



Nasdaq Calypso

Traiana Integration Guide

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Approved

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Document History

Revision	Published	Summary of Changes
1.0	April 2014	First edition for version 1.0.0
2.0	July 2015	Second edition – Updates for version 1.1.0
3.0	September 2021	Third edition – Updated for version 3.3.0
4.0	February 2022	Fourth edition for version 4.0.0, 4.0.1 - Technical release only – Compatibility with version 17
5.0	January 2024	Fifth edition for version 5.3.0 - Technical release only – Compatibility with version 18
6.0	June 2024	Fifth edition for version 5.6.0 – Added support for Portfolio Swap Positions

This document aims at guiding users to set up and configure the Traiana CCP Connect (CM Implementation) Integration Module.

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

Table of Contents

Introduction	4
1.1 Overview	4
1.2 Module Dependencies	4
1.3 Messaging Provider.....	4
Install Traiana CCP Connect Module	5
Configuration and Reference Data.....	8
3.1 Engine Config – Traiana Import Message Engine.....	8
3.2 Legal Entity – Client CM.....	8
3.3 Legal Entity – CCP.....	9
3.4 Account.....	10
3.5 Trade Book	11
3.6 Reset Rate	12
3.7 Trade Workflow (by importing Traiana_FXNDF_Trade.wf).....	13
3.8 Message Setup.....	14
3.9 Message Sender	16
3.10 Task Station.....	16
3.11 Trade Keywords (added by schema data XML)	17
3.12 Calypso Mappings (added by schema data XML).....	18
Engines	20

Introduction

1.1 Overview

This document aims at guiding users to set up and configure the Traiana CCP Connect (CM Implementation) Integration Module.

Traiana CCP Connect provides connectivity and workflow between participants and Central Counterparties (CCPs) as well as Swaps Data Repositories (SDRs). Calypso capture trade information sending from Traiana CCP Connect and keep the latest status about the trade.

FpML is used as the message format between Calypso and Traiana CCP Connect.

The current version of Traiana Integration Module supports regular FXNDF, Portfolio Swap Positions.

1.2 Module Dependencies

- Data Uploader

 [Note: Add this line to the file *gatewayservice.properties*.]

