreement AmpId or the agreement reference (which must be unique) be provided to identify the correct agreement. MarginSphere knows who the parties are based on the agreement cited.

5.1 Example of Bilateral Process

5.1.1 PRICED_RECEIVE

In the case the PO is expecting to receive collateral, the Margin Call Entry will be in PRICED_RECEIVE status. The PO will then send the message using the CREATE action, which will move the entry to CREATED and generate a CreateMarginCall message.

The PO will then wait for the CP's response, which can be one of the following:

- AGREE_EXPOSURE- This moves the entry to AGREED_REC. The PO then waits for the CP's pledge.
- PLEDGE - This moves the entry to PLEDGED_REC. The PO can then choose from the following actions:
  - Accept the pledge with the actions PLEDGE_ACCEPT or PLEDGE_CHECK_AND_ACCEPT, which moves the entry to PLEDGE_ACCEPTED (sending a *PledgeAcceptMarginCall* message back to the CP). The action EXECUTE can then be applied to save the Margin Call trades.
  - Reject the pledge (action PLEDGE_REJECT). In this case, a pop up message appears and the PO must provide rejection reasons, which are used to populate the message. This moves the entry to PLEDGE_REJECTED (sending a *PledgeRejectMarginCall* message to the CP). The CP can amend their pledge, in which case the PO receives a *PledgeAmendMarginCall* message.
- DISPUTE - In case of a full dispute, moving the entry to DISPUTED
- PARTIAL_AGREE - In the case of a partial dispute, moving the entry to PARTIAL_REC. This updates the Agreed Amount field to the CP amount. Moving to the next status depends on the CP action, which can be:
  - CANCEL_DISPUTE if the CP cancels the dispute, moving the entry to CREATE
  - PLEDGE, moving the entry to PLEDGED_REC

5.1.2 PRICED_PAY

In the case the PO is expecting to be called, the margin call entry will be in PRICED_PAY status and waiting to receive a message from the CP. Once the message is received, the action RECEIVE will be applied automatically and the entry will be moved to RECEIVED.

From there the PO can:

- AGREE_EXPOSURE, moving the entry to AGREED. The PO will then:
  - PLEDGE (see PLEDGE description above)
  - CANCEL_AGREE , moving the entry to CANCEL_AGREED. Then proceed to disputing it (partial or full).
- PLEDGE - The PO manually selects a pledge via the Allocation window. Upon receiving this pledge, the CP can accept or reject the pledge. The action applied on the entry depends on the message sent by the CP:
  - If the CP accepts the pledge, PLEDGE_ACCEPT is applied and the entry moves to PLEDGE_ACC. The PO can then execute the entry to save the Margin Call trades.
  - If the CP rejects the pledge, PLEDGE_REJECT will be applied and the entry moves to PLEDGE_REJ. The PO will then amend their pledge (a PledgeAmendMarginCall message will be sent).
- DISPUTE - Note that before the action DISPUTE is applied, the user needs to set the Agreed Amount. This can be done by either manually updating the Agreed Amount field and selecting the Dispute Option *Select Other* (in Collateral Manager > Dispute drop-down), or by selecting the Dispute Option *Select PO amount*. The DISPUTE action can then be applied. At this point, a pop up window appears for a dispute reason to be selected and a dispute comment to be entered. This information populates fields in the DisputeMarginCall message which is sent once the entry is in DISPUTED status. The dispute can be:
  - Partial dispute, in which case the PO pledges based on the agreed amount.
  - Full dispute, in which case it remains in DISPUTED status unless the PO cancels the dispute with the CANCEL_DISPUTE action.

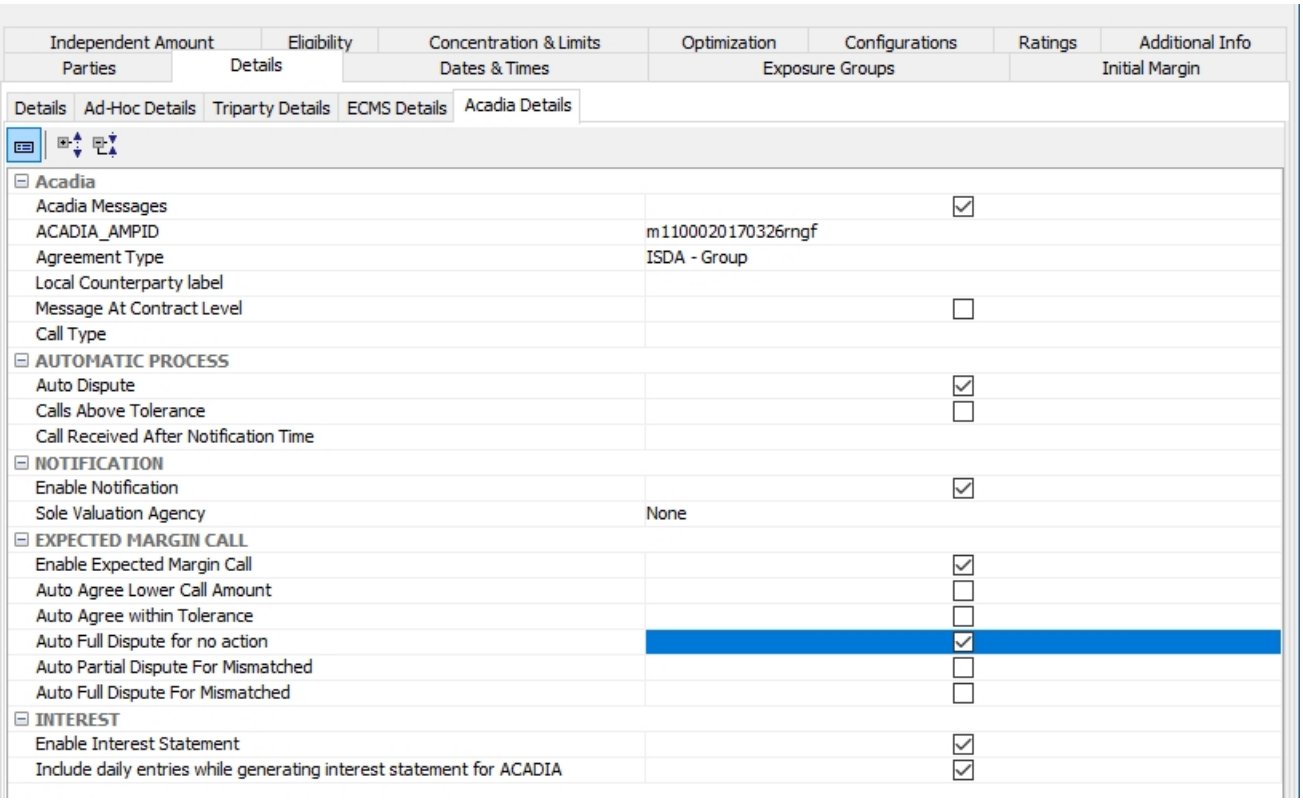
5.2 Acadia Attributes in Margin Call Contract

5.2.1 Acadia Details

The Acadia Details panel, within the Details panel in the Margin Call contract in the Collateral module, contains information related to generating AcadiaSoft messages.

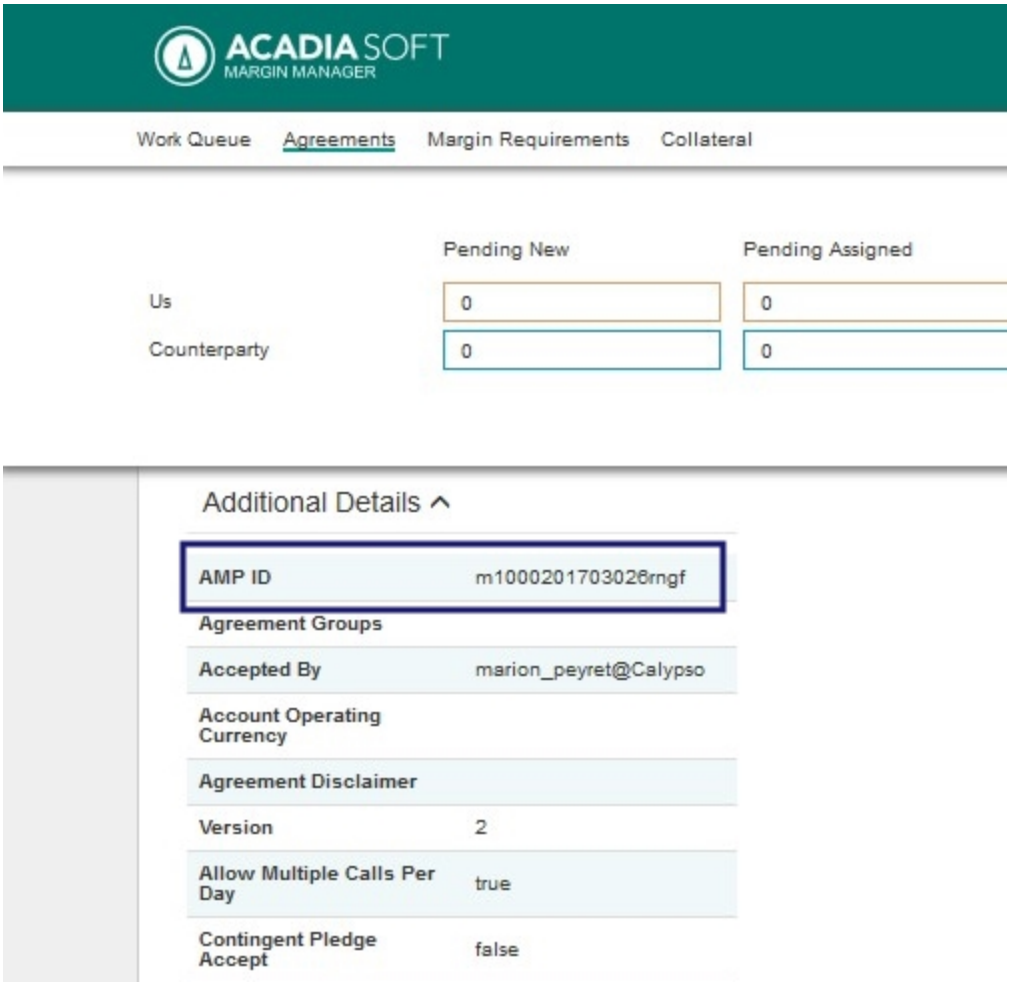
From Calypso Navigator, select **Configuration > Fees, Haircuts & Margin Calls > Margin Call**.

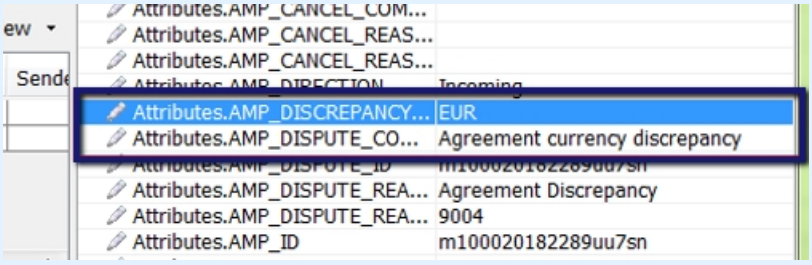
In the Details >Acadia Details tab, the following Acadia details are displayed. Click the Acadia Messages checkbox to indicate that Acadia messages are going to be sent and received.



NOTE: Automatic Process, Notification and Expected Margin Call are available at contract level only. They are not on the Acadia Details panel for Exposure Groups. Only one of these options can be chosen.

Fields	Description
Acadia	
Acadia Messages	Click the Acadia Messages checkbox to indicate that Acadia messages are going to be sent and received.
ACADIA_AMPID	In the *ACADIA_AMPID*, input the incoming response Id to a Margin Call when using AcadiaSoft.

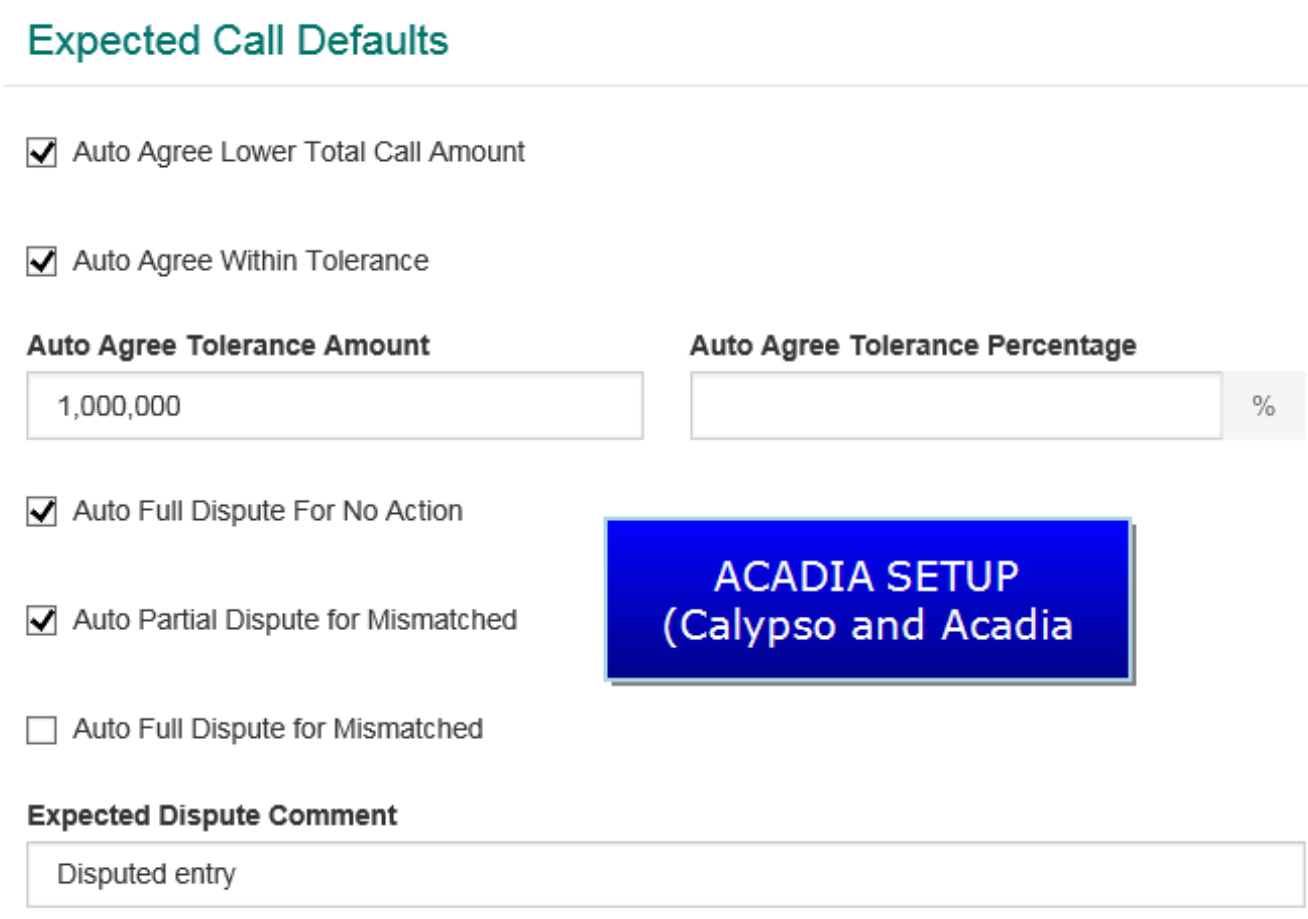
Fields	Description
	
Agreement Type	Select a value for the *Agreement Type*, which also comes from the Acadia configuration. The options are: • ISDA-Group • ISDA-CSA • ISDA-Regulatory CSA • Repo - GMRA • repo - ISMA • Repo - MRA • MSFTA • GMSLA The options available for selection come from the *Collateral.AcadiaAgreementType* domain value.

Fields	Description
Local Counterparty label	When populated with a value, it will populate the same value in the Create Margin Call message
Message At Contract Level	When selected, messages are sent at contract level. This should only ONLY be selected if there are no Exposure Groups on the contract.
Sole Valuation Agency	Options of PO or none, if PO is selected, a notification is automatically sent to the counterparty if the Global Required Margin is less than 0.
Call Type	Specifies the type of margin call, defining whether the call is netted or segregated (variation or initial)
Automatic Process	
Auto dispute	The Auto Dispute process automatically initiates a dispute when a designated dispute tolerance is exceeded. Configuration for this feature is as follows: • A Dispute Tolerance is set in the Details > Details panel of the Margin Call contract under Contract Level Dispute • The Auto Dispute field is selected in the Details > Acadia Details panel of the Margin Call contract • The workflow rule *CheckAutoDispute* is added to the RECEIVED – DISPUTE – DISPUTED workflow transition. This rule checks if the Auto Dispute flag is set and if so, if the Dispute Tolerance is met. This feature is also used when an incorrect margin call currency is received from Acadia. When Auto Dispute is selected, the margin call will be auto disputed if the incoming call currency is not the same as the agreement currency. The comments for the AMP_DISCREPANCY_CURRENCY attribute will reflect the incorrect currency and the AMP_DISPUTE_COMMENTS will read "Agreement currency discrepancy."  Dispute margin call messages received on non-business day will get mapped to the fully disputed entry and will get auto disputed. Once margin call is disputed, the system will send dispute code as 9999 and comment as “Non business day”. In Collateral Context, Workflow Subtype should be set to “From Contract and Entry” in order to use the “valuation” workflow on a non-business day.

Fields	Description
Calls Above Tolerance	If checked, an incoming call above the tolerance will automatically be disputed. If unchecked, no dispute will be performed based on the call amount.
Call Received After Notification Time	The STP process can be stopped if the call is received from the counterparty after the notification time on the agreement. The possible values are: Ignore Notification Time, Stop STP and Auto Dispute. This attribute checks the Collateral Manager > Result > Time to Notification column. If it is >0, the notification has not been reached yet and the call will not be disputed on this basis. If it is <0, the notification has passed, and the call can be disputed depending on the configuration of this attribute.
Notification	
Enable Notification	Select if a Notification needs to be generated on the contract. A Notification is visible to both the party sending the Notification to the HUB and the Counterparty.
Sole Valuation Agency	If Processing Org, a Notification is automatically sent to the Counterparty if the Global Required Margin is < 0. ▶ See Expected Call Messages for additional information.
Expected Margin Call	
Enable Expected Margin Call	Select if an Expected Margin Call message needs to be generated on the contract. In the case of a *Pay* Margin Call entry, an expected margin call message is generated which will be sent to the Acadia HUB, it is not visible to the counterparty. Depending on the following options selected, once the call has been sent to the counterparty, the message can automatically move through the workflow.
Auto Agree Lower Call Amount	An *Agree* message will be automatically generated by Acadia if the Counterparty calls for less than the Processing Org expected.
Auto Agree within Tolerance	An *Agree* message will be automatically generated by Acadia if the Counterparty calls with tolerance.
Tolerance Amount	This option is available if *Auto Agree within Tolerance* is selected. An amount or a percentage must be defined.
Tolerance Percentage	This option is available if *Auto Agree within Tolerance* is selected. An amount or a percentage must be defined.
Auto Full Dispute for no action	Dispute in case 'no action' is true.
Auto Partial Dispute for	Partial dispute message is automatically generated by Acadia if the Counterparty

Fields	Description
Mismatched	calls for more than expected.
Auto Full Dispute for Mismatched	Full dispute with Agreed Amount = 0 is generated if the Counterparty calls for more than is expected.
Interest - See Acadia Interest Manager for more information.	
Enable Interest Statement	If selected, Acadia interest statements are generated for the interest bearing trades linked to the Margin Call Contract. If it is not selected, the potential interest bearing trades linked to this Margin Call Contract will not generate interest statements.
Include daily entries while generating interest statement for ACADIA	If selected, Acadia interest statements will include daily entries.

NOTE: The setup in Calypso and Acadia must match.

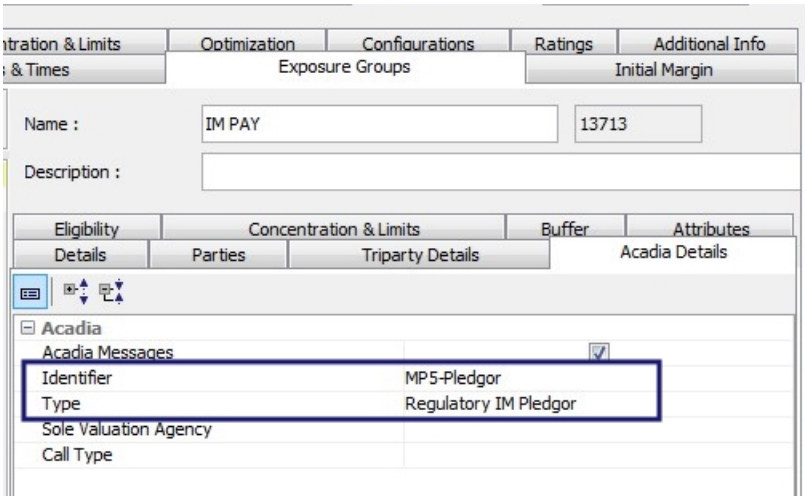


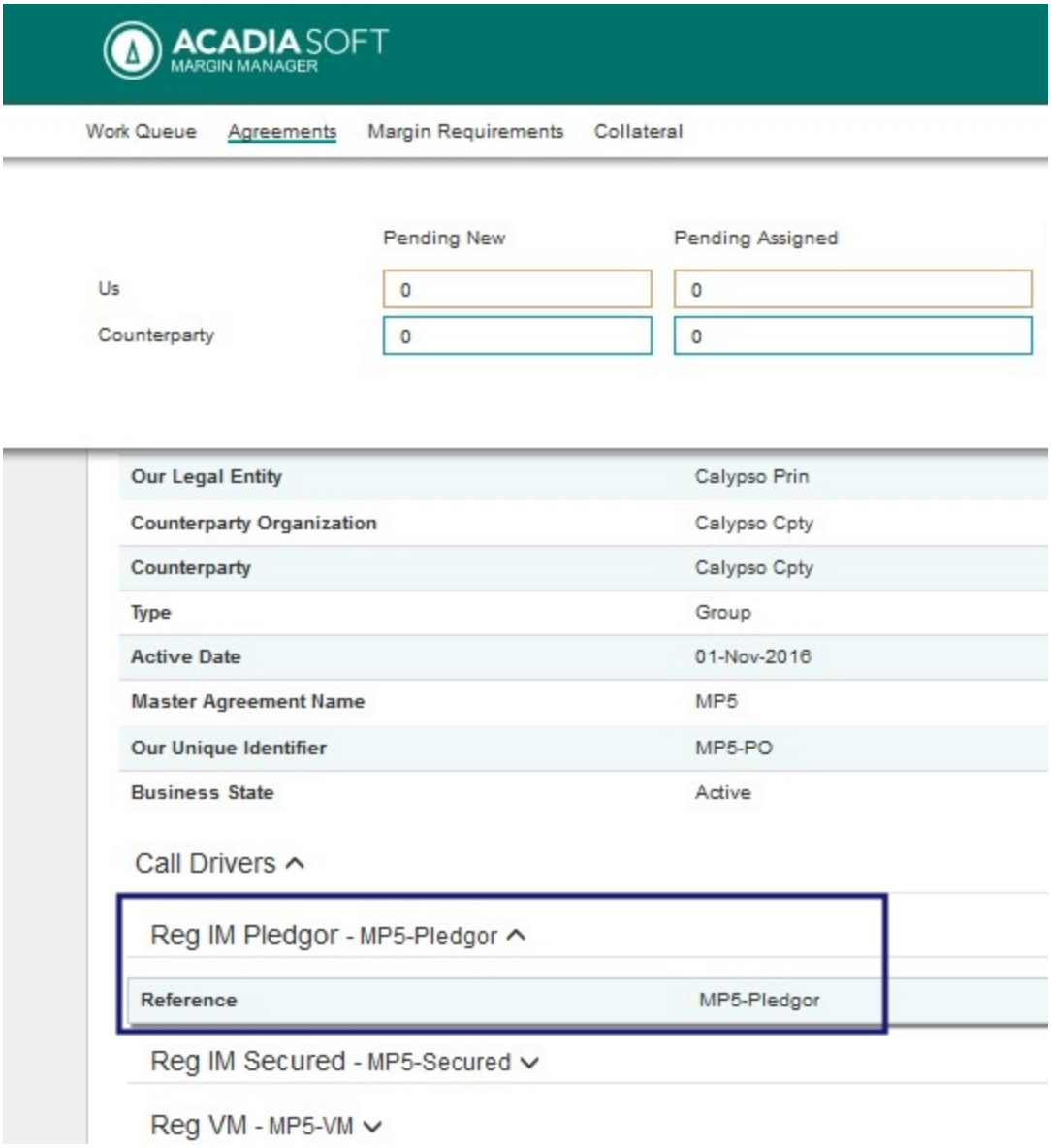
» For ISDA-Group at Master level, the following configuration is needed:

  - Configure ACADIA_AMPID, Agreement Type = ISDA-Group and select Acadia Messages
  - Configure ACADIA_MASTER_IDENTIFIER = Acadia Reference for each agreement type in the Additional Info panel of the Margin Call contract
  - Configure ACADIA_MASTER TYPE in the Additional Info panel of the Margin Call contract, choosing from the values in the drop-down. Values are Legacy Initial, Legacy Variation, Regulatory VM, Regulatory IM Pledgor and Regulator IM Secured
- The workflow is the same for the ISDA-Group contract either at the Master level or the Exposure Group level
- On the Acadia side, the call driver reference must be set at the lowest level of the group in case of VM Gross

Acadia Details are also available in the Exposure Group configuration, though the selection options are different from the Details panel.