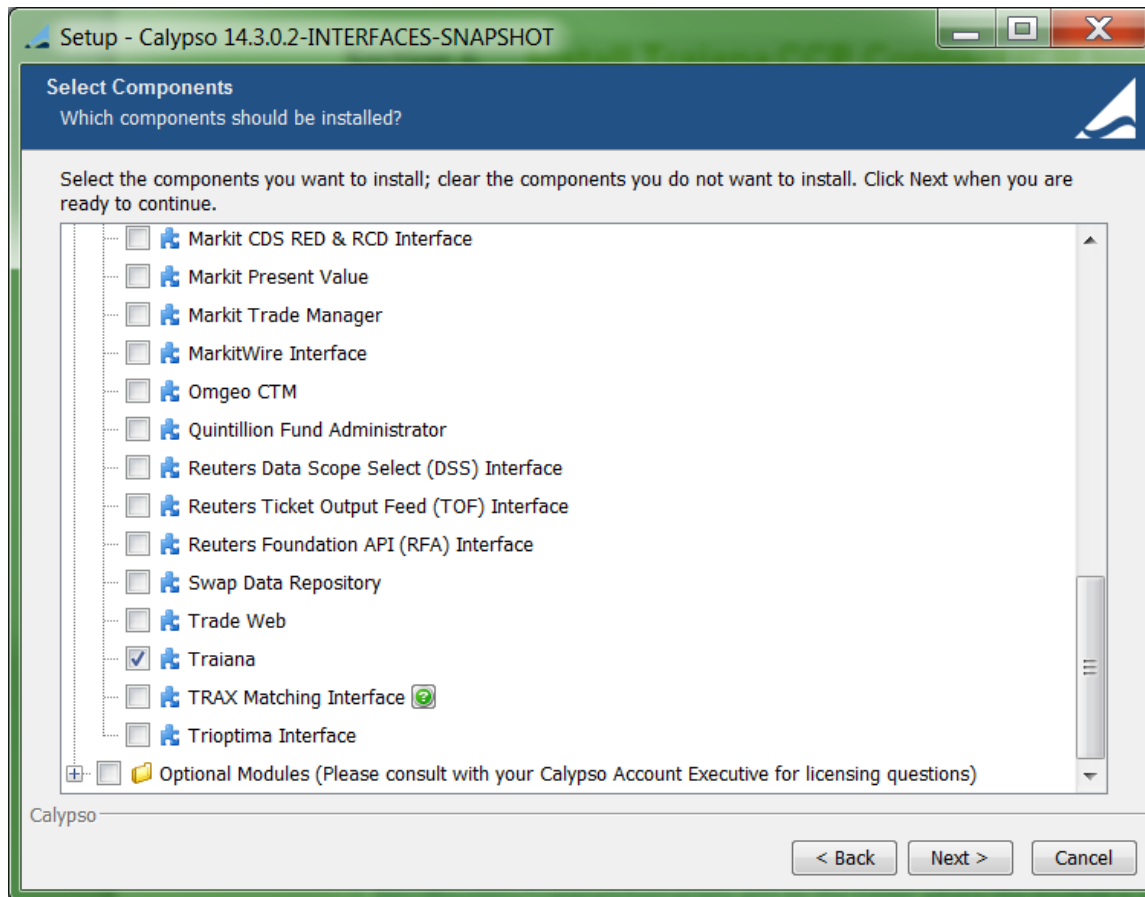
```
TraianaPublishers=
```

1.3 Messaging Provider

Messaging provider which supports JMS can be used for passing in source messages and sending out replies.

Install Traiana CCP Connect Module

1. Follow the Calypso System Guide "Installation and Upgrade" to install Calypso. Check the component Traiana during the installation.



Note - if you are upgrading Traiana Module from a previous version, please patch with the CUP file or release ZIP file.

2. For upgrading from a previous version of Calypso Traiana Module, please execute the corresponding migration SQL scripts.

Make sure the scripts executed cover the upgrade path. For example, if you are upgrading to version 1.1.0 from 1.0.0, please execute these scripts:

- For Oracle database,
 - \$CALYPSO_INSTALL_DIR\client\bin\dbscripts\oracle\sql\traiana_ora_migrate_from_1-0-1_to_1-0-2.sql
 - \$CALYPSO_INSTALL_DIR\client\bin\dbscripts\oracle\sql\traiana_ora_migrate_from_1-0-2_to_1-1-0.sql
- For Sybase database,

- \$CALYPSO_INSTALL_DIR\client\bin\dbscripts\sybase\sql\traiana_syb_migrate_from_1-0-1_to_1-0-2.sql
- \$CALYPSO_INSTALL_DIR\client\bin\dbscripts\sybase\sql\traiana_syb_migrate_from_1-0-2_to_1-1-0.sql

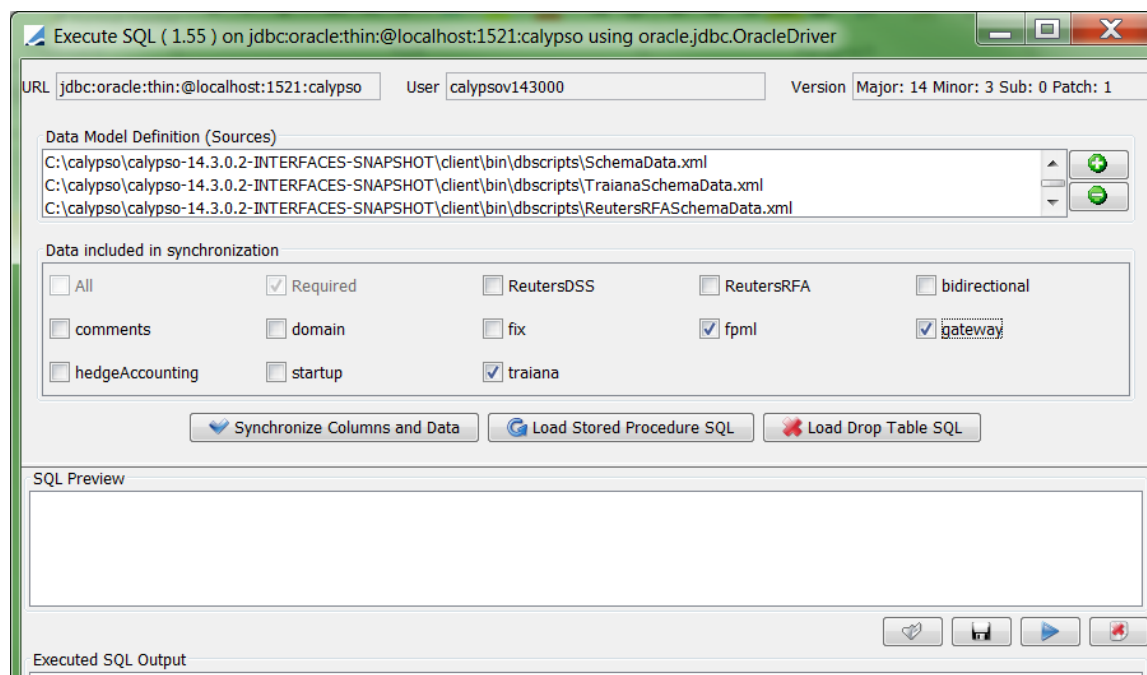
If you are using version 1.0.2 and is going to upgrade to version 1.1.0, you could just execute this one:

- For Oracle database,
 - \$CALYPSO_INSTALL_DIR\client\bin\dbscripts\oracle\sql\traiana_ora_migrate_from_1-0-2_to_1-1-0.sql
- For Sybase database,
 - \$CALYPSO_INSTALL_DIR\client\bin\dbscripts\oracle\sql\traiana_syb_migrate_from_1-0-2_to_1-1-0.sql

3. Run Execute SQL. Make sure that the following files are included in Data Model Definition.

- \$CALYPSO_INSTALL_DIR\client\bin\dbscripts\GatewaySchemaBase.xml
- \$CALYPSO_INSTALL_DIR\client\bin\dbscripts\GatewaySchemaData.xml
- \$CALYPSO_INSTALL_DIR\client\bin\dbscripts\FpMLSchemaData.xml
- \$CALYPSO_INSTALL_DIR\client\bin\dbscripts\TraianaSchemaData.xml

4. Check the boxes fpml, gateway and traiana and then click Synchronize Columns and Data. Then click the arrow button (marked 3 in the figure below) to apply the changes to the database.



5. Create the configuration file calypso_traiana_config.properties (you may start with the sample configuration file under the resources folder under where the module is unzipped). Please put in suitable values for each entry according to your own JMS infrastructure setup.

6. Copy the Traiana configuration file (prepared in step 5) to:

`$CALYPSO_INSTALL_DIR\tools\calypso-templates/resources`

Run `$CALYPSO_HOME/custom-extensions/bld deploy`

Deploy the changes by executing:

`$CALYPSO_HOME/deployLocal.bat` (for Windows) or `$CALYPSO_HOME/deployLocal.sh` (for Unix)

Configuration and Reference Data

3.1 Engine Config – Traiana Import Message Engine

Please add the engine definition for Traiana Import Message Engine through the Engine Server on Web Admin and make it listen to PSEventUpload events.