The Type field is only mandatory if the master Acadia Agreement Type is ISDA -Group.





Select the Acadia Messages checkbox to indicate that messages are going to be sent/received from the Exposure Group level.

Enter an Identifier which corresponds to the Identifier added in Acadia as well as a Type. The values possible for the Type field are:

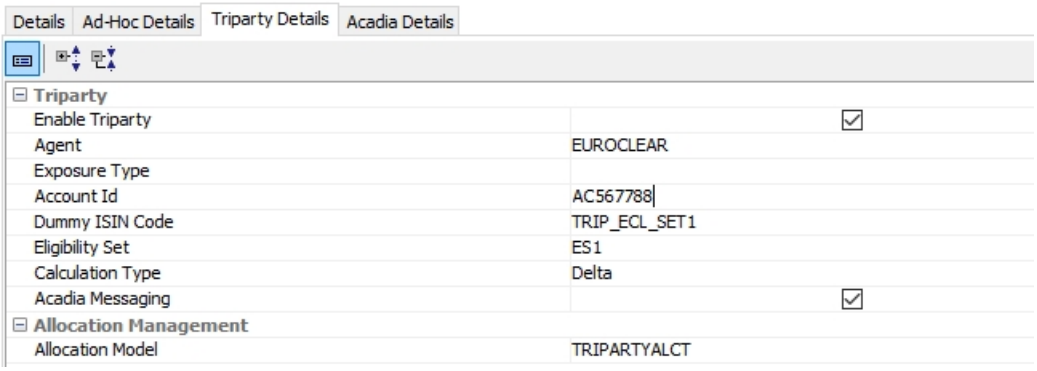
- Legacy Initial (for non-regulatory IM)
- Legacy Variation (for non-regulatory VM)
- Regulatory IM Pledgor
- Regulatory IM Secured

- Regulatory IM

These values are stored in the *Collateral.AcadiaMarginCallType* domain value.

5.2.2 Triparty Details

Refer to the Triparty Services Guide for information on Triparty setup. Some fields of this panel are described below.



Field	Description
Calculation Type	*Net Exposure*: Previous default behavior *Delta*: Default behavior. When Delta is chosen, the Global Required Margin shows a delta amount rather than the net exposure for Triparty/Non-Acadia contracts. When this is chosen, the following calculations apply: • Constituted Margin = Margin Required – Previous olive • Global Required Margin = Agreed Amount (if there is a dispute) • Global Required Margin = Constituted Margin (if no dispute) • RQV : – If below the MTA, RQV = Previous RQV (no change in the exposure notified to the triparty agent) – If above MTA, RQV = Global Required Margin + Previous RQV (Global Required Margin is a rounded amount) If Acadia Messaging is *True*, the only option for Calculation Type is *Delta*.
Allocation Model	The selection of the *Allocation Model* has an impact on the remaining margin calculation and changes based on whether Acadia Messaging is true or false. When Enable Triparty is selected, the Allocation Management section will become visible. The options when Acadia Messaging is set to *False* are: • Import MT569: Remaining Margin = RQV – Daily Margin • Manual: Remaining Margin = RQV – Previous RQV – Daily Margin

Field	Description
	If Acadia Messaging is set to *True*, the options for Allocation Model are: • MT569: The pledge messages from Acadia are ignored (regardless of the ISIN used). Users will import MT569, which reverses and creates new margin call trades. This was the previous default model. The only change is that all dummy pledges are ignored. • TRIPARTYALCT: Dummy pledges coming in from Acadia are created. User does not import MT569. Incoming pledge messages from Acadia create allocations regardless of the ISIN used. Remaining Margin = RQV – Previous RQV – Daily margin. • TRIPARTYALCT, MT569: Dummy pledges coming in from Acadia are created, enabling the user to perform a check on a dummy allocation. The user is then able to bring in real allocations with MT569. Incoming pledge messages from Acadia create allocations regardless of ISIN used. If approved, the corresponding margin call trades with the dummy are created. The following workflow transition should be used: XXX – CANCELTRIPARTY – TRIPARTY_TRANSATION_CANCELED. When applying this transition, the following will happen: • On Triparty (non-Acadia) contracts, an MT527/CANC message will be generated • On Triparty/Acadia contracts, two things will be done (provided the new workflow rule ResetRequiredValue is added on the transition): – Generate an MT527/CANC – Reset the Required Value field of the Collateral Manager Results tab to 0. The status TRIPARTY_TRANSATION_CANCELED is defined to trigger a cancel message in the *Collateral.TripartyCancelationStatus* domain. Message setup is described in the Triparty Services documentation. For Triparty IM Calls, the following options are available to send dummy pledge messages: • Manual pledge message sent by PO • Auto pledge functionality of Acadia - PO sends the agreed amount on Acadia, and Acadia creates the dummy ISIN TRIPARTYALCT pledge on behalf of PO and sends pledge to counterparty to accept. • Auto send the dummy ISIN TRIPARTYALCT message directly. See Auto Send Dummy ISIN TRIPARTYALCT Messages for details.

5.2.3 Triparty MTA and Rounding

MTA and rounding are supported for Triparty contracts. Calculation type must be set to *Delta*.

MTA Calculation:

For MTA calculation, if Constituted Margin is below the MTA, Global Required Margin is 0. If Constituted Margin is above the MTA, Global Required Margin is equal to the Constituted Margin. If the margin call needs to be paid, the PO's side MTA applies. If the margin call needs to be received, the counterparty's side MTA applies.

Rounding:

For Rounding, the margin call is a New Margin, the Global Required Margin is rounded using the delivery methodology specified on the margin call contract. If the margin call is a Return Margin, the Global Required Margin is rounded using the return methodology specified on the margin call contract.

If the margin call needs to be paid, the PO's side rounding methodology applies. If the margin call needs to be received, the counterparty's side rounding methodology applies.

New Margin Above MTA Example:

MTA = 200,000

Delivery Rounding Method: Rounding UP - 1,000

Return Rounding Method: Rounding DOWN - 1,000

Margin Required = $2,854,873.00

Previous RQV = $2,155.000.00

New Margin = $2,854,873.00 - $2,155,000.00 = $699,873.00

New Margin (Rounding) = $700,000.00, which is above the MTA (200,000.00)

Global Required Margin = $700,000.00

Required Value = $2,855,000.00 (which is $700,000.00 + $2,155,000.00)

New Margin Below MTA Example:

MTA = 200,000

Delivery Rounding Method: Rounding UP - 1,000

Return Rounding Method: Rounding DOWN - 1,000

Margin Required = $2,254,873.00

Previous RQV = $2,155,000.00

New Margin = $2,454,873.00 - $2,155,00.00 = $99,873.00

New Margin (Rounding) = $100,000, which is above the MTA (200,000.00)

Global Required Margin =0.00

Required Value = Previous RQV = $2,155,000.00

Return Above MTA Example:

MTA = 200,000

Delivery Rounding Method: Rounding UP - 1,000

Return Rounding Method: Rounding DOWN - 5,000

Margin Required = $1,854,873.00

Previous RQV = $2,155.000.00

Return Margin = $1,854,873.00 - $2,155,000.00 = $300,127.00

Return Margin (Rounding) = $300,000.00, which is above the MTA (200,000.00)

Global Required Margin = -$300,000.00

Required Value = $1,855,000.00 (which is -$300,000.00 + $2,155,000.00)

Return Below MTA Example:

MTA = 200,000

Delivery Rounding Method: Rounding UP - 1,000

Return Rounding Method: Rounding DOWN - 5,000

Margin Required = $2,054,873.00

Previous RQV = $2,155,000.00

New Margin = $2,054,873.00 - $2,155,00.00 = $100,027.00

New Margin (Rounding) = $100,000, which is above the MTA (200,000.00)

Global Required Margin =0.00

Required Value = Previous RQV = $2,155,000.00

5.2.4 Auto Send Dummy ISIN TRIPARTYALCT Messages

If this setup is not done, you can use one of the other options to send these messages:

- Manual pledge message sent by PO
- Auto pledge functionality of Acadia

If this setup is done, these messages are automatically sent.

Setup for Allocation Model TRIPARTYALCT

Workflow Rule

For the TRIPARTYALCT allocation model, you need to add workflow rule AutoPledgeTriparty on PLEDGE actions:

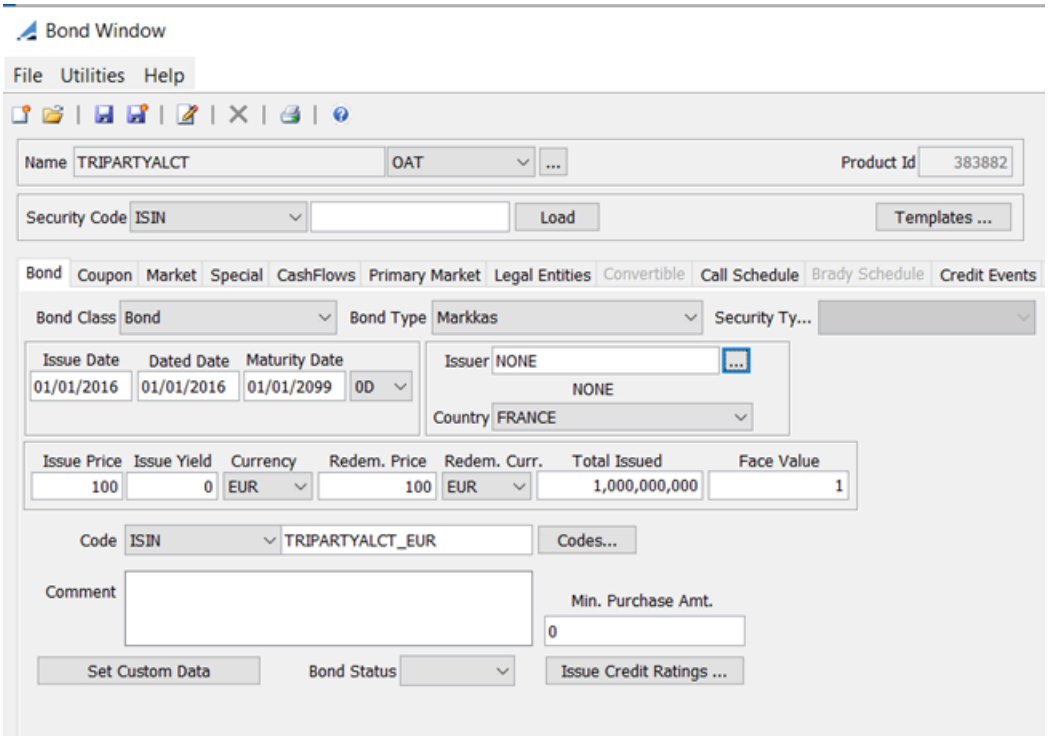
DISPUTED - PLEDGE - PLEDGED

AGREED - PLEDGE - PLEDGED

Dummy ISIN

As allocations need to be created in Calypso for the TRIPARTYALCT allocation model, you need to define a dummy bond for each currency with ISIN = TRIPARTYALCT_<currency>, and this bond needs to be priced as 1.

Example for EUR:

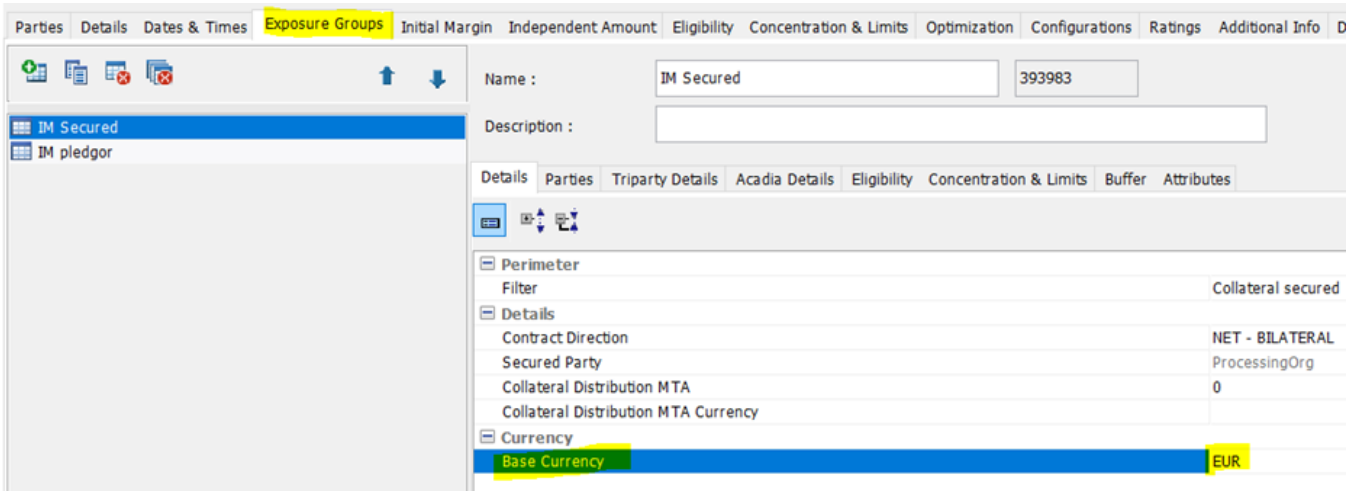


Setup for Allocation Model MT569

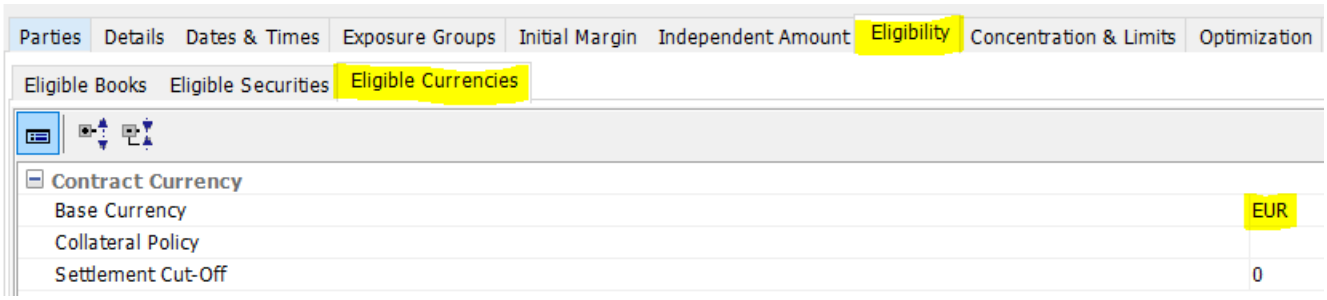
For allocation model MT569, no allocations are created in Calypso hence it is not necessary to set up a dummy bond.

To decide the currency for allocation, the system will first check the currency which is set on exposure groups.

Example:

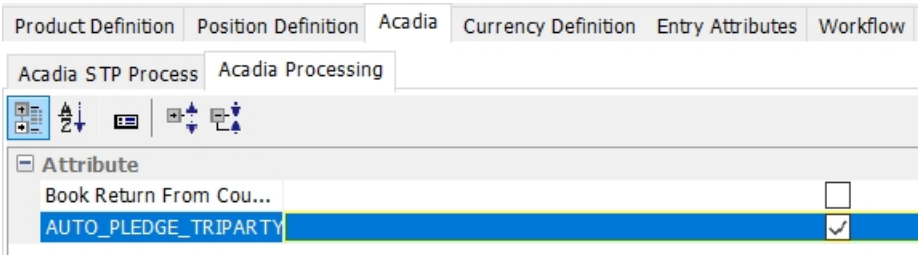


If there are no exposure groups in the contract and separate contracts are created for IM Secured and IM Pledgor, the system will check the currency which is set under eligible currencies.



For allocation model MT569, the allocation message needs to be sent without creating allocations in Calypso and hence it is not necessary to add the workflow rule AutoPledgeTriparty.

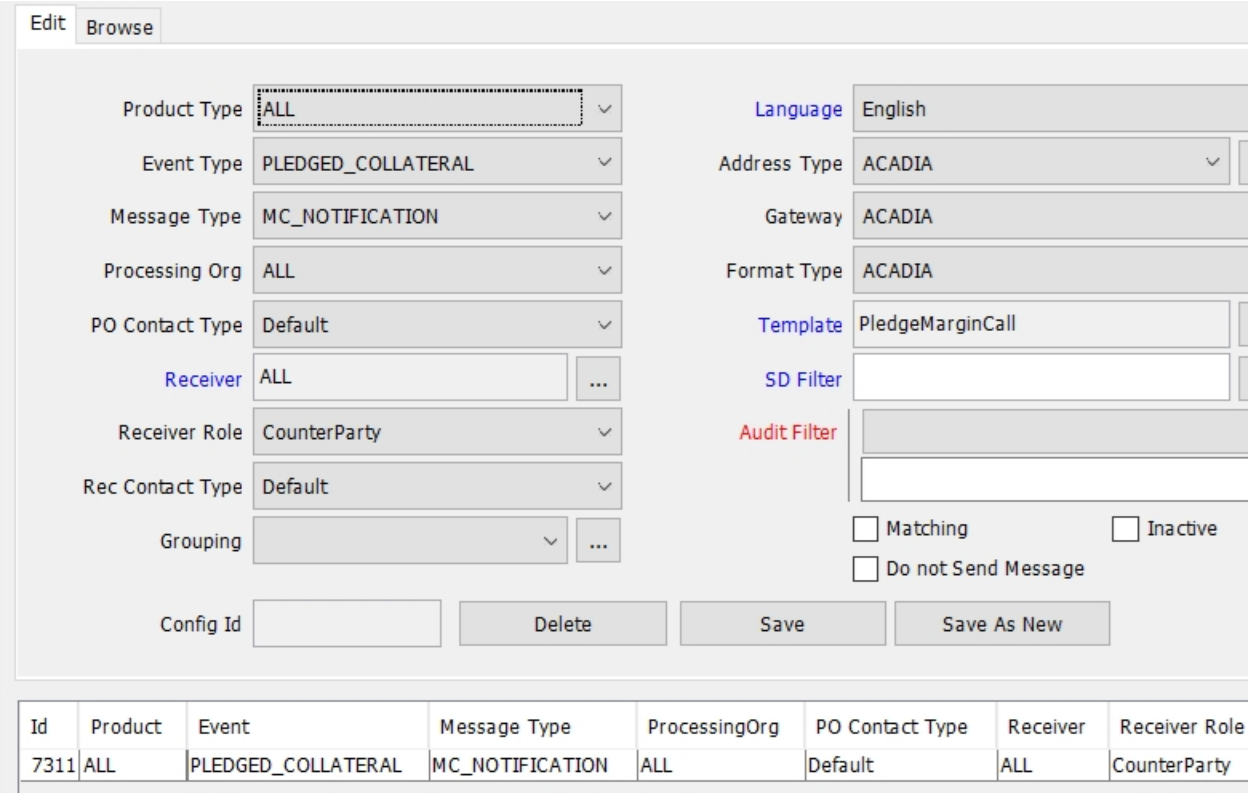
Instead, you need to check the collateral context attribute AUTO_PLEDGE_TRIPARTY under the Acadia panel.



Message Setup

A message of type MC_NOTIFICATION needs to be configured on PLEDGED_COLLATERAL events.

When the PLEDGE action is applied, the message will be generated.



5.3 Acadia Attributes in Collateral Manager

Required Value and Previous RQV, found in the **Collateral Manager > Results** panel show Acadia / Triparty information.

	Triparty Non-Acadia	Triparty Acadia	Bilateral
Previous RQV	RQV from D – 1	RQV from D – 1	Empty
Required Value	Global Required Margin	Prev RQV if below the MTA; otherwise Required Margin (post dispute) This is sent in MT527 (tag :19A::TRAA//) and therefore pushes to the margin call trade in the Exposure Amount field via the Exposure Adjustment lifecycle action when the margin call entry reaches the TRIPARTY_INSTRUCTED status.	Empty
Triparty Allocation Value	N/A	Triparty agent valuation of collateral provided in MT569; Sum of Norm. Transaction Value in the sec finance collateral report. Populated after MT569 integration via the MT569MessageProcesser (if possible).	Empty
Triparty	N/A	Populated after MT569 integration. Required Value minus Triparty	Empty

	Triparty Non-Acadia	Triparty Acadia	Bilateral
Margin Amount		Allocation Value.	
Other Columns	Regular Triparty calculations	Constituted Margin = Margin Required – Previous RQV Global Required Margin if there is a dispute: Agreed Amount. If there is no dispute: Constituted Margin Remaining Margin = RQV – Daily Margin	Regular bilateral calculation

NOTE: For clients sending and receiving messages from external systems, the *RQVMatched* workflow rule can be used in a workflow transition to add the RQV of the margin call as the matched RQV in the entry attributes, which will be looked for when calculating Previous RQV. This workflow rule needs to be added to the *workflowRuleCollateral* domain.

The attribute *MatchedRQV* is propagated from the margin call entry each time the margin call contract is priced. Therefore, the last matched RQV is stored on a daily basis on each margin call entry and it is possible to archive the older margin call entries without issue.

Margin Flow Approach

There are two fields in related to the Margin Flow Approach, *Schedule Amount* and *SIMM*. These fields are used to provide IM information on the CreateMarginCall and ExpectedMarginCall messages.

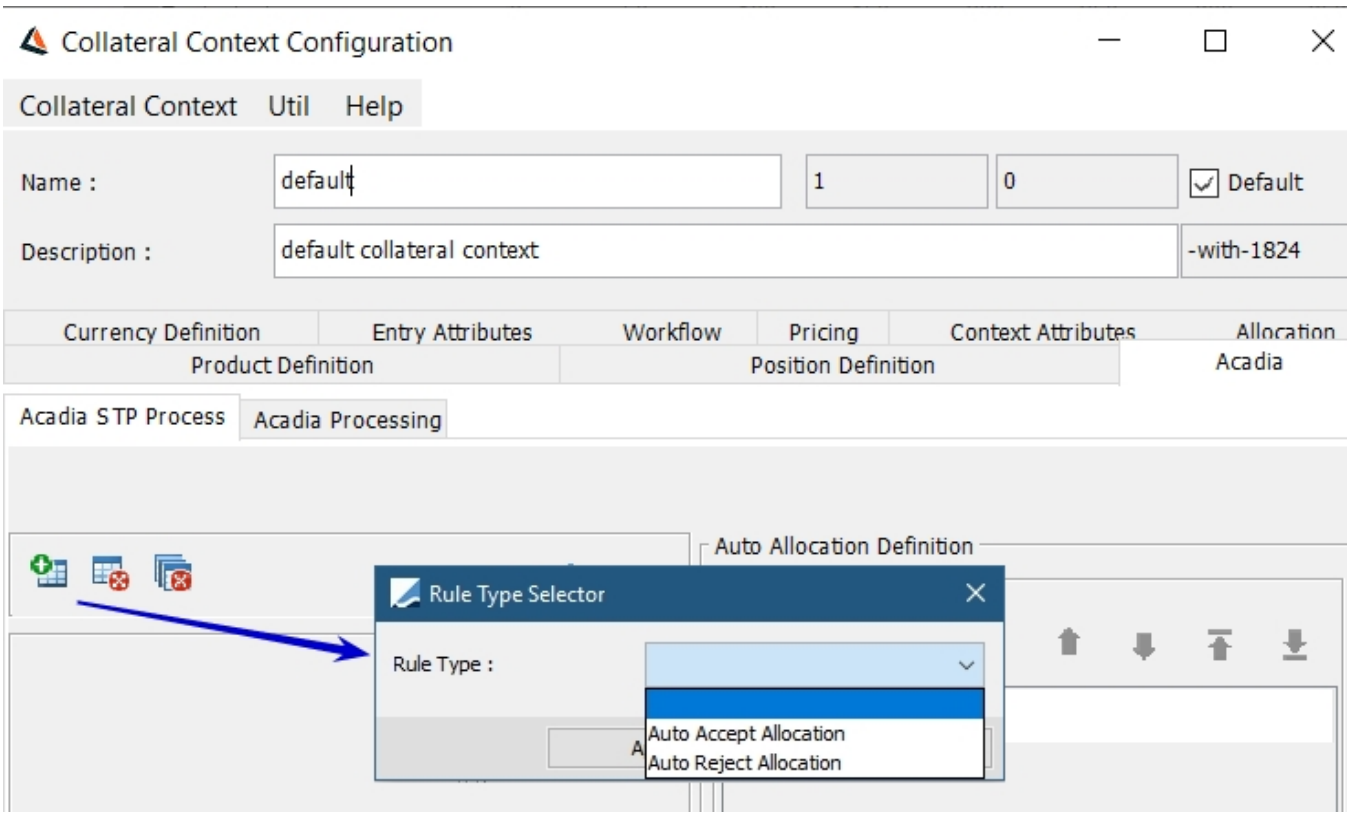
Also, there are two pricing measures, PM_SIMM and PM_SCHEDULE which map to the *Schedule Amount* and *SIMM*. These are editable if you do not break them down automatically when you import your exposures.

Details on the Margin Flow Approach can beTrip found in the Collateral documentation in the Margin Call Contract > Independent Amount section.

5.4 Acadia Attributes in Collateral Context

5.4.1 Acadia STP Process

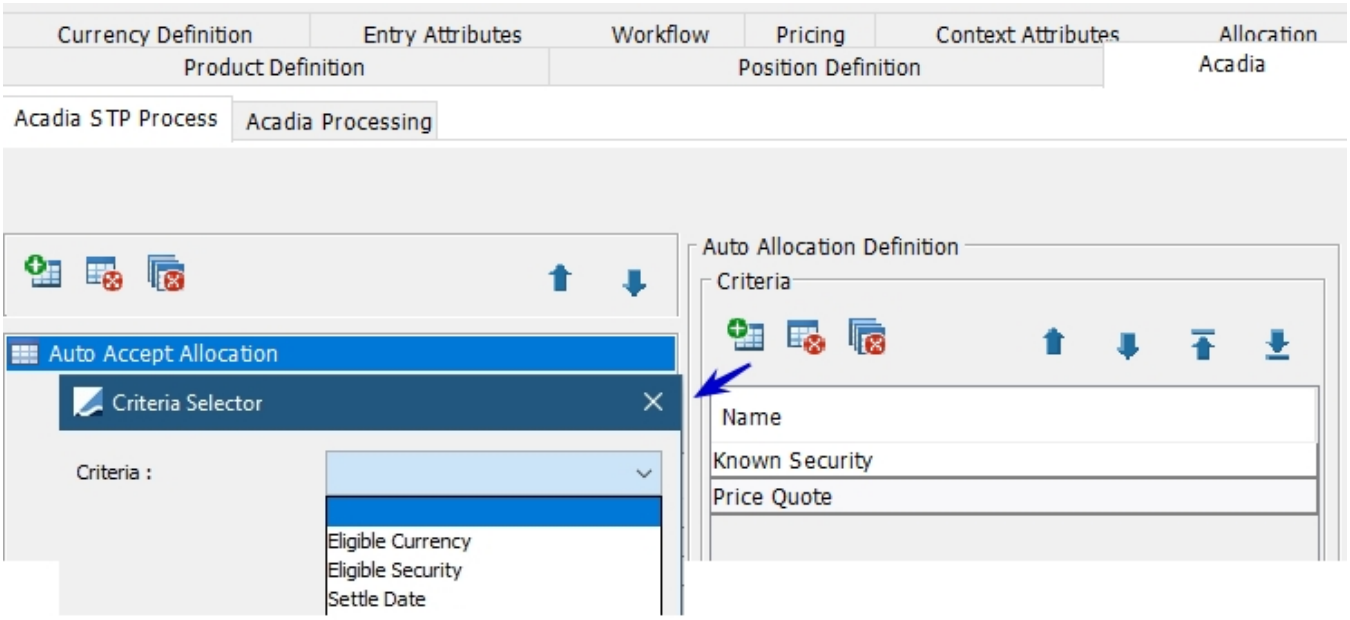
It is possible to automate the acceptance or rejection of pledges received by the Counterparty via Acadia using pre-defined criteria in the Collateral Context. The rule configuration in the Acadia STP Process panel defines the criteria that must be met for an Auto Accept or an Auto Reject to be possible.



Auto Accept Allocation

When Auto Accept Allocation is chosen, the Auto Allocation Definition populates automatically with the validation criteria *Known Security* and *Price Quote*.

Additional validation criteria may be chosen in the Auto Allocation Criteria Definition area.



The following validation criteria are available:

Criteria	Description
Bond Minimum Purchase Amount	In the case of a security allocation, this check validates that the Minimum Purchase Amount of the bond is respected. The Minimum Purchase Amount is defined on the Bond Definition window.
Bond Increment Lot Size	In the case of a security allocation, the nominal of each security allocation is compared with the incremental value. If it is a multiple of the lot size, the validation passes. If it is not a multiple of the lot size, the validation is breached. Increment Lot Size is specified in Bond product code "Lot Size" by default.
Bond Total Issued	In the case of a security allocation, the validation checks if the amount of the allocation does not exceed the total amount issued. Total Issued amount is set on the Bond Definition window.
Concentration Limit	The validation checks concentration limits. Please note that concentration limit check is not performed on full return cases when exposure changes are in the PO's advantage.
Eligible Currency	The validation checks if the currency is eligible, as defined in the Margin Call Contract.
Eligible Security	The validation checks if the security is eligible, as defined in the Margin Call Contract.
Fully Allocated	If an allocation suggested by the counterparty does not meet the call amount,

Criteria	Description
	Auto Accept can be stopped. If *Check collateralization tolerance* is checked, incoming pledges must within the Collateralization Tolerance or above (designated in the Collateral Context - Allocation - Collateralization Tolerance tab). If unchecked, the pledges must mach perfectly with the amount calculated by Calypso.
Known Security	In the case of a security allocation, the product must exist in the system. This auto accept criteria is mandatory.
Price Quote	In the case of a security allocation, the product must have a price. This auto accept criteria is mandatory.
Settle Date	The allocation suggested by the counterparty (whether cash or security), has a settle date which matches what is defined in the margin call contract, less than or equal to.

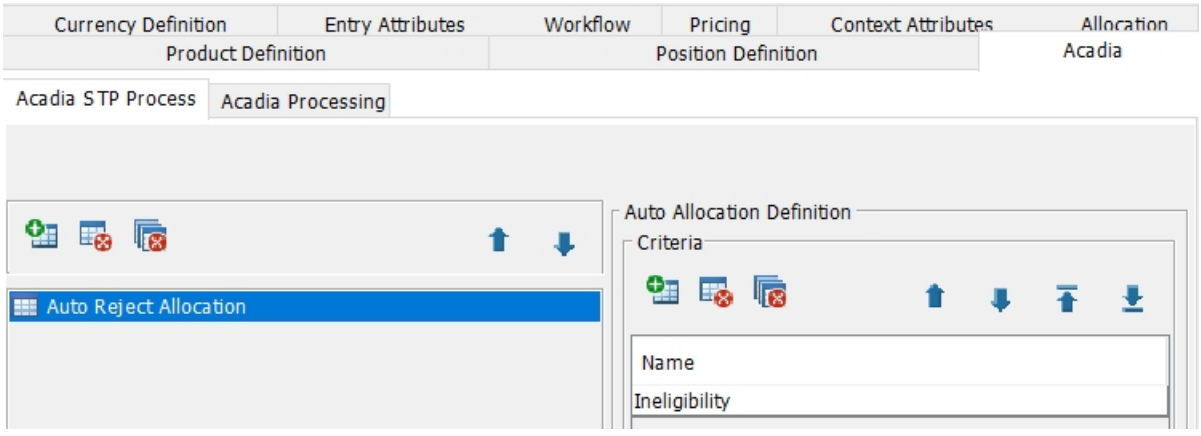
Auto Reject Allocation

When Auto Reject Allocation is chosen, you can select the following criteria:

Ineligibility, which is set by default - Allocation is rejected if pledge security is not eligible.

Settle Date - Allocation is rejected if pledge settle date is not correct based on offset and holidays defined in Margin Call Contract.

Fully Allocated - Allocation is rejected if pledge is under collateralized and not within collateralization tolerance (designated in the Collateral Context - Allocation - Collateralization Tolerance tab), regardless of *Check collateralization tolerance*.



[NOTE: If you select Settle Date and Fully Allocated as auto-reject criteria, you need to select them as auto-accept criteria as well - Also, the values FullAllocationValidator and SettleDateValidator must be added to the domain "ACADIAAllocationValidators" for consistency]

Workflow Rules

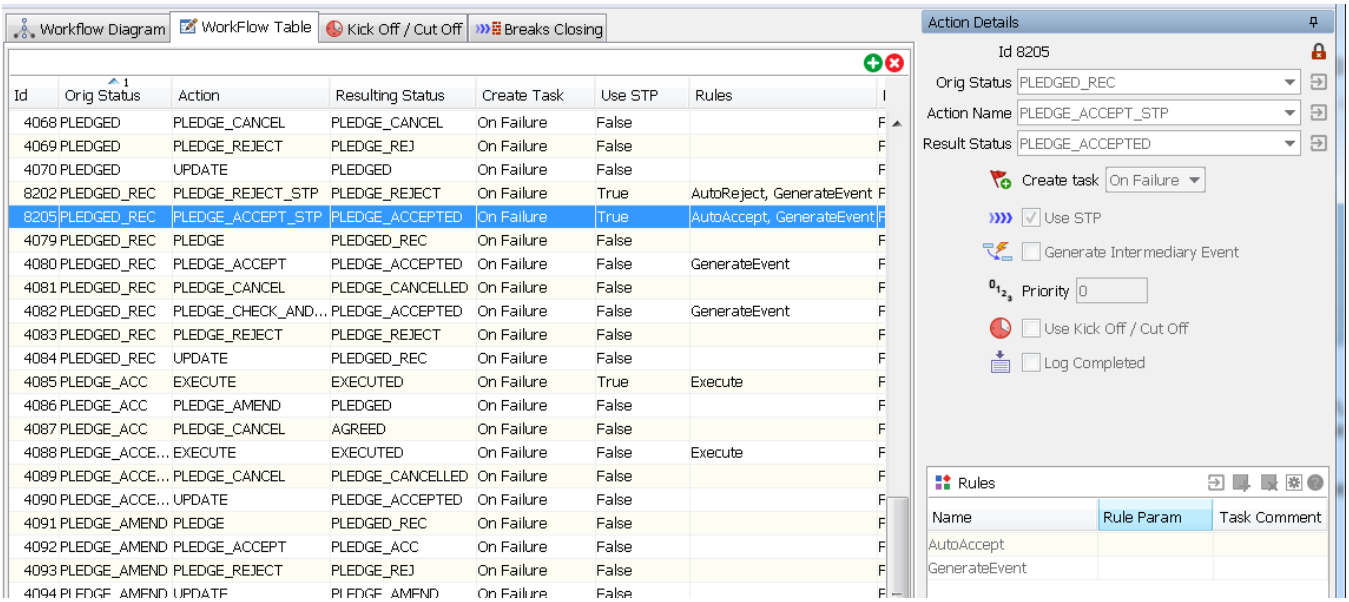
There are two workflow rules associated with Auto Accept / Auto Reject functionality which are *AutoAccept* and *AutoReject*.

The workflow transitions in STP are:

- PLEDGED_REC – PLEDGE_REJECT_STP – PLEDGE_REJECT (with *AutoReject* and *GenerateEvent* as workflow rules)
- PLEDGED_REC – PLEDGE_ACCEPT_STP – PLEDGE_ACCEPTED (with *AutoAccept* and *GenerateEvent* as workflow rules)

Non-STP transitions are kept in order to process allocations that cannot be auto accepted or auto rejected:

- PLEDGED_REC – PLEDGE_ACCEPT – PLEDGE_ACCEPTED
- PLEDGED_REC – PLEDGE_CANCEL – PLEGED_CANCELLED
- PLEDGED_REC – PLEDGE_CHECK_AND_ACCEPT – PLEDGE_ACCEPTED
- PLEDGED_REC – PLEDGE_REJECT – PLEDGE_REJECT



Example 1:

If the counterparty pledges the following:

1. Cash EUR with settle date = T+1, is auto accepted as it respects all the rules of the Auto Accept functionality. The entry will move to PLEDGE_ACCEPTED automatically.
2. Bond A is rejected because it is ineligible, which is a criteria which leads to Auto Reject. The entry moves to PLEDGE_REJECTED automatically.

3. Cash EUR with settle date = T+3, the margin call entry remains in PLEDGE_REC. It cannot go to PLEDGE_ACCEPTED automatically because it does not respect all of the Auto Accept criteria (because of the settle date). But, because it is eligible collateral, it cannot automatically be rejected.

The user will therefore have to manually review and decide which action to apply to the allocation.

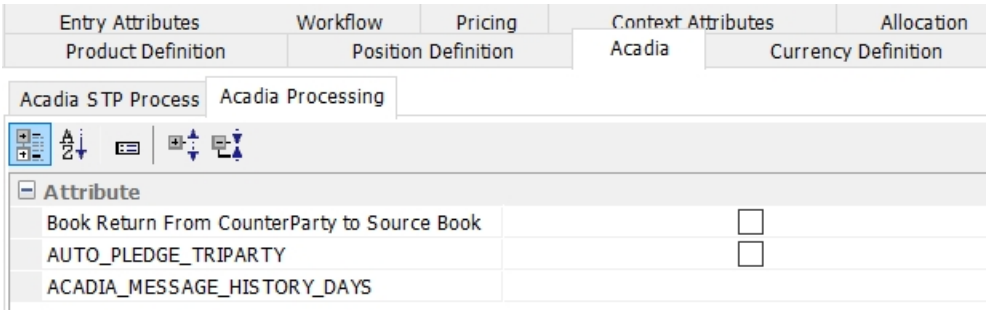
Example 2:

If the counterparty pledges more than one collateral:

1. If all the allocations validate the Auto Accept criteria, the entry can move to PLEDGE_ACCEPTED and the corresponding pledge accept message can be sent out.
2. If some allocations can be auto accepted but automatic treatment is impossible for others (does not meet Auto Accept nor Auto Reject), the entry remains in PLEDGE_REC and the user will manually have to decide whether to accept or reject the allocation.
3. If some allocations can be accepted but other are rejected, the margin entry moves to PLEDGE_REJECTED and a pledge reject message will be sent back to the counterparty.
4. If all the allocations validate the Auto Reject criteria, the entry will move to PLEDGE_REJECTED and a pledge message will be sent to the counterparty.

5.4.2 Acadia Processing

You can set additional attributes in the Acadia Processing panel.



Book Return From Counterparty to Source Book

If set to true (checked), a return from Acadia is done on initial book. This will have a performance impact which depends on total number of netted positions in the system.

If the same collateral type is delivered from two books and if PO receives collateral from counterparty as return, then it will be booked to source book(s), and it will impact books from smallest position to biggest position.

In below example, ISIN FR000004345 is delivered from two books:

Book 1 for 2500

Book 2 for 2530

If PO has sent margin call for EUR 4,000 then

1. If CP returns 1000, then it should impact Book 1

2. If CP returns 4000, then system should book return of 2500 against Book and 1500 against Book 2

If not set (default), the system will select the books mentioned under Eligibility tab in margin call contract.

AUTO_PLEDGE_TRIPARTY

▶ See Auto Send Dummy ISIN TRIPARTYALCT Messages for details.

ACADIA_MESSAGE_HISTORY_DAYS

Number of business days for which to display stored messages in the Acadia Message Repository panel of the Collateral Manager. Default is 1 for current business day.

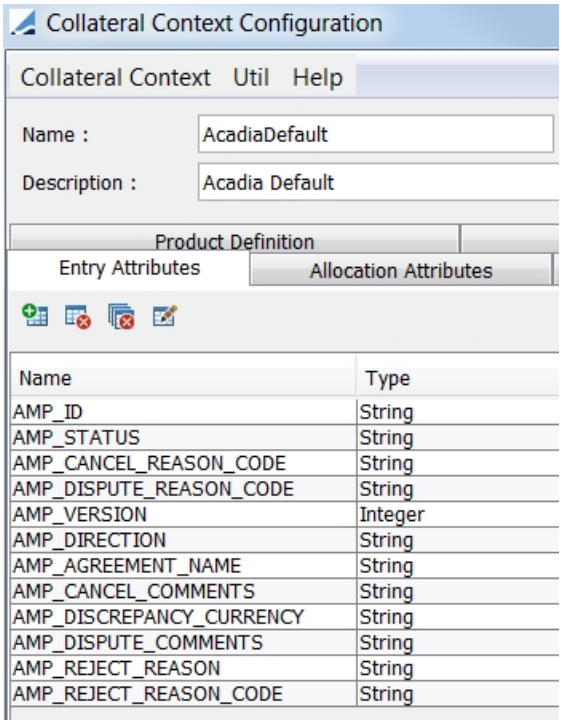
▶ See ACADIA_INCOMING Message Workflow for details.

5.5 Acadia Attributes in Collateral Context Template

From Calypso Navigator, select **Processing > Collateral Management > Collateral Manager**.

From the Window menu, select **Configuration > Collateral Context**.

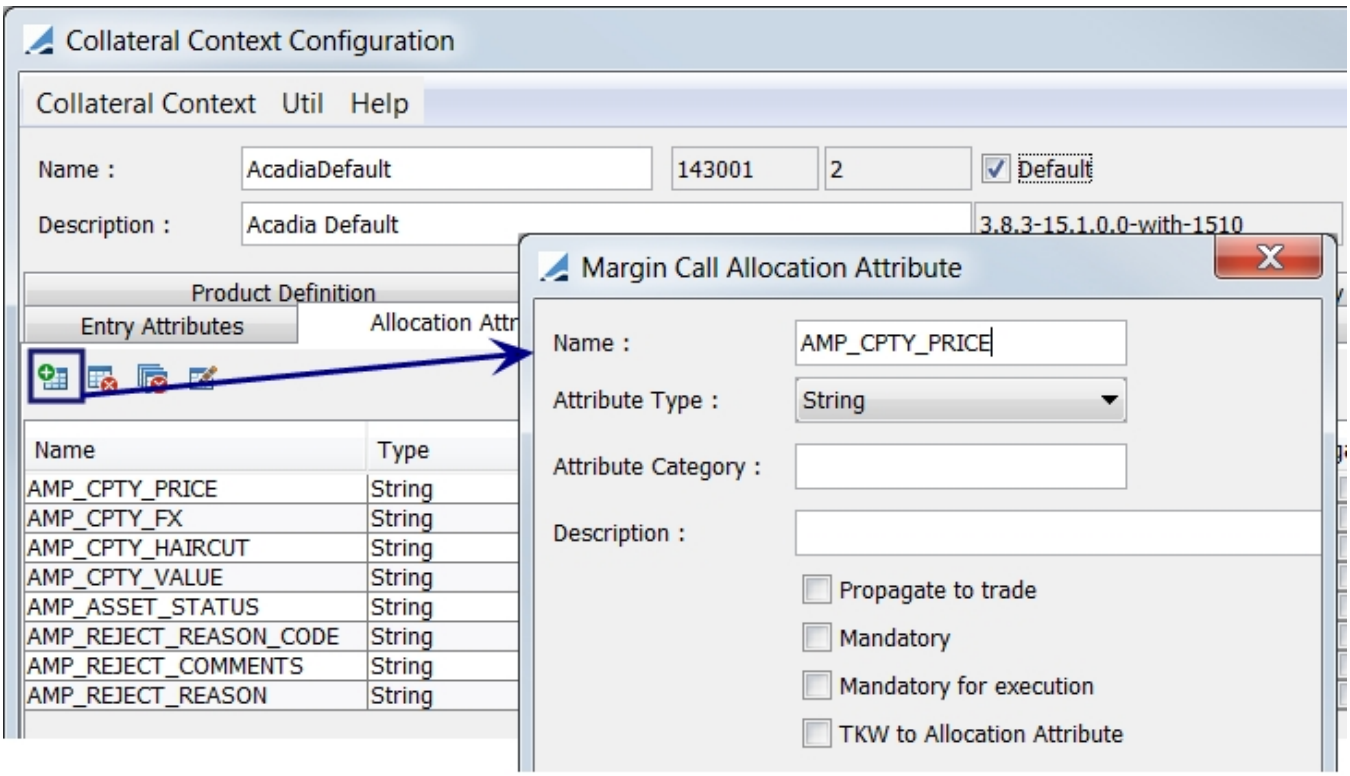
In the Entry Attributes panel, you should see these attributes:



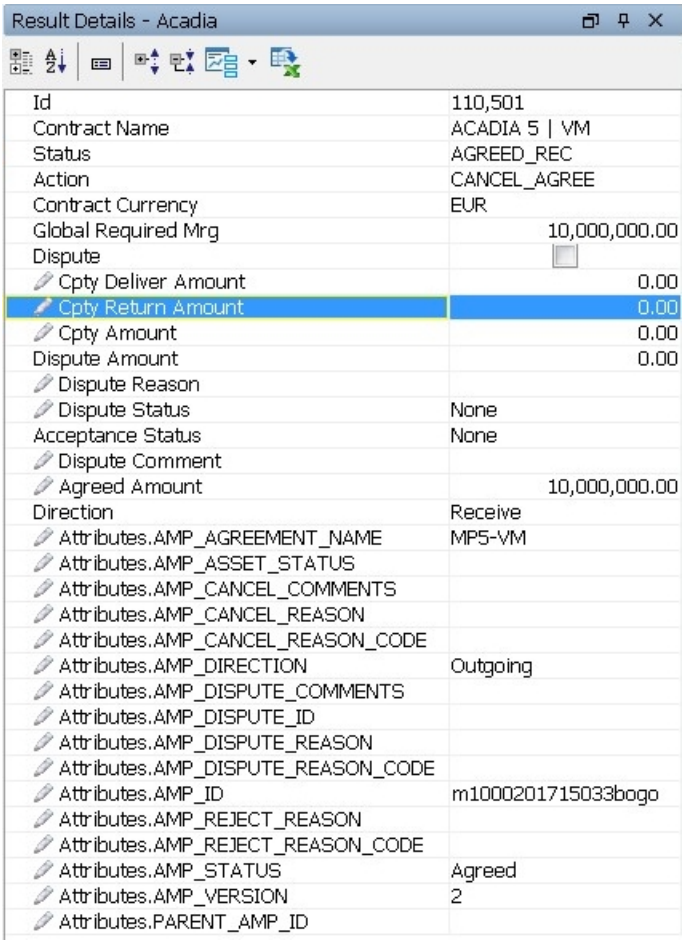
These attributes can be loaded and viewed in the Collateral Manager Results panel.

- *AMP_AGREEMENT_NAME* – from the Margin Call contract Identifier at the Exposure Group level in the Acadia panel
- *AMP_ASSET_STATUS* – allocation message if there is an issue with the pledged assets, used in case of ineligible collateral
- *AMP_CANCEL_COMMENTS* – from CancelMarginCall message
- *AMP_CANCEL_REASON* – from CancelMarginCall message
- *AMP_CANCEL_REASON_CODE* – from CancelMarginCall message
- *AMP_DIRECTION*
- *AMP_DISCREPANCY_CURRENCY* - incorrect call currency received
- *AMP_DISPUTE_COMMENTS* - from DisputeMarginCall message
- *AMP_DISPUTE_ID* – from DisputeMarginCall message
- *AMP_DISPUTE_REASON* – from DisputeMarginCall message
- *AMP_DISPUTE_REASON_CODE* – from DisputeMarginCall message
- *AMP_ID* – from Margin Call contract > Details > Acadia Details panel
- *AMP_REJECT_REASON* – reason for rejecting a pledge (reasons are hard coded), from PledgeRejectMarginCall message
- *AMP_REJECT_COMMENTS* – free form comments regarding rejected pledge
- *AMP_STATUS* – corresponds to AMP_STATE when a message is created or received
- *AMP_VERSION* – version of the Margin Call object on the Acadia side, used to handle history information found on Acadia messages
- *PARENT_AMP_ID* – Acadia information in case of disputes, where on the Acadia side there are two objects

In the Allocation Attributes panel, add the following attributes:



- *AMP_CPTY_PRICE – the price specified in AcadiaSoft*
- *AMP_CPTY_FX* – FX rate specified in AcadiaSoft
- *AMP_CPTY_HAIRCUT* – haircut specified in AcadiaSoft
- *AMP_CPTY_VALUE* – adjusted value based on parameters (price, FX, haircut) of AcadiaSoft
- *AMP_ASSET_STATUS* – allocation message if there is an issue with the pledged assets, used in case of ineligible collateral
- *AMP_REJECT_REASON_CODE* – reason code for rejecting a pledge (reason codes are hard coded), from PledgeRejectMarginCall message
- *AMP_REJECT_REASON* – reason for rejecting a pledge (reasons are hard coded), from PledgeRejectMarginCall message
- *AMP_REJECT_COMMENTS* – free form comments regarding rejected pledge
- *AMP_ID* - corresponds to pledge Amp Id



NOTE: Only the Default Collateral Context can be used for Acadia Messages.

6. Acadia Interest Manager

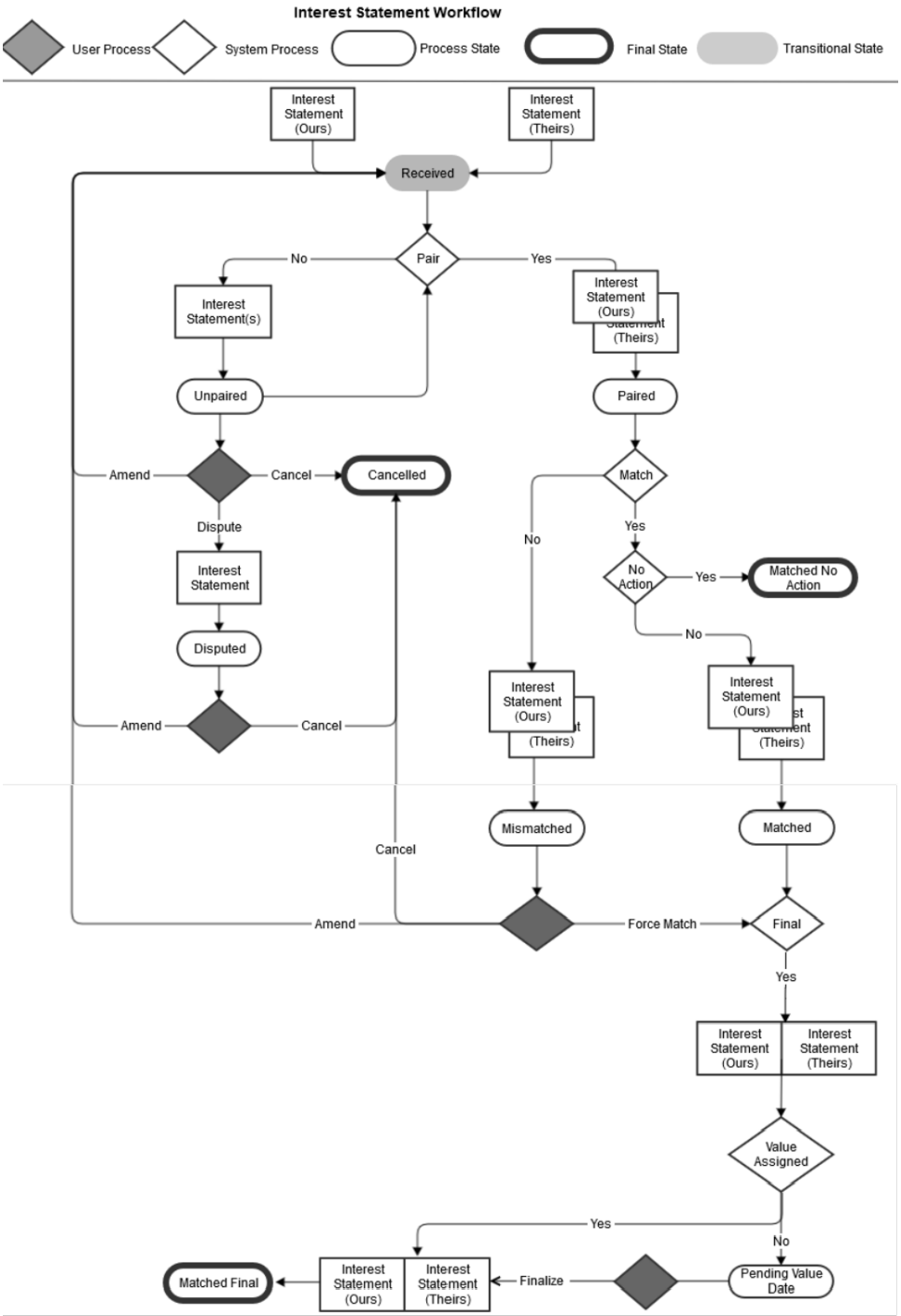
The Interest Manager window displays interest bearing trades and information related to those trades.

All interest-bearing trades generated for Collateral are displayed in the Interest Manager, so the user has one point of entry regardless of whether Acadia interest or non-Acadia interest is being managed.

NOTE: This functionality does not include gross interest statements, disbursement types that are not cash and non-interest-bearing trades and no match.

When using interest statements, be sure to set *acadia.interestsstatement.message.version=4.0* in your calypso_acadia_config.properties file. If not using an interest statement, set *interest.polling.interest.enabled=false* and the polling url should be empty in your acadia.polling.properties file.

Overview of Acadia Interest Statement Process



Pairing of Statements

Pairing is done by Acadia.

Statements are paired on the following fields:

- Call type - Initial, Variation or Netted
- Agreement type - CSA or Regulatory CSA
- Role - Pledgor or Secured
- Start Date
- End Date
- Currency
- Party Receiving Payment

In case of an unpaired Statement, the following can be done:

  - View and compare the unpaired statement with the counterparty's unpaired statements
  - Dispute counterparty statements with reason code and comment
  - Cancel your statement if an error is found

Match and Mismatch

- Match On
  - Payment Amount
  - Party Receiving Payment
  - Disbursement Type
  - Ending Collateral Balance (if elected)
- Agreement Settings
  - Clients can set matching tolerances for Payment Amount by currency
  - Clients can bilaterally agree to use Ending Collateral Balance
  - Clients can set matching tolerances for Ending Collateral Balance by currency
- Matching Logic
  - If two parties have different tolerances, the smaller tolerance (more conservative) is used
  - If a party does not set a tolerance, exact match is required
  - Exact match required on Party Receiving Payment
  - Exact match required on Disbursement Type
- Mismatch Handling

  User can view and compare their statements with the counterparty's statements
  - Differences in matching fields highlighted in red
  - Daily item comparison screen shows differences in red

    Collateral Balance

Movement

Rate and Spread

Daily Interest

Accrued Interest

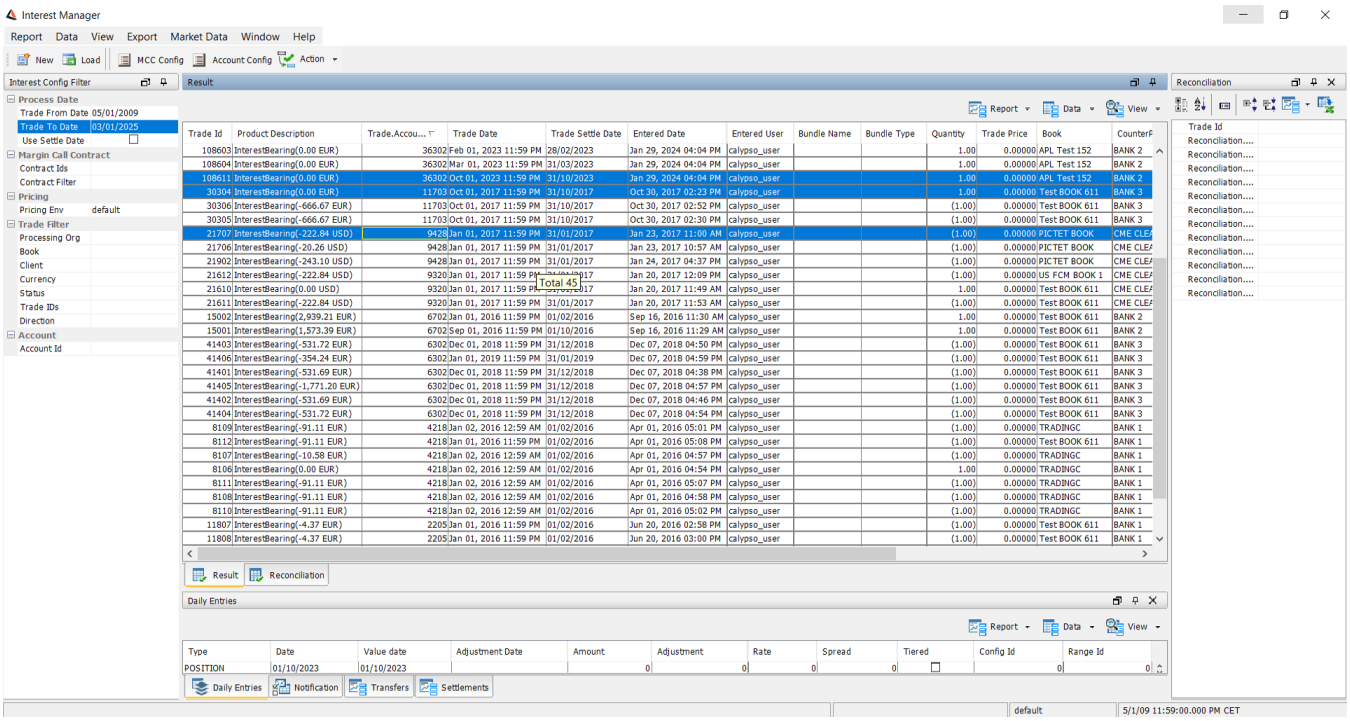
From Mismatched, users can:

- Amend - Modify values on current statement; Send statement through matching logic again
- Cancel - Cancel the statement; Counterparty's statement becomes unpaired

NOTE: The actual pairing/matching keys are determined by Acadia and depend on specific agreement characteristics. The actual keys may vary depending on a user's specific setup.

6.1 Interest Manager

The Interest Manager Window displays the Interest Bearing trades in the results panel and information related to those trades below, in a set up similar to Collateral Manager. The window is displayed by choosing **Configuration > Accounting > Interest Manager** from Calypso Navigator. (`refdata.collateral.InterestManagerDesktop`)



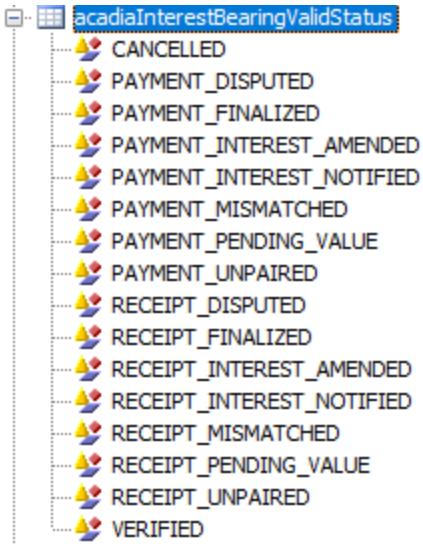
All interest bearing trades generated for the Collateral module are displayed in this manager so that the user has one point of entry, regardless of whether Acadia or non Acadia interest is being managed.

» The **Interest Config Filter** area allows the user to filter by:

  - Process Date Range
  - Process Time
  - Pricing Environment
  - Processing Org
  - Book
  - Legal Entity
  - Currency
  - Amount
  - Account ID
  - Contract attributes
- The **Results** panel displays the interest bearing trades. In this area, the columns from the Trade Browser reporting are available.
- Upon selecting an interest bearing trade in the Results panel the daily entries of that trade are displayed in the daily entry **Account Interest Config** panel with the:
  - Type
  - Date
  - Value Date
  - Adjustment Date
  - Amount
  - Adjustment
  - Rate
  - Spread
  - Tired
  - Config Id
  - Range Id
- By selecting an Interest Bearing Trade and clicking on:
  - **MCC Config** - The associated Margin Call contract will be opened.
  - **Account Config** - The Account Definition window of the account linked to the trade will be opened.
  - **Action** - All available actions that can be performed on the existing status of the trade as per its workflow will be displayed and can be applied accordingly.
- There is a **Reconciliation** panel that can be used to trace and compare Processing Org and Counterparty information.

This tab can be loaded independently from the Result tab. In this case, all reconciliation entries are displayed for the selected date range. The incoming unpaired messages are displayed (with trade Id =) that the PO can dispute by applying the action IB_DISPUTE.

To generate reconciliation entries, the workflow rule "UpdateIBReconciliationDetails" must be added to every transition from which the reconciliation entries are to be generated. All the original statuses on which this workflow rule is applied, must then be added to the domain value "acadiaInterestBearingValidStatus".

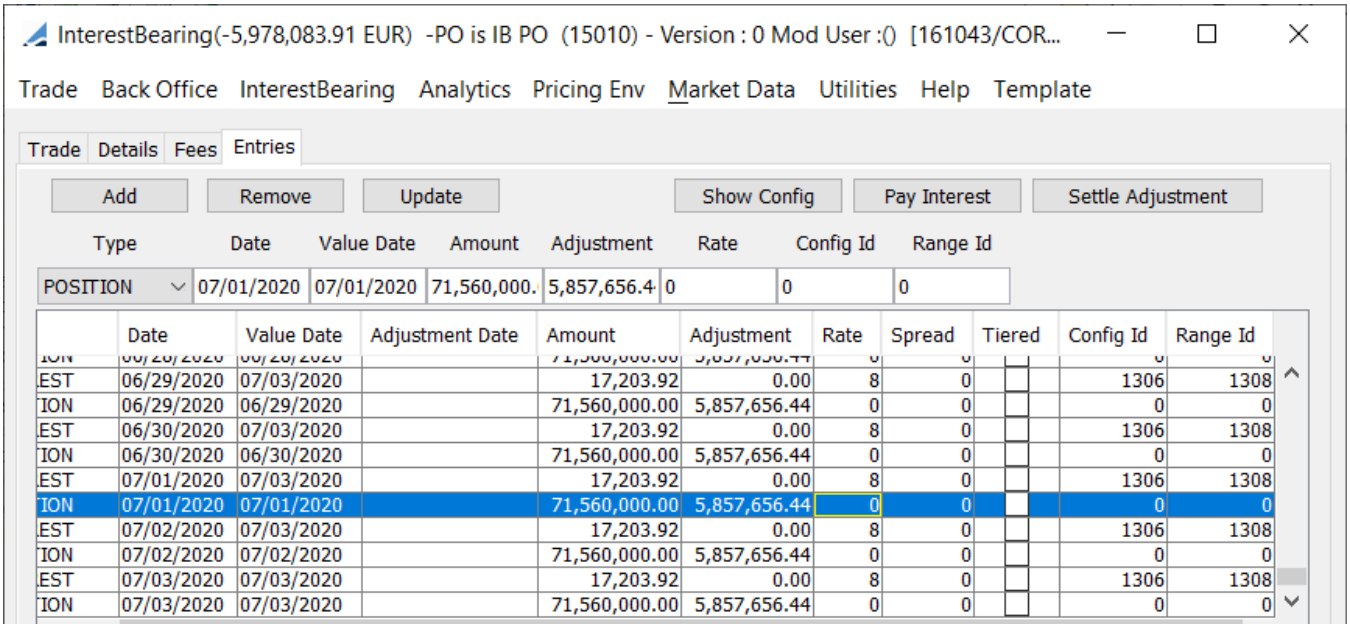


A second Reconciliation panel is available which displays the information vertically.

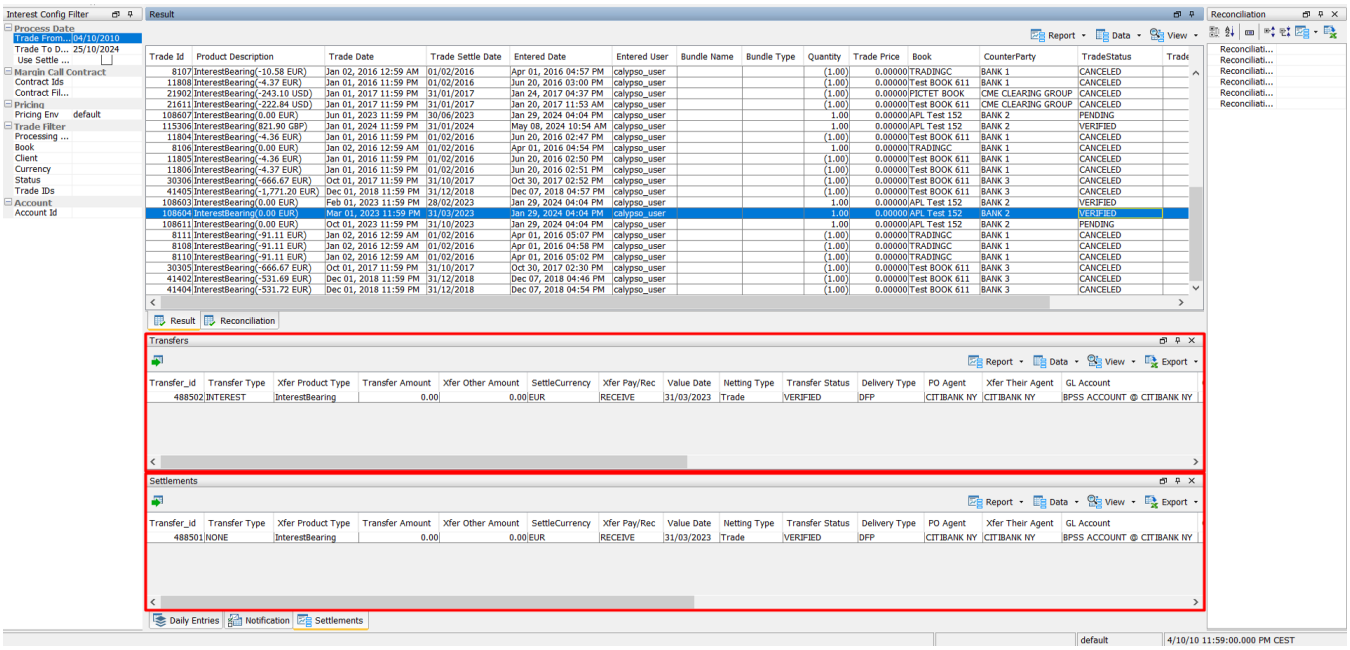
When selecting a specific trade, the Reconciliation panel displays with information such as:

- the party receiving the payment
- the payment amount
- disbursement type
- no action
- valuedate
- contractual settle date
- ending collateral balance
- current period interest amount
- rollover amount
- benchmark
- calculation type
- day convention
- tax exemption
- tax withholding amount

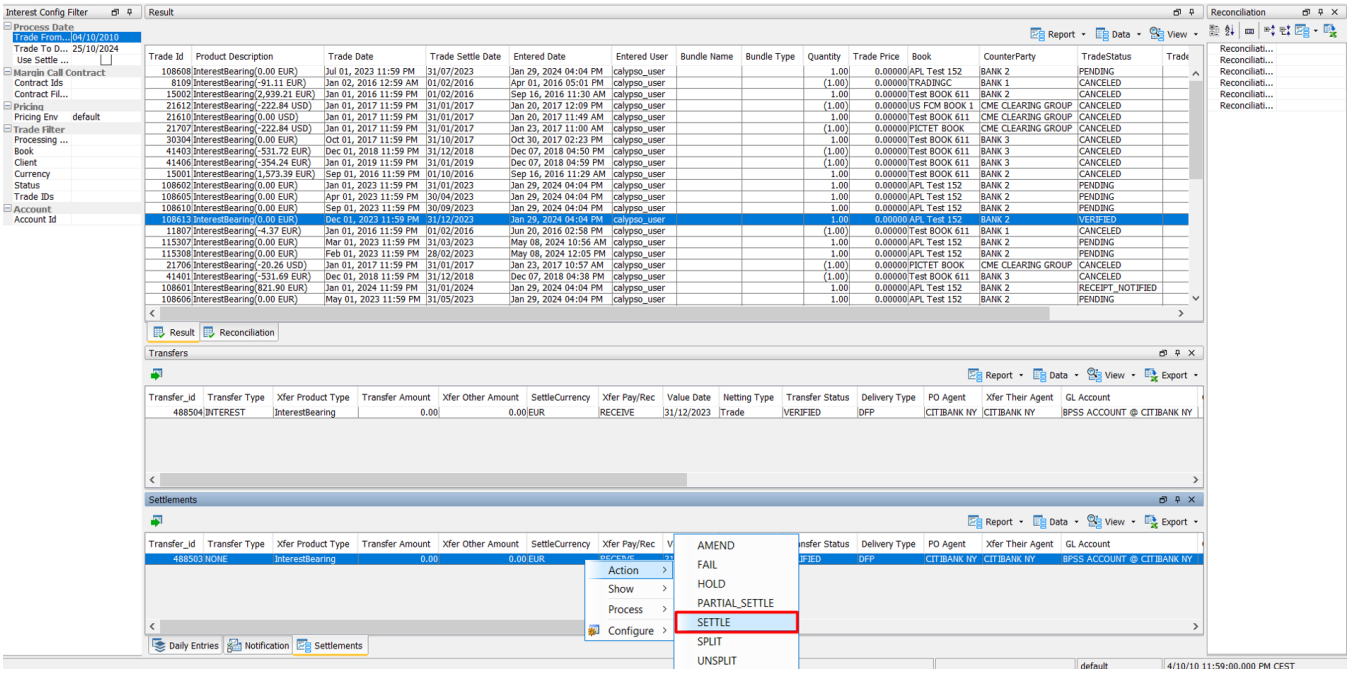
Similar to Collateral Manager's Notification panel, the information available in the Interest Notification panel, the information available will contain all of the information that can be loaded in a message report.



On selecting the Transfers and Settlements tabs, all the relevant information about the transfers and settlements associated with the selected Interest Bearing trade will be displayed.

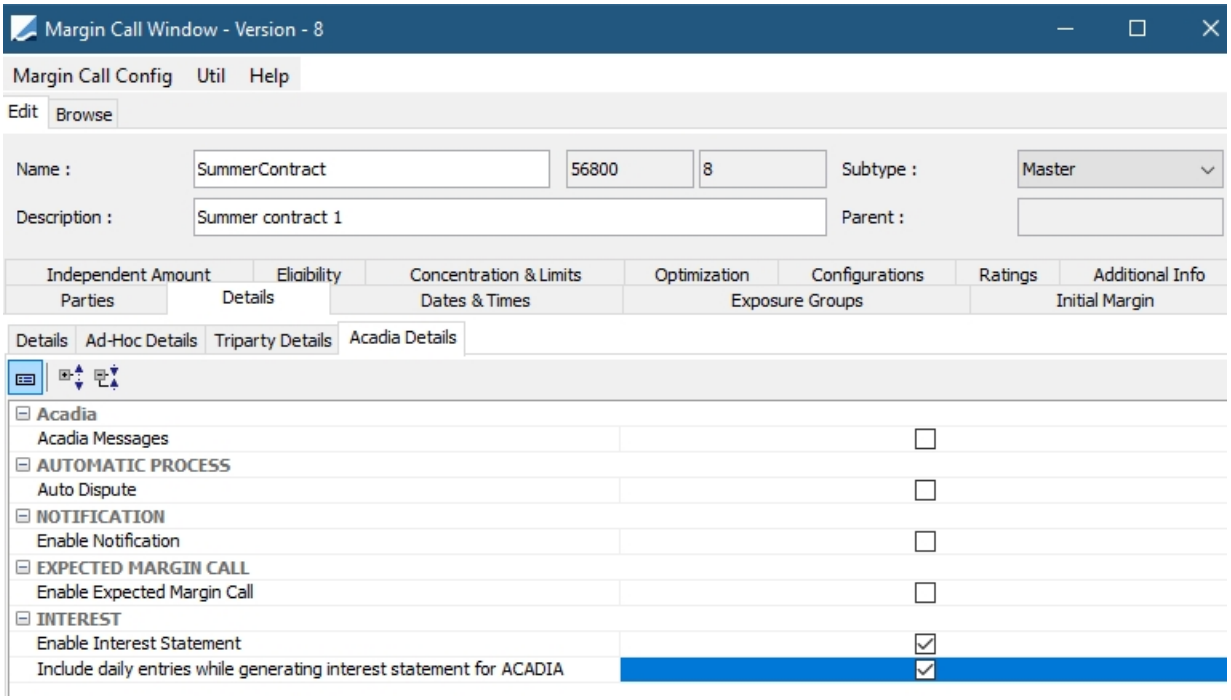


Transfer and Settlement statuses can be modified by right clicking a trade settlement and updating its status by applying the required ACTION.

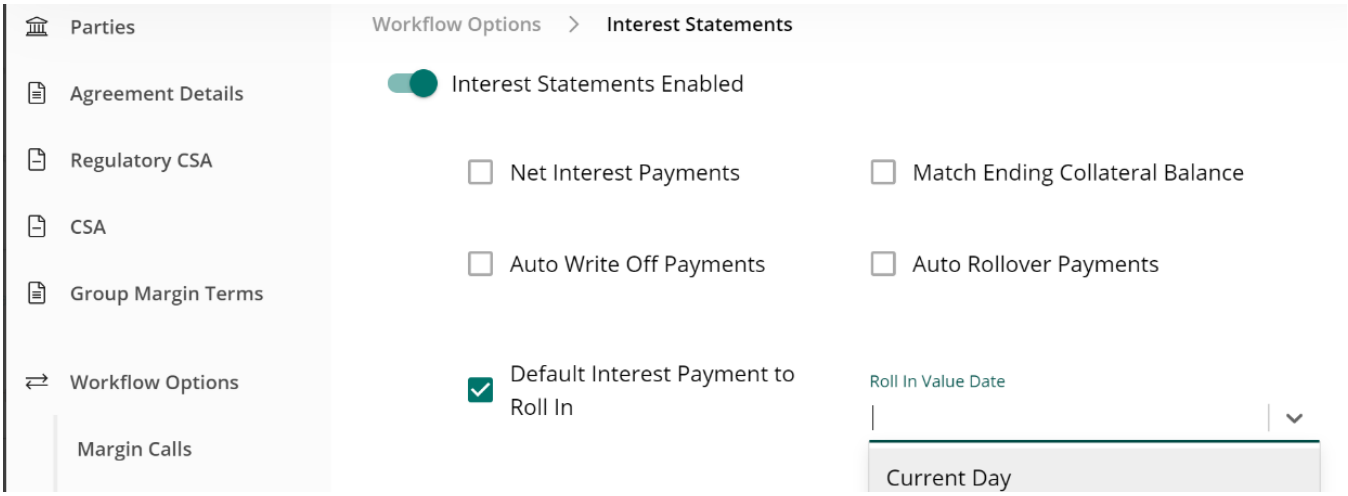


6.2 Interest Details in Margin Call Contract

In the Margin Call Contract **Details > Acadia Details** panel, there is an Interest section that is used to designate if the contract is using the Interest Statement functionality.



- If *Enable Interest Statement* is selected, Acadia interest statements are generated for the interest bearing trades linked to the Margin Call Contract. If it is not selected, the potential interest bearing trades linked to this Margin Call Contract will not generate interest statements.
- If *Include daily entries while generating interest statement for ACADIA* is chosen, Acadia interest statements will include daily entries.
- ON the Acadia side, the user needs to set up interest in the following way:
  - Net Interest Payment = ON , meaning one message is sent for the net amount. (When it is disabled one message is sent for gross positive and one for gross negative.)
  - Match Ending Collateral Balance = ON or OFF
  - All other attributes = OFF



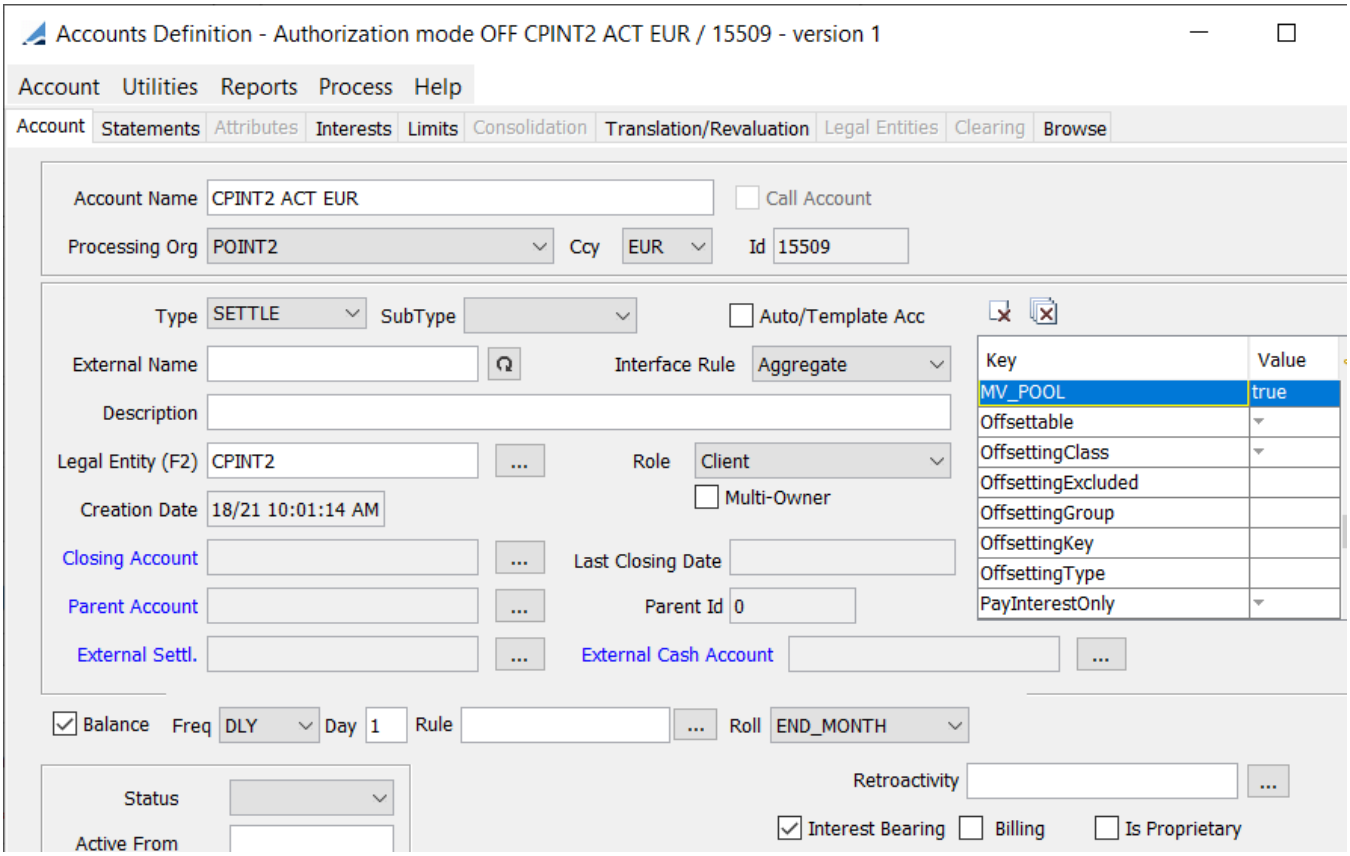
Fields propagated to Interest Bearing trade

The following information is propagated from the Margin Call Contract to the Interest Bearing trade:

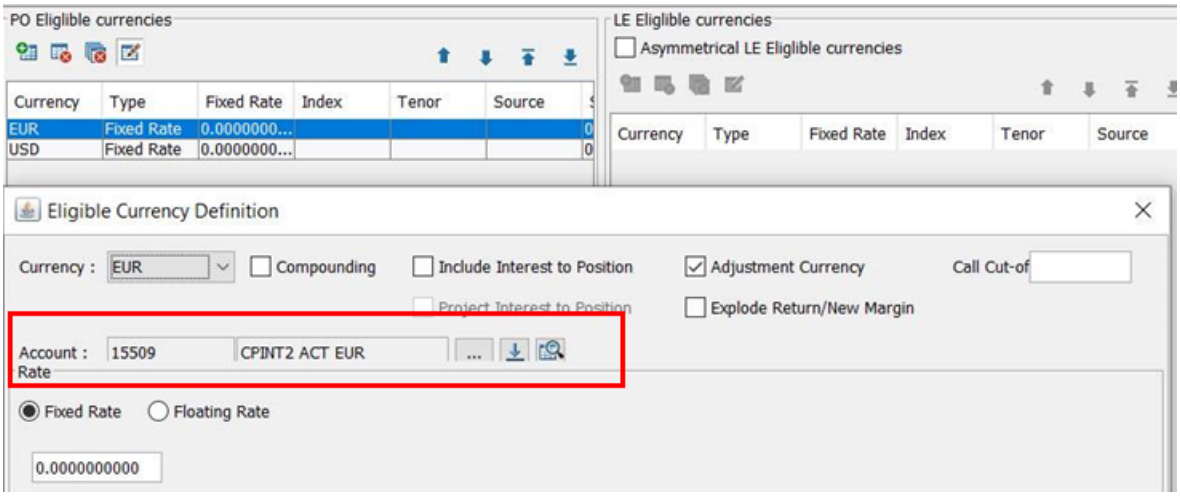
- MarginAgreementAmpId
- MarginAgreementShortName
- MarginAgreementType
- CallType

6.2.1 Adding an Account to the Margin Call Contract

An Account should be added to the margin call contract in the Eligible Currencies section. Create an account in the Account Definition window (**Configuration > Accounting > Accounts**).



Account Definition Window



Margin Call Contract - add account

6.3 Trade Workflow

The InterestBearing trade workflow needed for Interest Manager is uploaded when CollateralWorkflowSchemaData is added when running Execute SQL.

Please remove the following transitions from the InterestBearing trade workflow as these are not valid.

- PAYMENT_NOTIFIED - IB_CANCEL - VERIFIED
- RECEIPT_NOTIFIED - IB_CANCEL - VERIFIED

They are removed as of version 18 May monthly release..

6.3.1 Specific Workflow Actions

These actions can only be applied from the Interest Manager, not from the trade window.

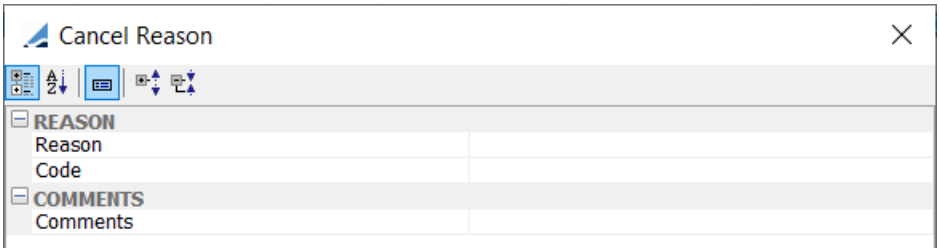
Notify

The Notify action should be done when the end date of the trade has been passed.

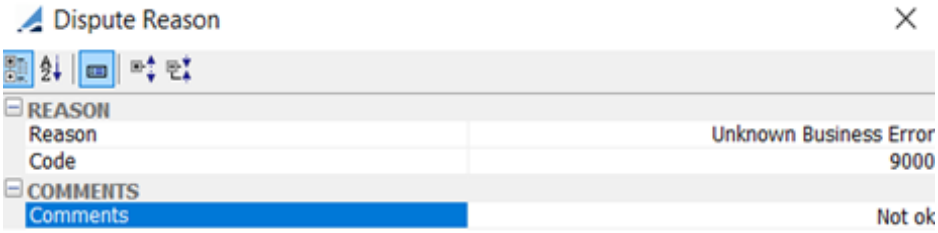
PO Trade actions with pop-up message

When applying the action IB_CANCEL on a trade, the user is required to provide certain pieces of information.

If the user selects the action IB_CANCEL, meaning the create interest statement will be canceled, a pop-up message appears where the user needs to select a cancel reason and an optional cancel comment.



Additionally, when applying the action IB_DISPUTE on a trade, the user must provide certain information. When IB_DISPUTE is chosen, a pop-up window appears for the user to enter a dispute reason and optional comment.

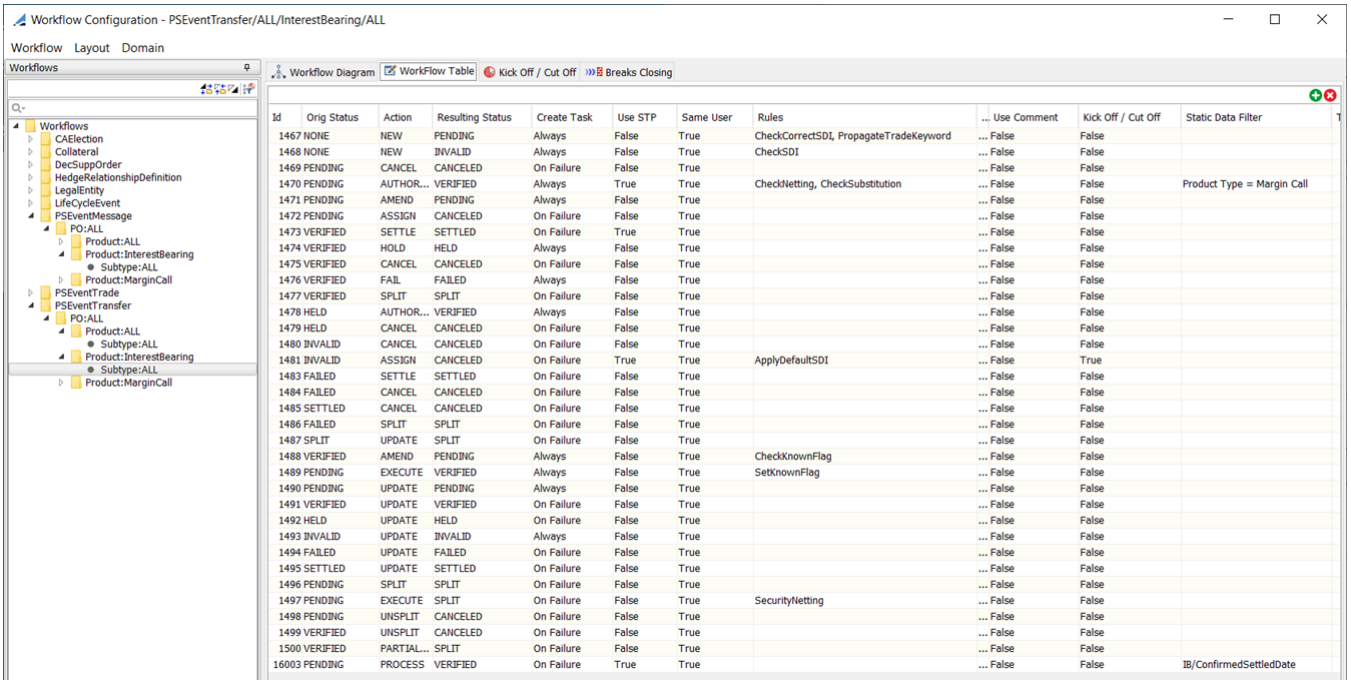


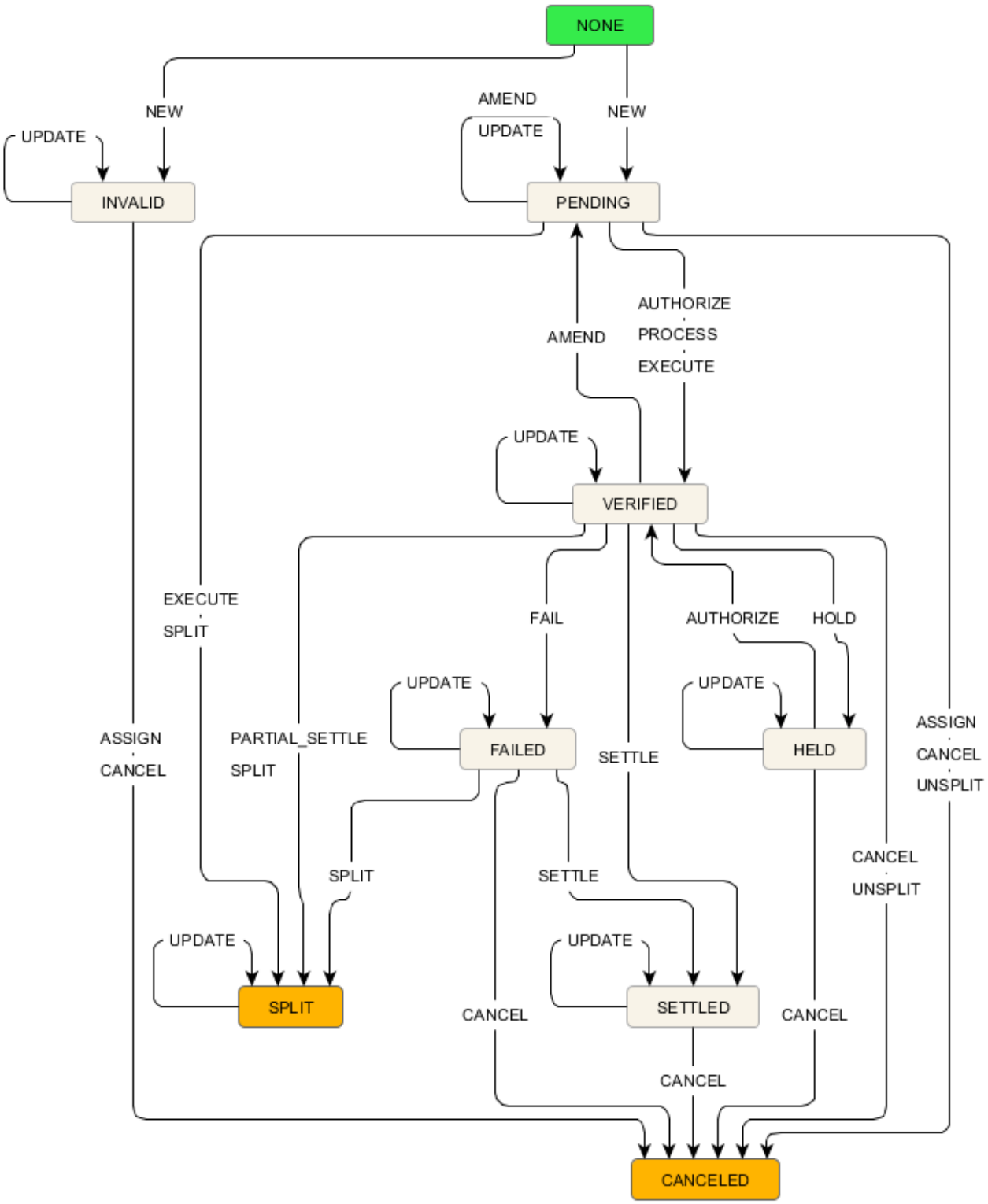
The cancel and dispute reasons are:

Code	Description
9000	Unknown Business Error
9701	Payment Amount Discrepancy
9702	Party Receiving Payment Discrepancy
9999	Other

6.4 Transfers

An Interest Bearing transfer is generated when the trade is in VERIFIED status. This is the default behavior. The transfer stays in PENDING status until the trade goes to FINALIZED status.




NONE
NEW
AMEND
NEW
UPDATE
UPDATE
INVALID
PENDING
AMEND
AUTHORIZE
PROCESS
EXECUTE
UPDATE
VERIFIED
EXECUTE
SPLIT
FAIL
AUTHORIZE
HOLD
UPDATE
UPDATE
ASSIGN
CANCEL
PARTIAL_SETTLE
SPLIT
FAILED
SETTLE
HELD
ASSIGN
CANCEL
UNSPLIT
SPLIT
SETTLE
CANCEL
UNSPLIT
UPDATE
UPDATE
SPLIT
CANCEL
SETTLED
CANCEL
CANCEL
CANCELED

6.5 Messages

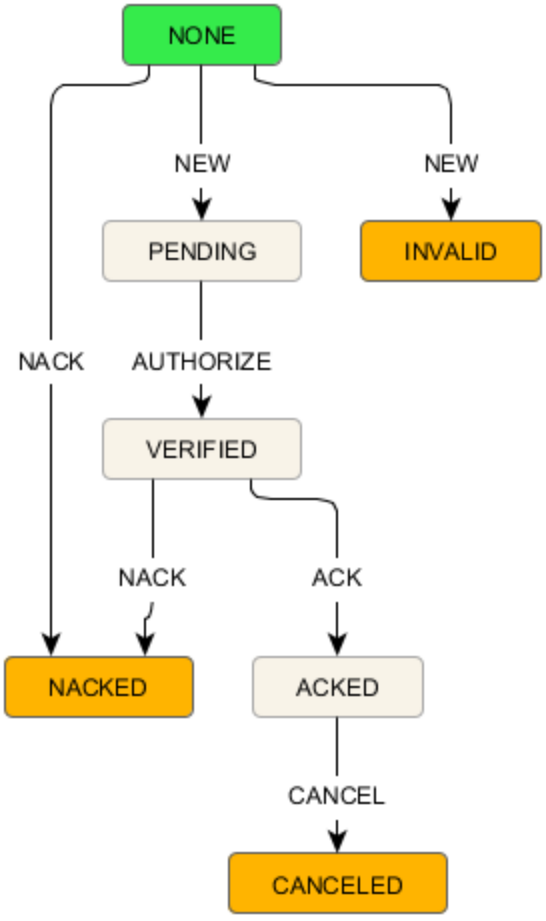
The Acadia Interest messages setup is automatically created upon installation.

Product	Event	Message Type	ProcessingOrg	PO Contact Type	Receiver	Receiver Role	Rec Contact Type	Language	Addr Type	Gateway	Format Type	Template Name
InterestBearing	MISMATCHED_INTEREST	INTEREST_NOTIFICATION	ALL	Default	ALL	CounterParty	Default	English	ACADIA	ACADIA	ACADIA	AmendInterest
InterestBearing	VERIFIED_INTEREST	INTEREST_NOTIFICATION	ALL	Default	ALL	CounterParty	Default	English	ACADIA	ACADIA	ACADIA	CreateInterest
InterestBearing	FINALIZED_INTEREST	INTEREST_NOTIFICATION	ALL	Default	ALL	CounterParty	Default	English	ACADIA	ACADIA	ACADIA	FinalizeInterest
InterestBearing	CANCELLED_INTEREST	INTEREST_NOTIFICATION	ALL	Default	ALL	CounterParty	Default	English	ACADIA	ACADIA	ACADIA	CancelInterest
InterestBearing	DISPUTED_INTEREST	INTEREST_NOTIFICATION	ALL	Default	ALL	CounterParty	Default	English	ACADIA	ACADIA	ACADIA	DisputeInterest
InterestBearing	UNPAIRED_INTEREST	INTEREST_NOTIFICATION	ALL	Default	ALL	CounterParty	Default	English	ACADIA	ACADIA	ACADIA	AmendInterest

6.5.1 Workflow

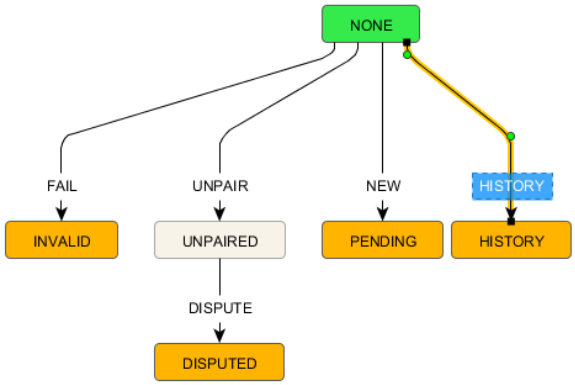
Outgoing Messages

This is the Acadia Interest Statement specific workflow.

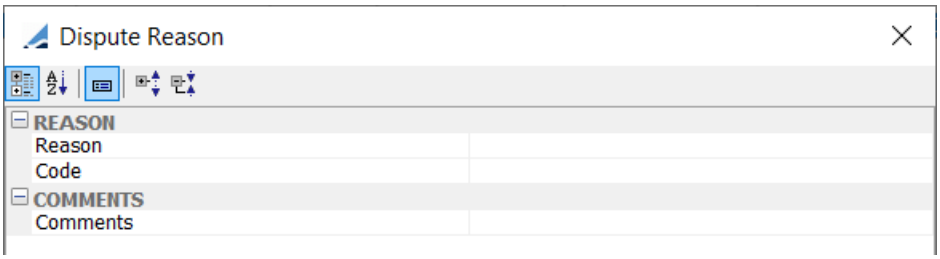


Incoming Messages

An additional message subtype, ACADIA_INTEREST_INCOMING, manages incoming messages from the Acadia Interest API.



The DISPUTE action is only possible on a counterparty incoming message that cannot be paired by Acadia. In this case, the PO can dispute the message. The action is applied on the message itself. Upon selecting DISPUTE a pop-up message appears where the user needs to select a dispute reason and an optional dispute comment.



The dispute reasons are:

Code	Description
9000	Unknown Business Error
9701	Payment Amount Discrepancy
9702	Party Receiving Payment Discrepancy
9999	Other

6.6 Outgoing Messages

6.6.1 Create Interest

- Direction is PAY or RECEIVE.
- Message type is `create.intereststatement.api.acadiasoft.com`.

- Business State is *<amp:businessState>Received</amp:businessState>*.
- If the agreement has interest enabled on the margin call contract (Details > Acadia Details> , when the Notifiy action is applied, the createinterestsatement message is generated.
- Both the PO and CP (the payer and receiver) must send an interest statement which Acadia will pair. The PO messages are generated on these two transitions:

  VERIFIED- NOTIFY - PAYMENT_NOTIFIED

  VERIFIED - NOTIFY - RECEIPT_NOTIFIED

6.6.2 Amend

- Direction is PAY or RECEIVE
- Message type is `amend.interestsatement.api.acadiasoft.com`.
- Business State is *<amp:businessState>Unpaired</amp:businessState>*.
- The PO can only amend an Interest Statement generated by the PO and vice versa.
- The AMEND action is the workflow transition

6.6.3 Finalizing Interest Statement

- Direction is PAY
- Message type is `finalize.interestsatement.api.acadiasoft.com`.
- Business State is *<amp:businessState>Matched Final</amp:businessState>*.
- Only the Payer can define the settle date. If the PO is the payer of interest and the settle date has not be provided, the PO must define it.
- The workflow transition is DELIVERY_PENDING_VALUE_DATE - FINALIZE - FINALIZED

6.6.4 Disputing Interest Statement

- Direction is PAY or RECEIVE
- Message type is `dispute.interestsatement.api.acadiasoft.com`
- Business State is *<amp:businessState>Disputed</amp:businessState>*
- PO can dispute an incoming unpair message sent by the CP by applying action IB_DISPUTE

6.6.5 Canceling an Interest Statement

- Direction is PAY or RECEIVE
- Message type is `cancel.interestsatement.api.acadiasoft.com`
- Business State is *<amp:businessState>Cancelled</amp:businessState>*

- You can only cancel your own outgoing Interest Statement. This can be done at various stages in the workflow:
  - PAYMENT_INTEREST_AMENDED
  - PAYMENT_MISMATCHED
  - PAYMENT_UNPAIRED
  - PAYMENT_DISPUTED
  - RECEIPT_INTEREST_AMENDED
  - RECEIPT_MISMATCHED
  - RECEIPT_UNPAIRED
  - RECEIPT_DISPUTED
- The workflow transition action is IB_CANCEL - **This action can only be applied from the Interest Manager (not directly from the trade)**

6.7 Incoming Messages

6.7.1 Unpaired Messages

There are two possibilities with Unpaired messages:

- Calypso receives an unpaired response to an outgoing interest statement sent out by Calypso. In this case, the UNPAIR action is applied and the trade will move to DELIVERY_UNPAIRED or CALL_UNPAIRED.
- Calypso receives an unpaired message following a counterparty interest statement that cannot be paired. In this case, the message follows the message workflow transition NONE - UNPAIR - UNPAIRED. The user will then be able to view the messages in the Message Report or in the Interest Manager > Reconciliation tab with trade Id = 0.

6.7.2 Create Interest

- Direction is PAY or RECEIVE
- Message type is `create.intereststatement.api.acadiasoft.com`
- Business State is *<amp:businessState>Received</amp:businessState>*
- Both the PO and the CP (payer and receiver) must send an Interest Statement which Acadia will pair.

6.7.3 Amend

- Direction is PAY or RECEIVE
- Message type is `amend.intereststatement.api.acadiasoft.com`
- Business State is *<amp:businessState>Unpaired</amp:businessState>*
- The counterparty can amend their message, which can lead to either:

- UNPAIRED > PAIRED
- PAIRED > PAIRED
- MISMATCHED> UNPAIRED

6.7.4 Finalizing Interest Statement

- Direction is RECEIVE
- Message type is `finalize.intereststatement.api.acadiasoft.com`
- Business State is *<amp:businessState>Matched Final</amp:businessState>*
- Only the payer can define the settle date, if the Finalize Interest Statement is incoming, it means that the PO is receiving collateral.
- The workflow transition RECEIPT_PENDING_VALUE - FINALIZE - RECEIPT_FINALIZED

6.7.5 Disputing Interest Statement

- Direction is PAY or RECEIVE
- Message type is `dispute.intereststatement.api.acadiasoft.com`
- Business State is *<amp:businessState>Disputed</amp:businessState>*
- The counterparty can dispute the Create Interest Statement if it is in UNPAIRED status, the trade will move to a _ DISPUTED status

6.7.6 Canceling Interest Statement

- Direction is PAY or RECEIVE
- Message type is `cancel.intereststatement.api.acadiasoft.com`
- Business State is *<amp:businessState>Cancelled</amp:businessState>*
- A counterparty can cancel their message, which brings the message back into an UNPAIRED status.

7. Acadia Agreement Manager

The Acadia Agreement Manager provides the ability to create collateral agreements in AcadiaSoft Agreement Manager from Calypso. This also includes the ability to manage updates to the agreements in Calypso and send them to the Acadia Agreement Manager.

7.1 Setup

7.1.1 calypso_acadia_config.properties

The following properties are nmandatory when using the Acadia Agreement interface:

acadia.amserver.name

marginagreement.polling.get.url

marginagreement.polling.get.summary.url

7.1.2 Servers to Start

The following servers should be started in the order listed below:

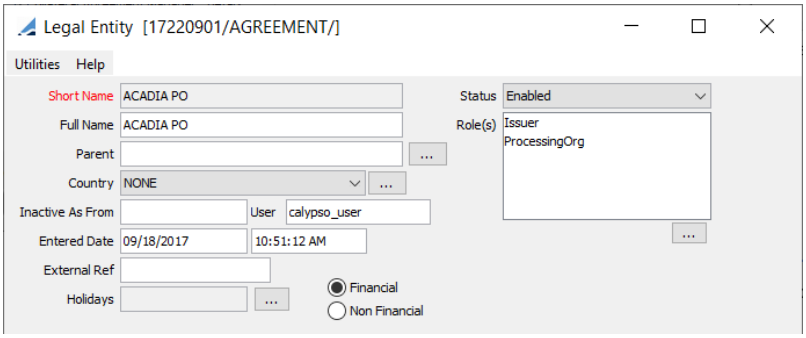
- Auth Server
- Discovery Server
- Gateway Server
- Event Server
- Data Server
- Calypso Navigator
- Messaging Server
- Engine Server including AcadiaMessageEngine

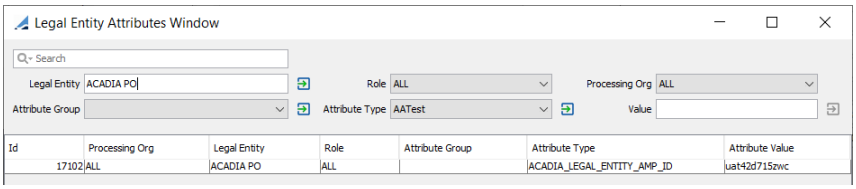
7.1.3 Legal Entity Setup

Calypso Legal Entities must have Acadia Amp id reference saved. Both the PO and the CP must have a legal entity Amp Id.

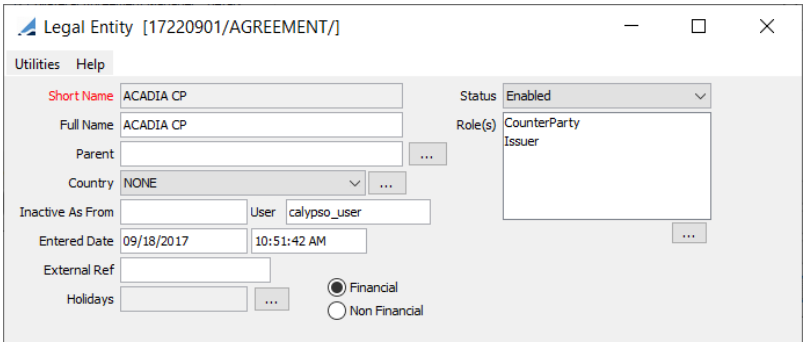
Agreement workflow actions must be applied in Agreement Manager.

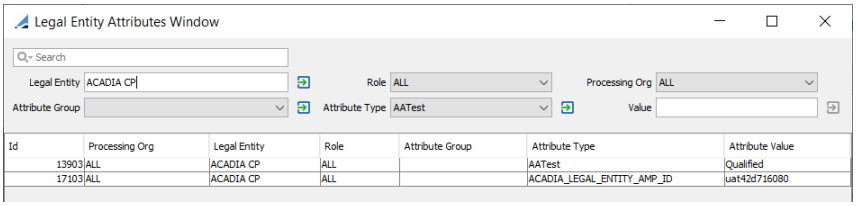
Processing Org Setup



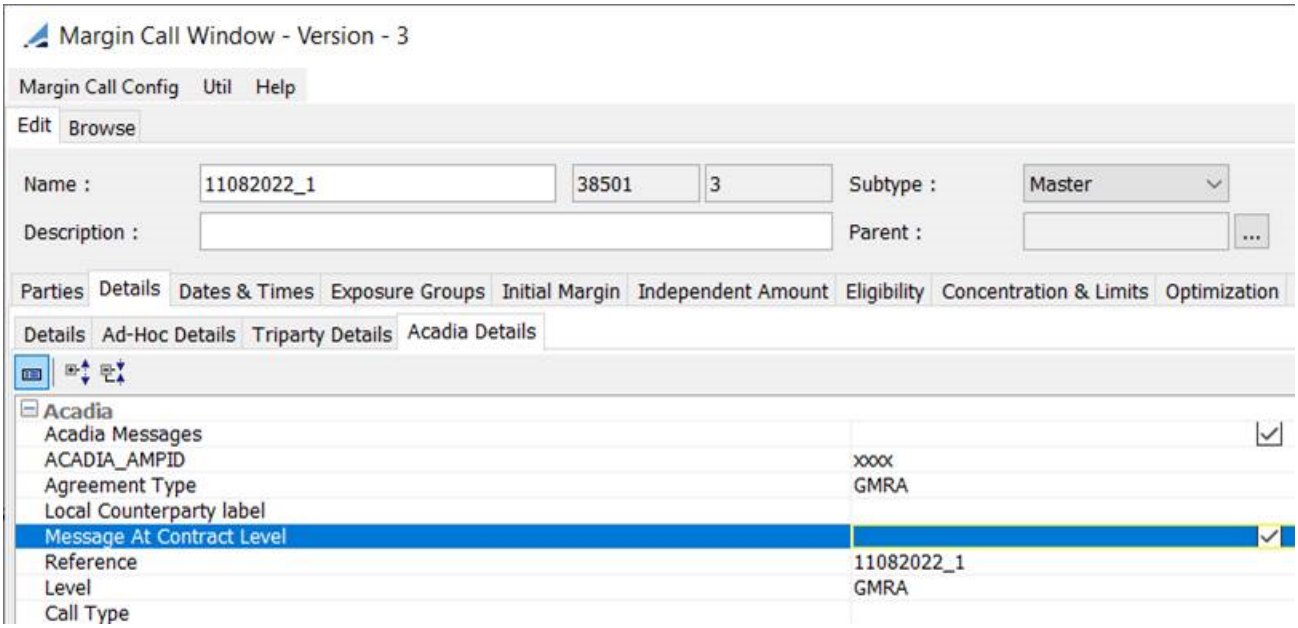


Counterparty Setup





7.1.4 Margin Call Contract Setup

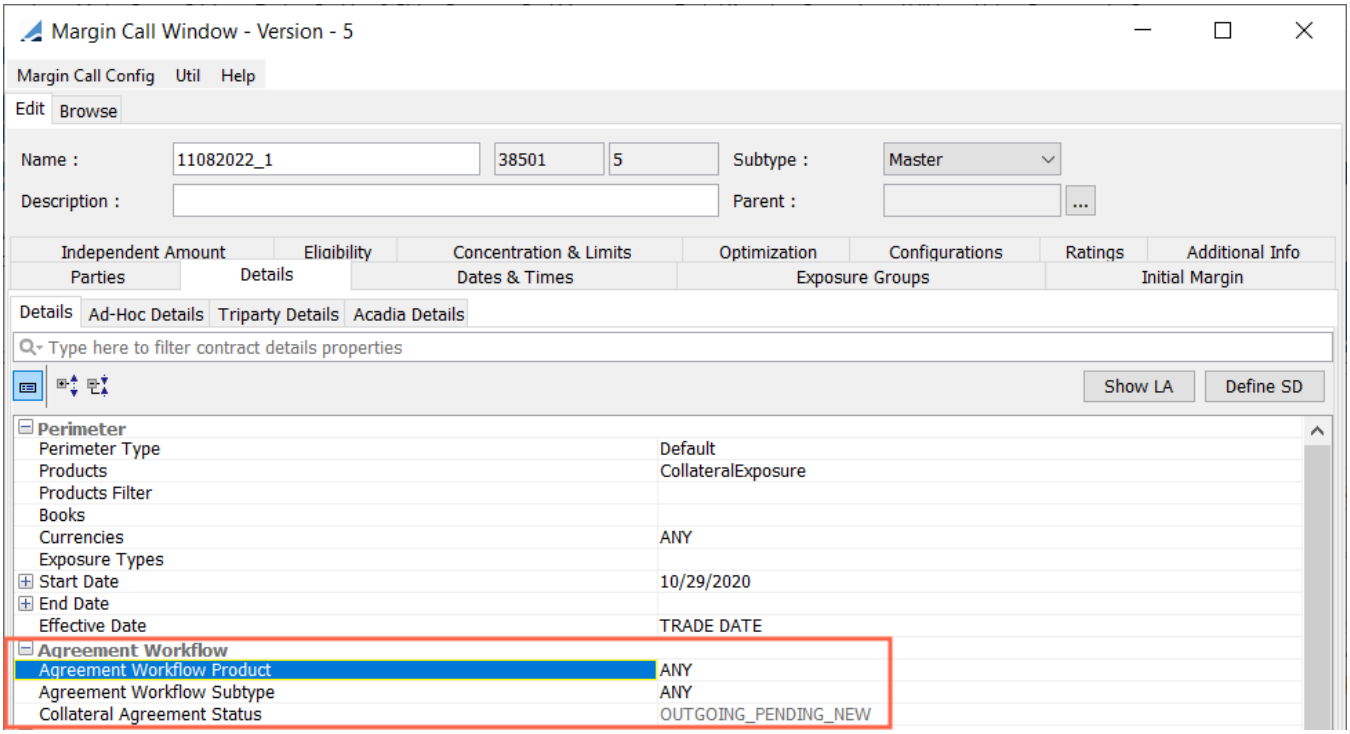


▶ See Acadia Mapping for detailed field description.

ⓘ ***Message At Contract Level*** **should only be selected if there are no Exposure Groups on the contract. It is not supported if there are Exposure Groups.**

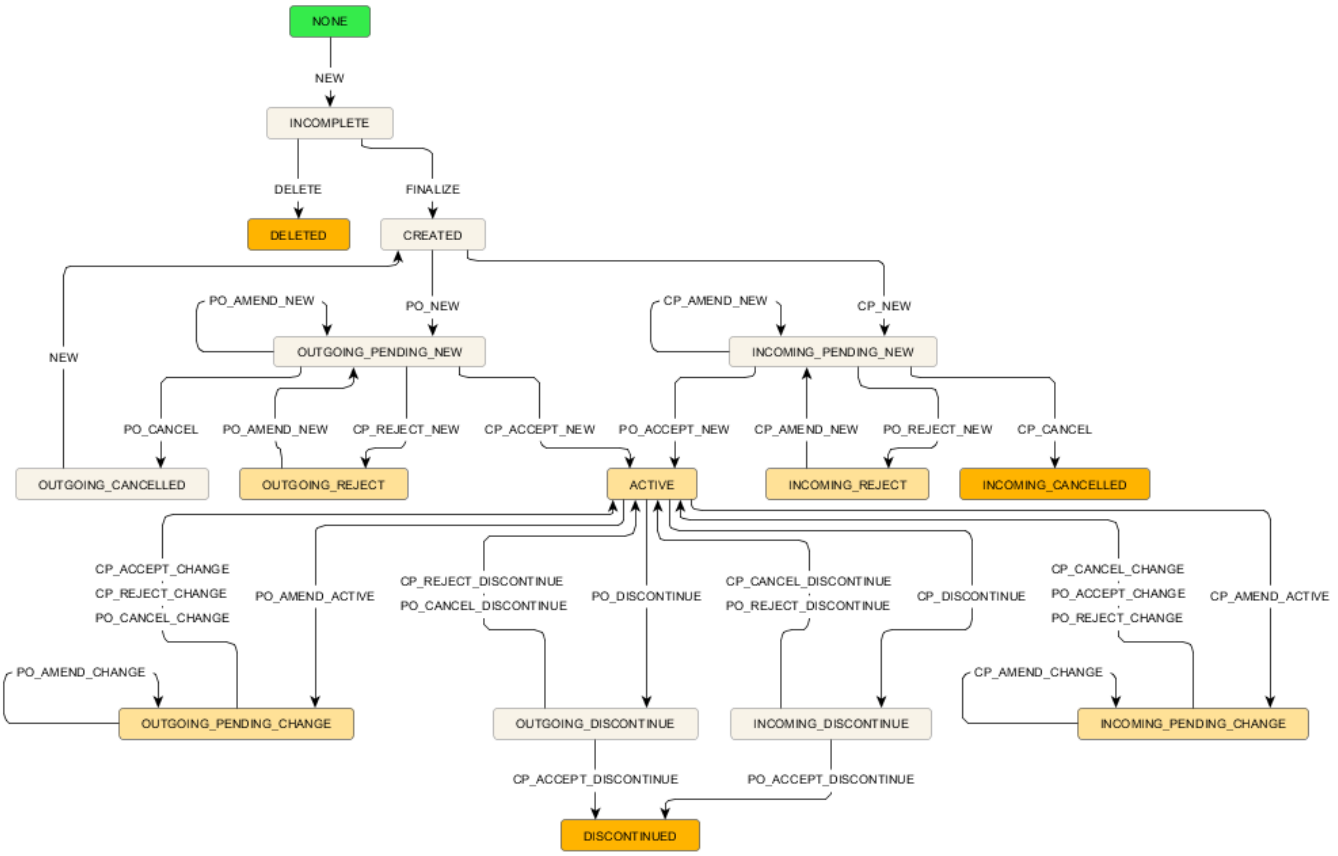
7.1.5 Workflow

Setup on Margin Call Contract



Workflow for Acadia Margin Agreement

There is a specific workflow used for the Acadia Margin Agreements and the Acadia Agreement Manager - It can be imported from AcadiaSoft_CSA.wf.



7.1.6 Message Setup

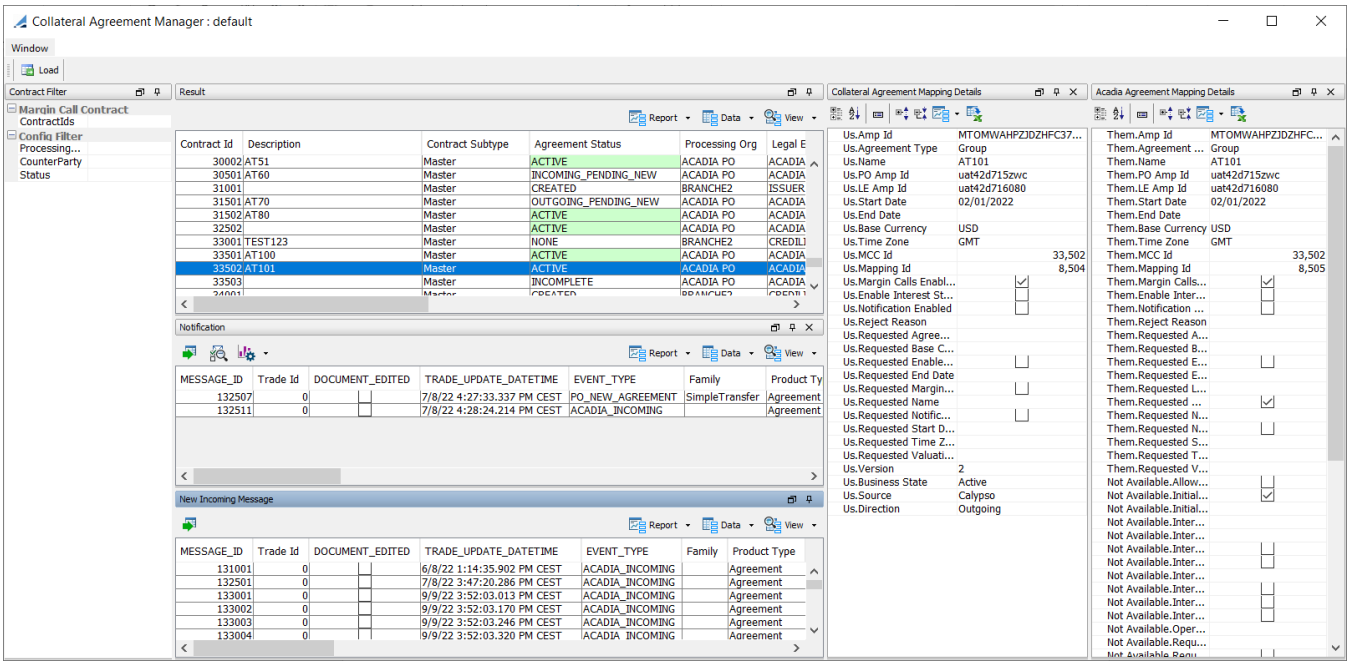
Below is the message setup in json format.

Product	Event	Message Type	ProcessingOrg	PO Contact Type	Receiver	Receiver Role	Rec Contact Type	Language	Addr Type	Gateway	Format Type
Agreement	PO_ACCEPT_NEW_AGREEMENT	AGREEMENT_NOTIFICATION	ALL	Default	ALL	CounterParty	Default	English	ACADIA	ACADIA	ACADIA
Agreement	PO_REJECT_NEW_AGREEMENT	AGREEMENT_NOTIFICATION	ALL	Default	ALL	CounterParty	Default	English	ACADIA	ACADIA	ACADIA
Agreement	PO_NEW_AGREEMENT	AGREEMENT_NOTIFICATION	ALL	Default	ALL	CounterParty	Default	English	ACADIA	ACADIA	ACADIA
Agreement	PO_CANCEL_AGREEMENT	AGREEMENT_NOTIFICATION	ALL	Default	ALL	CounterParty	Default	English	ACADIA	ACADIA	ACADIA
Agreement	PO_AMEND_ACTIVE_AGREEMENT	AGREEMENT_NOTIFICATION	ALL	Default	ALL	CounterParty	Default	English	ACADIA	ACADIA	ACADIA
Agreement	PO_AMEND_NEW_AGREEMENT	AGREEMENT_NOTIFICATION	ALL	Default	ALL	CounterParty	Default	English	ACADIA	ACADIA	ACADIA
Agreement	PO_AMEND_CHANGE_AGREEMENT	AGREEMENT_NOTIFICATION	ALL	Default	ALL	CounterParty	Default	English	ACADIA	ACADIA	ACADIA
Agreement	PO_ACCEPT_CHANGE_AGREEMENT	AGREEMENT_NOTIFICATION	ALL	Default	ALL	CounterParty	Default	English	ACADIA	ACADIA	ACADIA
Agreement	PO_REJECT_CHANGE_AGREEMENT	AGREEMENT_NOTIFICATION	ALL	Default	ALL	CounterParty	Default	English	ACADIA	ACADIA	ACADIA
Agreement	PO_CANCEL_CHANGE_AGREEMENT	AGREEMENT_NOTIFICATION	ALL	Default	ALL	CounterParty	Default	English	ACADIA	ACADIA	ACADIA
Agreement	PO_DISCONTINUE_AGREEMENT	AGREEMENT_NOTIFICATION	ALL	Default	ALL	CounterParty	Default	English	ACADIA	ACADIA	ACADIA
Agreement	PO_ACCEPT_DISCONTINUE_AGREEMENT	AGREEMENT_NOTIFICATION	ALL	Default	ALL	CounterParty	Default	English	ACADIA	ACADIA	ACADIA
Agreement	PO_REJECT_DISCONTINUE_AGREEMENT	AGREEMENT_NOTIFICATION	ALL	Default	ALL	CounterParty	Default	English	ACADIA	ACADIA	ACADIA
Agreement	PO_CANCEL_DISCONTINUE_AGREEMENT	AGREEMENT_NOTIFICATION	ALL	Default	ALL	CounterParty	Default	English	ACADIA	ACADIA	ACADIA
Agreement	PO_LOCAL_CHANGE_AGREEMENT	AGREEMENT_NOTIFICATION	ALL	Default	ALL	CounterParty	Default	English	ACADIA	ACADIA	ACADIA

7.2 Agreement Manager

The Agreement Manager uses its own window to view all of the agreements and apply actions on the agreements.

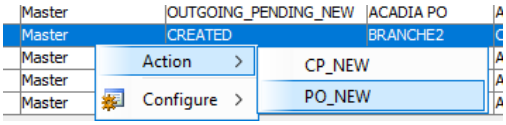
You can add a menu item for the Agreement Manager using menu action `refdata.collateral.CollateralAgreementManager`.

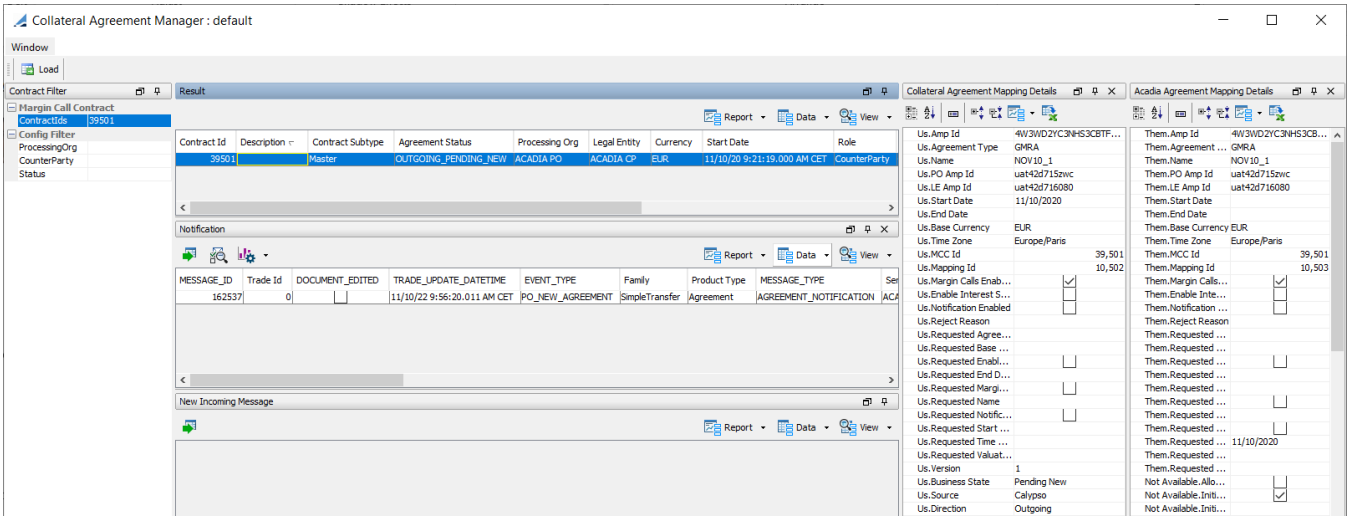


Collateral Agreement Manager

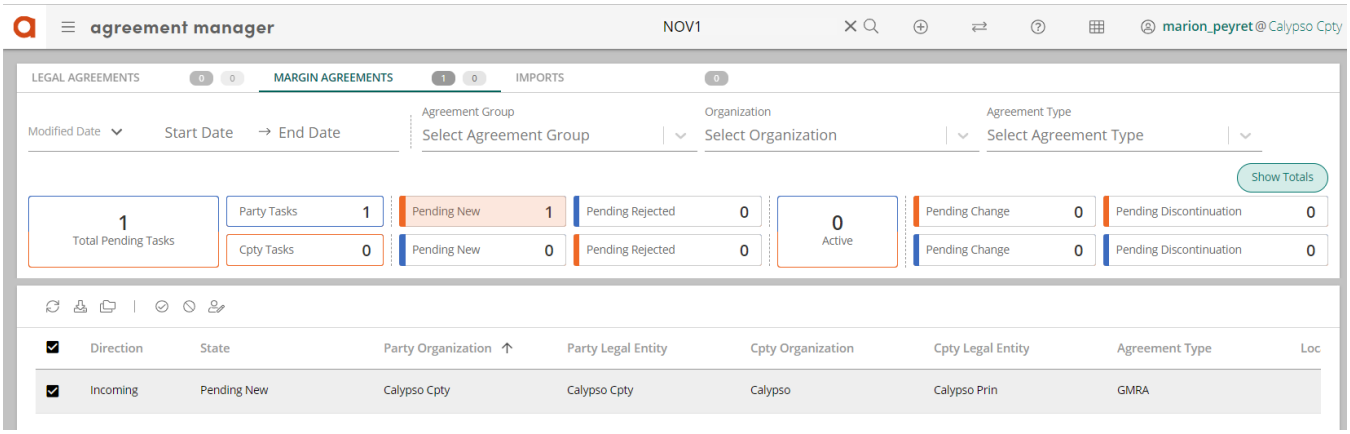
7.3 Process

7.3.1 PO Creates Agreement

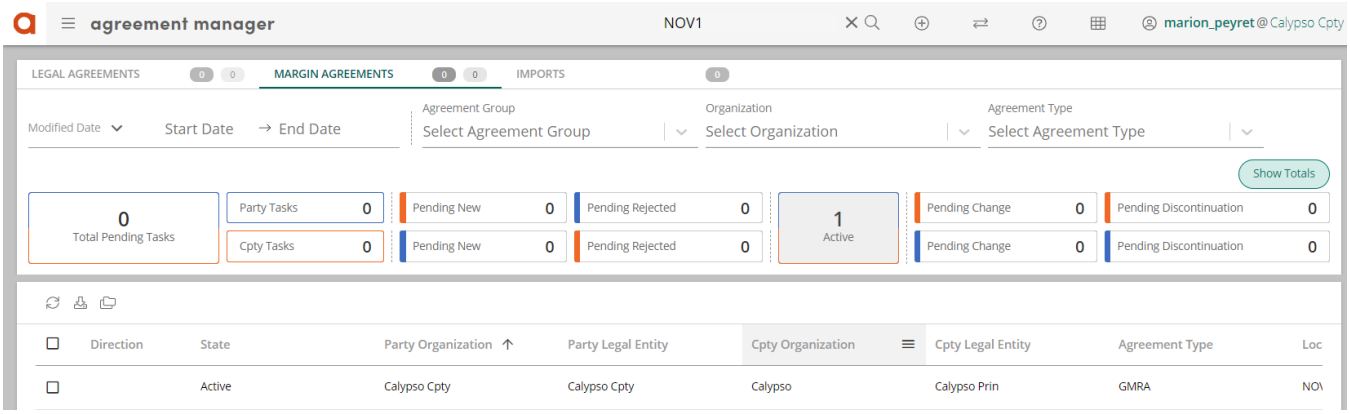




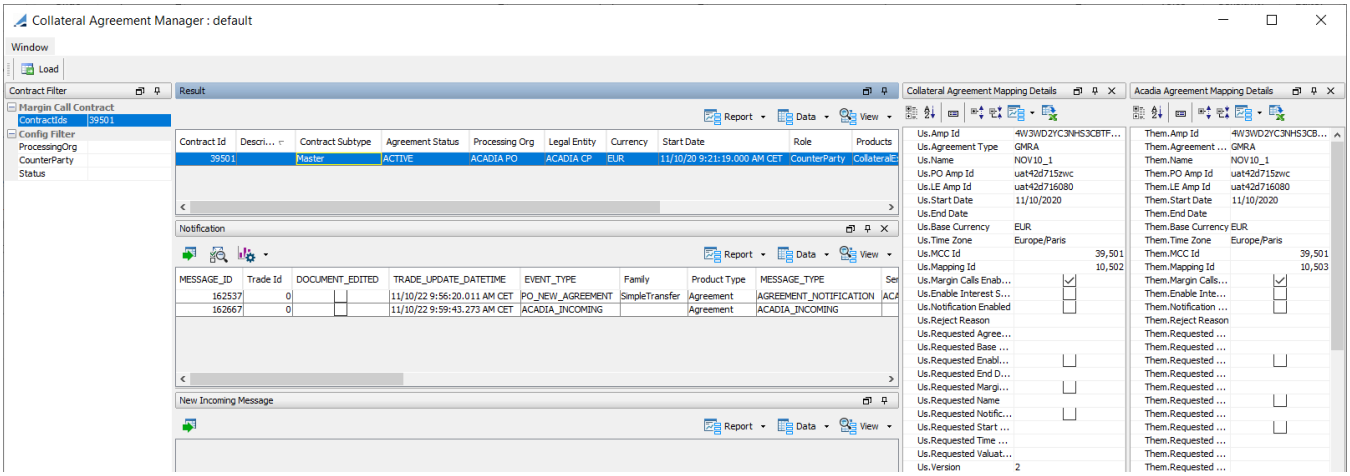
This will appear as **Pending New** on the Acadia portal.



Once accepted, it will move to **Active**.

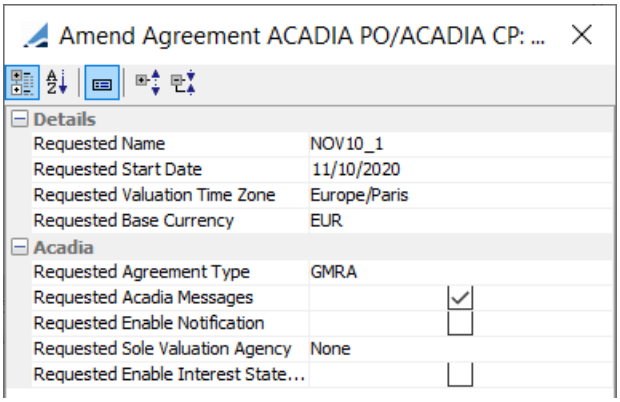


The contract will move to **ACTIVE** on the Calypso side too.

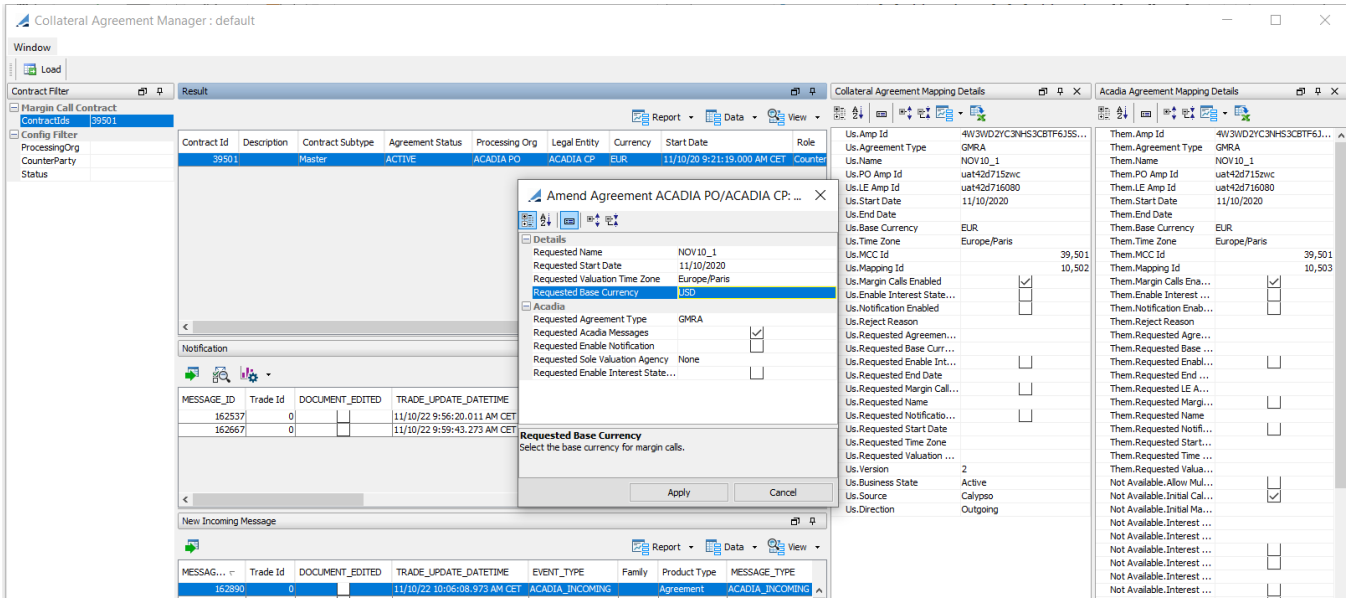


7.3.2 PO Modifies Agreement

When selecting this action, the following pop up message will appear.

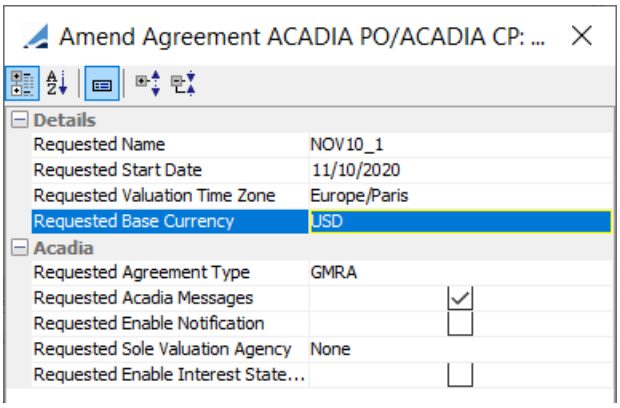


The only fields that can be amended are those that can be amended on the Acadia side.

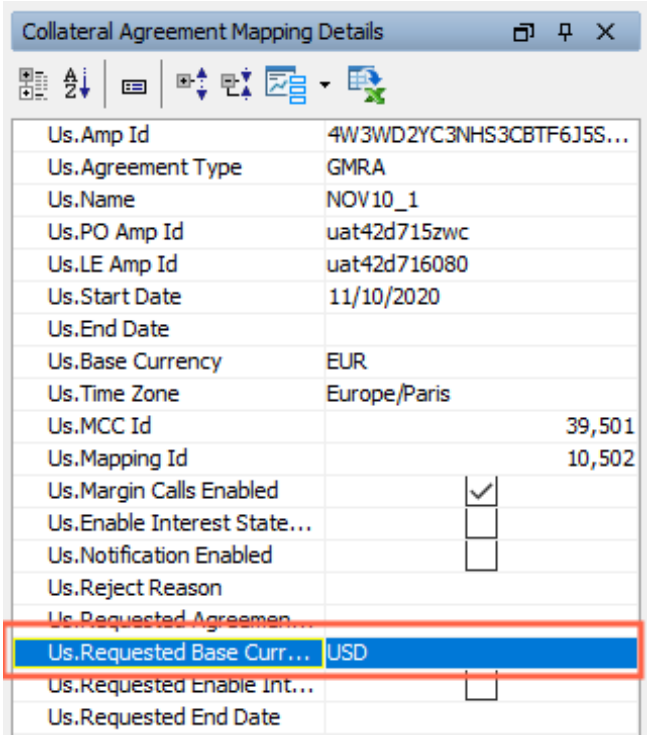


Example

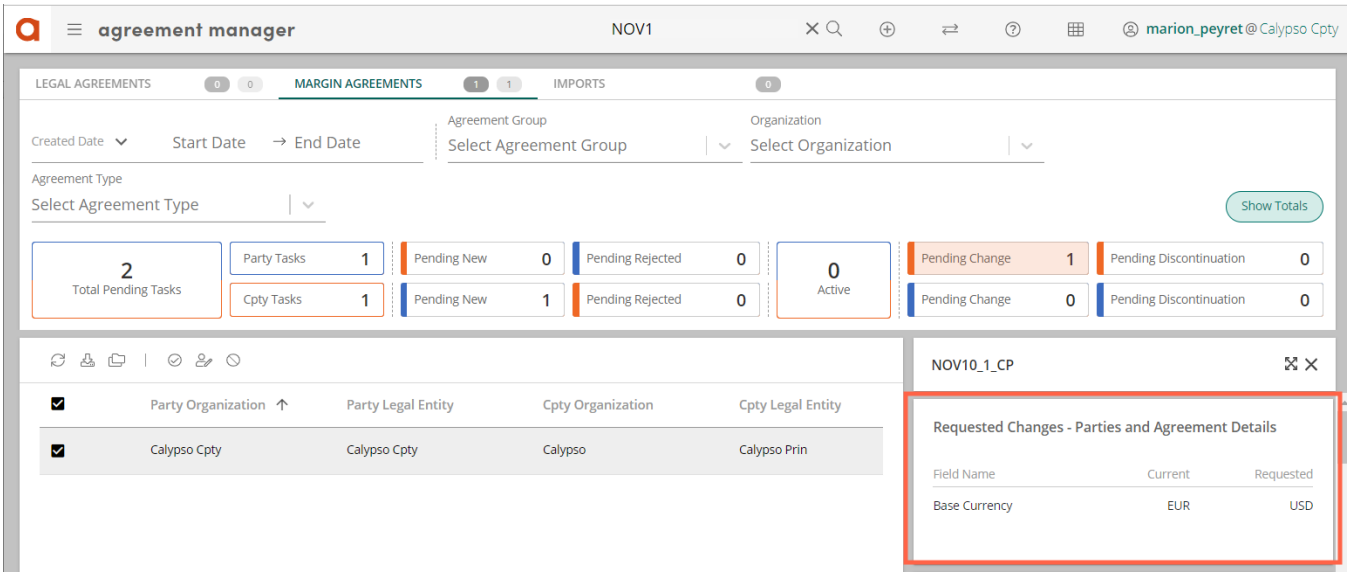
If the currency is changed from EUR to USD



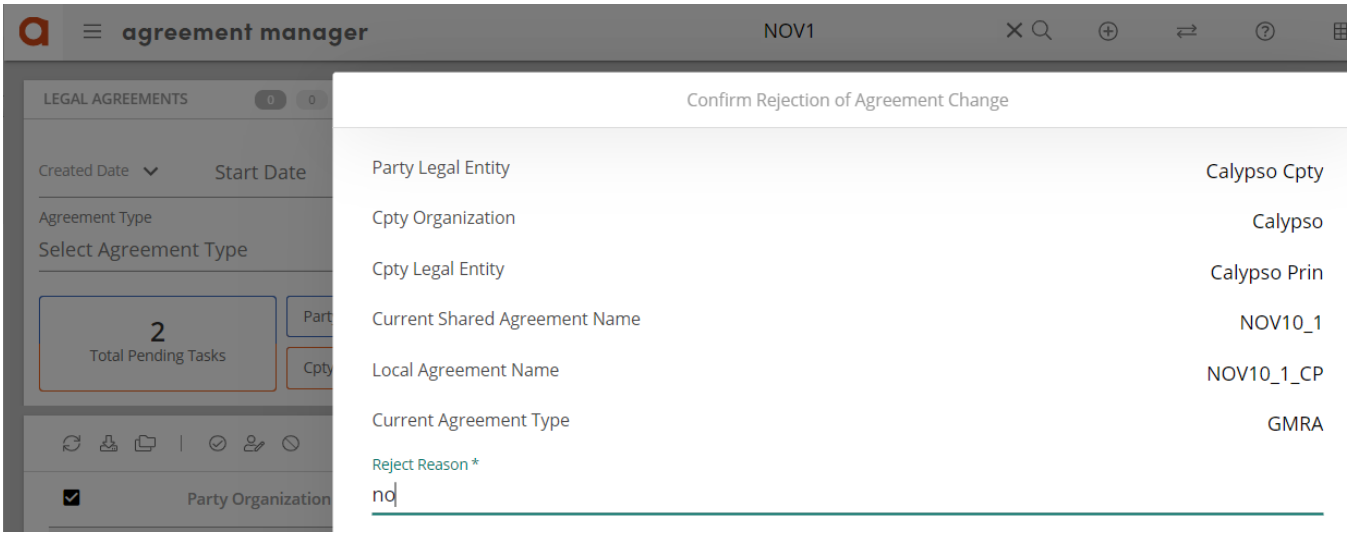
This will show on the Collateral Agreement Details.



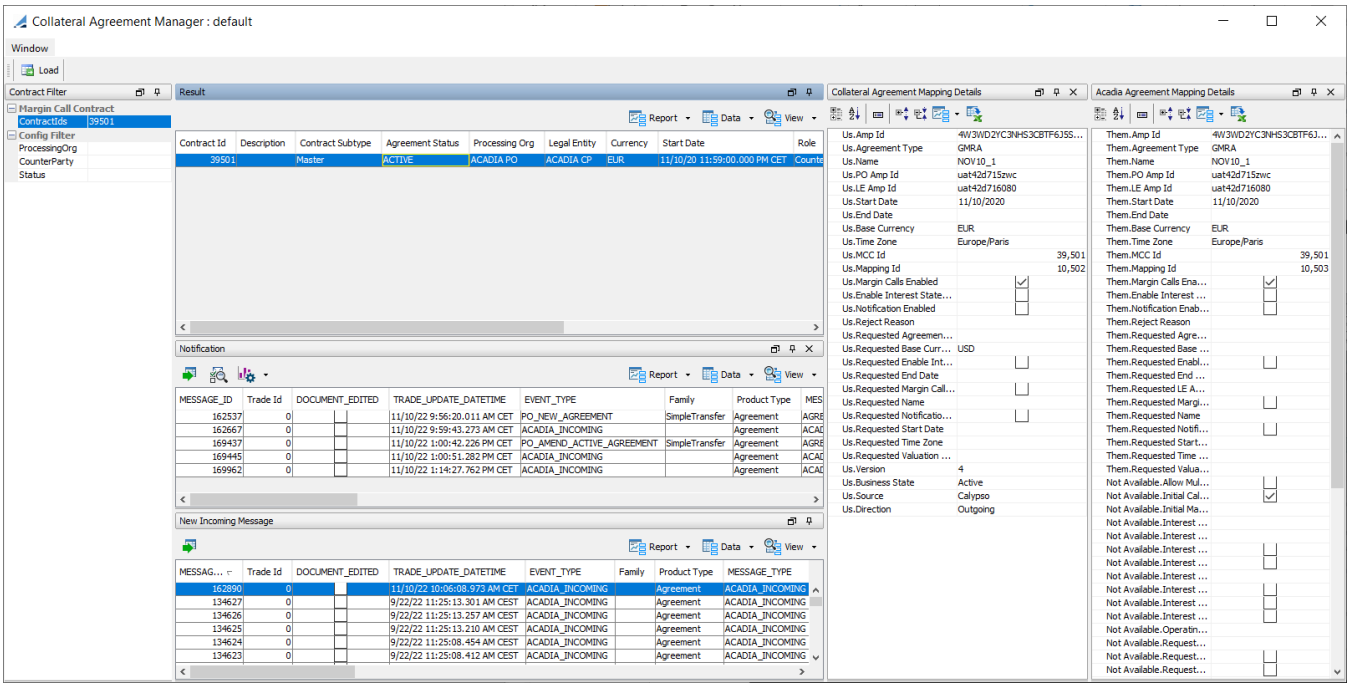
A message will be sent to Acadia and the CP will see that the PO has asked for an amend.



The CP can reject.



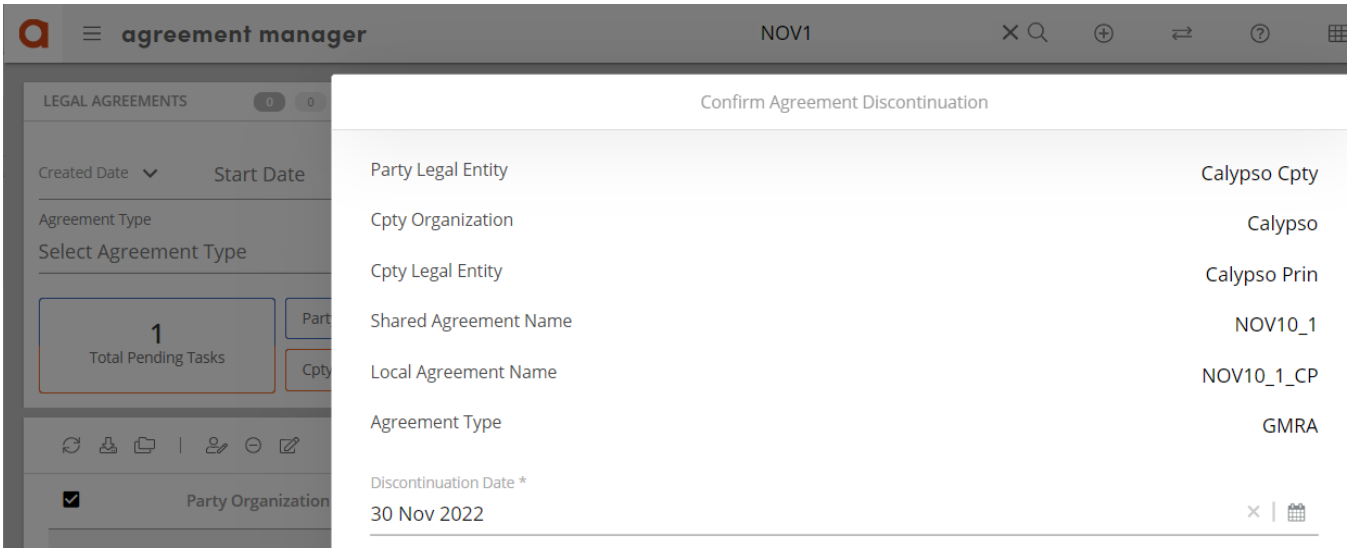
In which case, the contract currency will remain EUR.



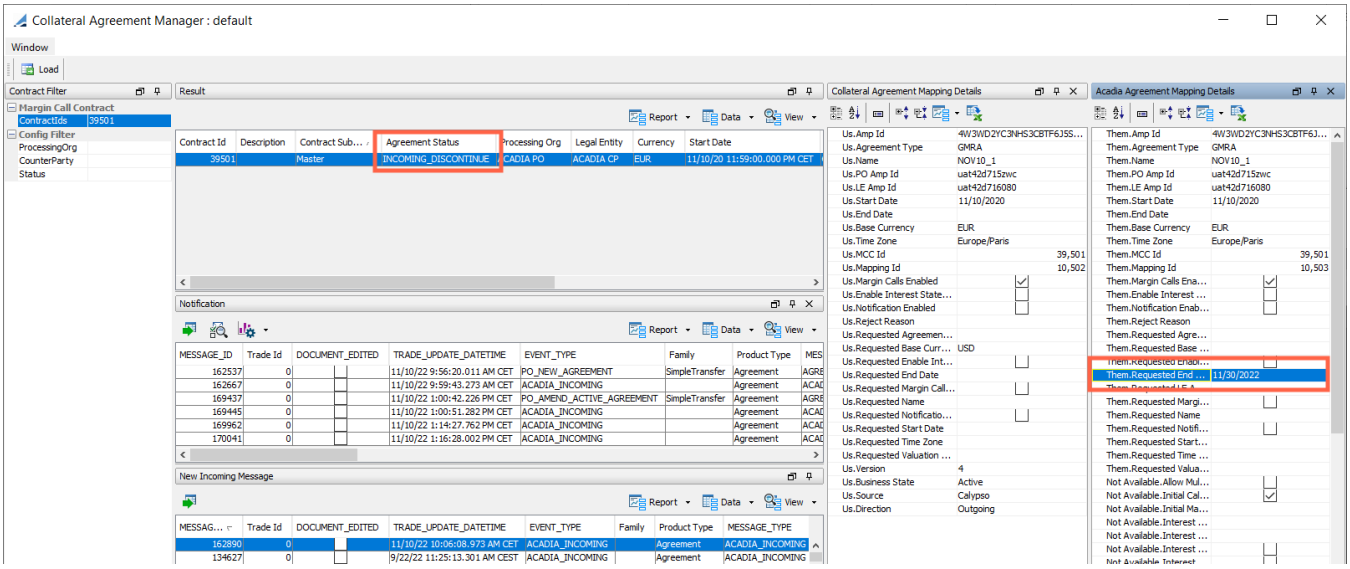
[NOTE: An AMEND can also be triggered by the CP, in which case the PO must decide whether to accept or reject the change.]

7.3.3 Counterparty Discontinues Agreement

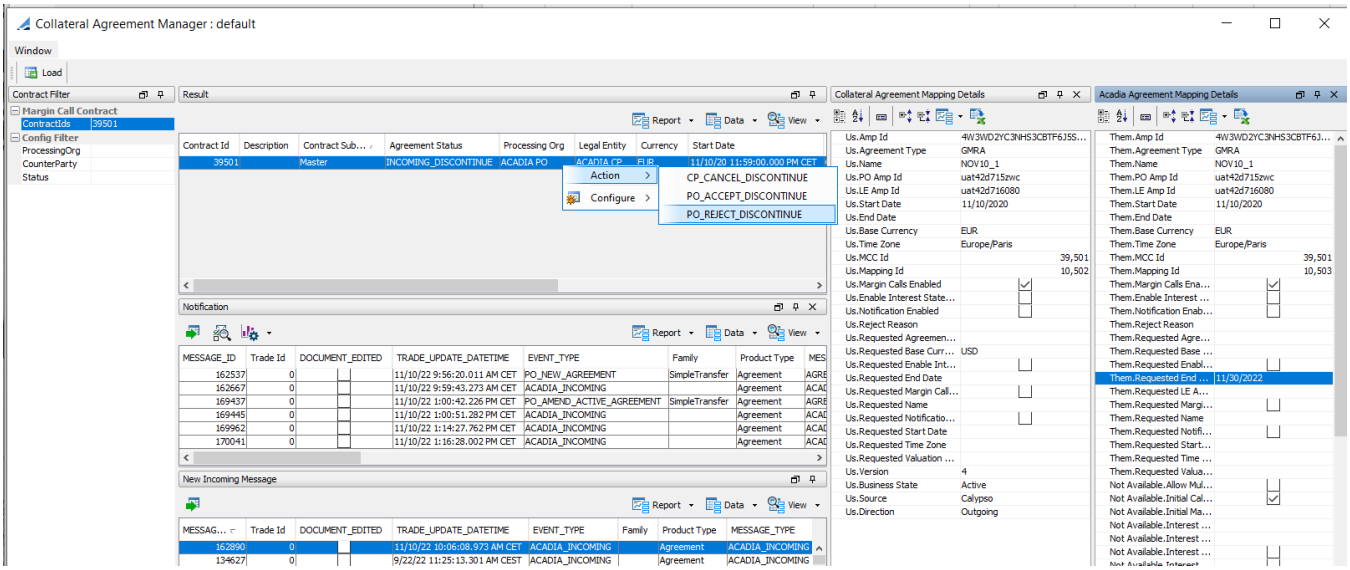
The CP can send a request to discontinue the contract.

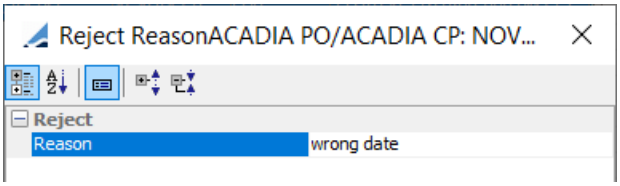


As a result, the contract status is updated in Calypso and the Request End Date is set.

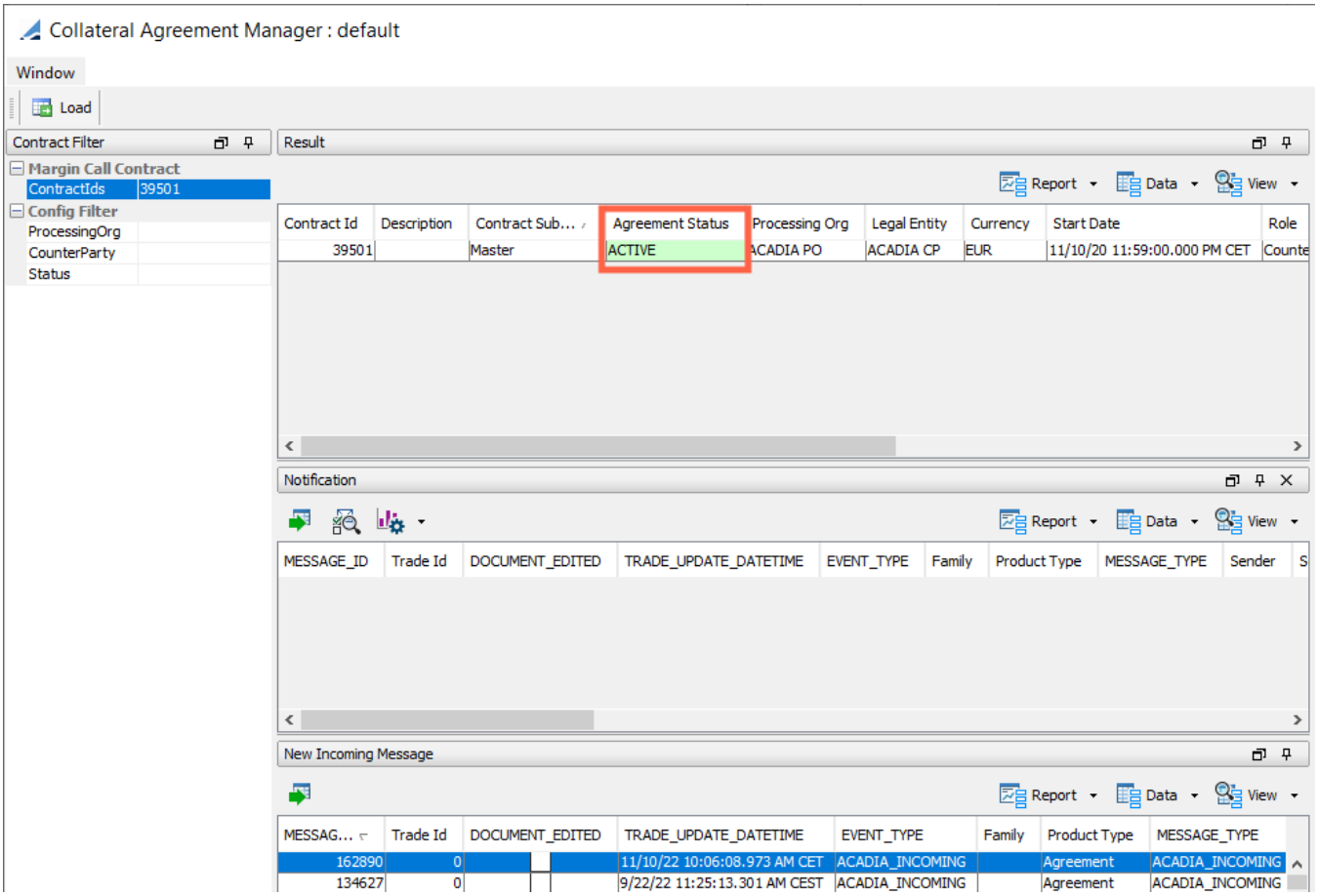


The PO can accept or reject. Assuming the PO rejects:





The contract will move back to **ACTIVE**.


Collateral Agreement Manager : default
Window
Load
Contract Filter
Margin Call Contract
ContractIds 39501
Config Filter
ProcessingOrg
CounterParty
Status
Result
Report
Data
View
Contract Id
Description
Contract Sub...
Agreement Status
Processing Org
Legal Entity
Currency
Start Date
Role
39501
Master
ACTIVE
ACADIA PO
ACADIA CP
EUR
11/10/20 11:59:00.000 PM CET
Notification
MESSAGE_ID
Trade Id
DOCUMENT_EDITED
TRADE_UPDATE_DATETIME
EVENT_TYPE
Family
Product Type
MESSAGE_TYPE
Sender
New Incoming Message
MESSAG...
162890
134627
11/10/22 10:06:08.973 AM CET
9/22/22 11:25:13.301 AM CEST
ACADIA_INCOMING
Agreement

8. Description Properties File

The properties contained in the Acadia property files are described below.

8.1 acadia.ws.properties

Property	Default Value	Description
JMS Configuration		
jms.url	-	Specifies the provider URL
jms.initial.context.factory	org.apache.activemq.jndi. ActiveMQInitialContextFactory	*Should only be modified for custom code* Specifies the name of the initial context factory class used to create the initial context
jms.queue.connection.factory	java:/calypso/jms/ConnectionFactory	*Should only be modified for custom code* Specifies the name of the class connection factory that is used by the client runtime to establish a connection to the JMS messaging engine
jms.connection.password	calypso	The caller's password to connect to the JMS server
Dispatcher Configuration		
dispatcher.output.queue	queue/dispatcher	Name of the queue used to push messages
dispatcher.class	acadia.ws.JMSMessageSender	*Should only be modified for custom code* Specifies the name of the class who manages the dispatcher queue
Processor Configuration		
processor.count.reconnect	10	Controls the number of reconnection attempts after the client has a connection failure
processor.interval.reconnect	5	Specifies the time between each connection retry attempt (Reconnect Count) Valid values are 1 to 60 seconds

8.2 acadia.engine.properties

Property	Default Value	Description
Acadia Subscription Information		
acadia.message. affectedOrganizationAmpId	-	Id used by Acadia when sending messages to you This AmpId is provided by Acadia when you create an account
acadia.message. counterpartyContactEmail	-	Email address associated to your organization when you create an account
acadia.message. counterpartyContactInfo	CALYPSO	Additional info that you can provide to Acadia when they contact you
acadia.message. counterpartyContactName	CALYPSO	Name of your organization that Acadia uses when they contact you
acadia.message.https	false	Indicates if you want to use https or not when Acadia contacts you
acadia.intereststatement.message.version		If using an interest statement, set to 4.0
AcadiaSoft Credentials		
acadia.user		User name used to send messages to Acadia Provided by Acadia when an account is created
acadia.password		Password used to send messages to Acadia Provided by Acadia when an account is created Must be encrypted Mandatory
acadia.message.version	3.7	Message version number expected to receive Calypso handles version 2.2
Proxy Configuration		
acadia.proxy.host	-	Address information sent to Acadia if the client uses a local proxy to access the internet

Property	Default Value	Description
acadia.proxy.port	-	Port number where the proxy server is reachable
acadia.proxy.user	-	Username of the proxy server to authenticate the caller
acadia.proxy.password	-	Password of the proxy server to authenticate the caller
JMS Configuration		
jms.url	-	Specifies the provider URL
jms.initial.context.factory	org.apache.activemq.jndi. ActiveMQInitialContextFactory	Specifies the name of the initial context factory used to create the initial context
jms.queue.connection.factory	java:/calypso/jms/ ConnectionFactory	Specifies the name of the class connection factory that is used by the client runtime to establish a connection to the JMS Messaging Engine
jms.connection.username	admin	The caller's username to connect to the JMS server
jms.connection.password	calypso	The caller's password used to connect to the JMS server (When acadia.crypt.password is set to true, this needs to be encrypted with the key being the normal text password.)
Dispatcher Gateway		
dispatcher.class	acadia.preprocessor. JMSMessagePreprocessor	*Should only be modified for custom code* Class name which handles the dispatcher queue
dispatcher.delegator	acadia.preprocessor. ACADIADispatcher	*Should only be modified for custom code*
Processor Gateway		
processor.save.old.message	true	Saves a Back Office message when a message is received with an older version (or equal version) than the last Acadia message handled by Calypso
processor.count.reconnect	10	Controls the number of reconnection attempts after the client has a connection failure

Property	Default Value	Description
processor.interval.reconnect	15	Specifies the time between each connection retry attempt (Reconnect Count) Valid values are 1 to 60 seconds
message.error.reprocess.count	3	Number of retry when a message cannot be correctly processed
Polling Gateway		
polling.class	acadia.processor. ACADIAPollingProcessor	*Should only be modified for custom code* Class name which handles the Acadia processor when the polling mechanism is used
polling.delegator	acadia.preprocessor. ACADIAPolling	Should only be modified for custom code Class name that handles Acadia delegator when the polling mechanism is used
Collateral Configuration		
collateral.context	default	The default Collateral Context This context is used to process incoming messages Note: Only the Default Collateral Context can be used for Acadia Messages
Password Encryption		
acadia.crypt.password	False	If true, the system tries to decrypt all passwords defined in all properties files with the associated key. When set to true, jms.connection.password needs to be encrypted with the key being the normal text password provided.
acadia.crypt.key	-	Associated key to decrypt the password, this key is used for all encrypted passwords in Acadia If there are no keys used, leave this property empty

8.3 acadia.polling.properties

Property	Default Value	Description
Polling Configuration		
margin.polling.referenceGroup	Blank	Blank (or empty) indicates that there is no filter criteria considered. Only margin calls are consumed with agreements that are in the database. If a value is present, only margin calls from that Reference Group are consumed. For example, if the Reference Group value is ABC, only margin calls from ABC are considered and all other margin calls are ignored.
acadia.polling.interval	10	Interval between requests from Calypso to Acadia
margincall.polling. deliveryMapContext		Not used
margincall.polling.history	False	Allows receiving of messages that have been expired by new messages
margincall.polling. filterAgreement	False	Consume only margin calls with agreements that are in your database
polling.input.queue	queue/polling	Name of the queue that will split messages into a unit message
polling.output.queue	queue/pollingToAcadia	Name of the queue that to which the polling task will send messages
interest.polling.interest.enabled		Set to false if not using an interest statement. In this case, interest.polling.get.url should be empty. If set to true, interest.polling.get.url=https://uat.acadiahub.com/amp/interestStatement/get?v=4.0&useDeliveryMap=Calypso2&useDeliveryMap Order=true&deliveryMapIncludeExpired=false&history=true&interestStatementState=Mismatched,Matched,Finalized,MatchedFinal, Unpaired

9. FAQs

How is a Calypso Margin Call Contract mapped to an Acadia Agreement?

An Identifier should be used which is unique. If there is no identifier, the system looks for an AmpId. If an AmpId is shared, the system looks for a call type or role to determine the mapping.

What happens if the Counterparty pledges a security that is not known in Calypso?

An EX_ACADIA_ERROR exception is raised in the Task Station

What happens if the Counterparty pledges non-eligible collateral?

In the Category column in the Allocation panel, it will display as ineligible. The user can then accept or reject. An error also appears in the Task Station.

What happens if an unknown Counterparty lodges a Margin Call?

The system will automatically reject if the system cannot recognize the AmpId.

What if there is a discrepancy in the Valuation Date?

If the Valuation Date calculated by Calypso is not the same as the Acadia valuation, an error is logged and there is an attribute on the entry called MC_ATTRIBUTE_DISPCREPANCY_VALDATE. This is not a blocker for Calypso, however.

If a dispute is resolved, is it also reflected in Calypso messaging?

If a dispute is resolved, the entry moves from Dispute to Dispute Cancel and back to a Received or Created status.

Is it possible in Calypso to attach a document with Acadia messaging?

Acadia has a feature of attaching any report/statement as part of messaging to the Counterparty. But, Calypso does not support this. However, it is possible to send a notification to the Counterparty using Collateral Manager.

Which product code can be used when sending or receiving a pledge?

Any product code can be received (ISIN, CUSIP).

When sending a pledge, only ISIN can be used.

What is the difference between statuses CREATE/CREATED and CANCEL/CANCELLED?

Based on the default setup:

In the CREATE and CANCEL status, no message is generated.

In the CREATED and CANCELLED status, messages are generated.

What information is imported from Acadia messages?

- Cpty MTM
- Cpty Amount
- Cpty Return Amount (CreateMarginCall message only)
- Cpty Delivery Amount (CreateMarginCall message only)

Is anything NOT supported in the Calypso Acadia functionality?

Not supported are Acadia option separate call per currency and Substitution functionality (not an exhaustive list).

What happens if there is a discrepancy in the valuation date?

If the valuation date calculated by Calypso is not the same as the AcadiaSoft valuation date, an error is logged and the AMP_DISCREPANCY_VALDATE attribute appears on the entry.

This attribute is empty if the Calypso and AcadiaSoft valuation dates are the same. If the valuation dates are different, the valuation date from the incoming message is displayed in the attribute.