Engine Name: 	Engine ID:
TraianaImportMessageEngine	120
Engine Class:	
com.calypso.tk.engine.UploadImportMessageEngine	
Display Name: 	Application Type:
TraianaImportMessageEngine	EngineServer
Description:	
Traiana Upload Import Message Engine	

Persisted Event Configuration:

PSEventAccountBilling	+ -
PSEventUpload	

XFER_USE_POS_AGGREGATION_ONLY	
XFER_USE_REVERSE	
config	Traiana

Cancel Save

3.2 Legal Entity – Client CM

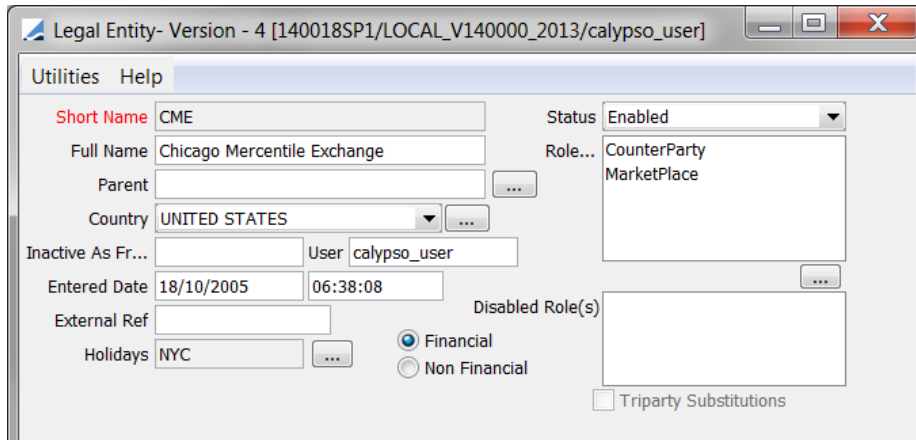
Below shows a sample setup of the Client CM Legal Entity.

Legal Entity- Version - 0 [140018SP1/LOCAL_V140000_2013/calypso_user]

Utilities Help	
Short Name	CLIENT_CM
Full Name	Calypso Client CM
Parent	...
Country	AFGHANISTAN
Inactive As Fr...	User calypso_user
Entered Date	28/10/2013 16:29:34
External Ref	
Holidays	...
☐ Financial ☒ Non Financial	
☐ Triparty Substitutions	
Status	Pending
Role...	Agent ProcessingOrg
Disabled Role(s)	

3.3 Legal Entity – CCP

Below shows a sample setup of the CCP Legal Entity.



Legal Entity - Version - 4 [140018SP1/LOCAL_V140000_2013/calypso_user]

Utilities Help

Short Name: CME Status: Enabled

Full Name: Chicago Mercantile Exchange Role...: CounterParty, MarketPlace

Parent: ...

Country: UNITED STATES

Inactive As Fr...: User: calypso_user

Entered Date: 18/10/2005 06:38:08

External Ref: ...

Holidays: NYC

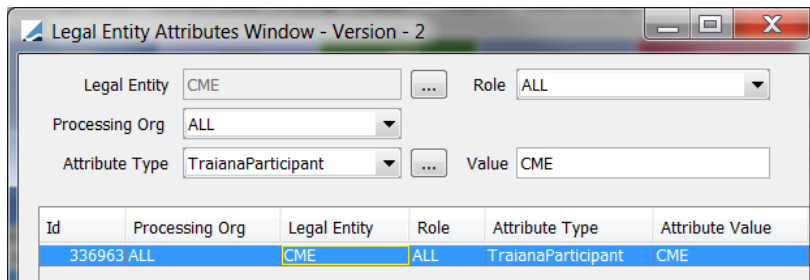
Disabled Role(s):

☒ Financial ☐ Non Financial

☐ Triparty Substitutions

Add attribute TraianaParticipant. The value is to match the ClearingPartyID of the source message.

XPath in FpML: /requestConsent/header/copyTo [@messageAddressScheme="ClearingPartyID"]



Legal Entity Attributes Window - Version - 2

Legal Entity: CME Role: ALL

Processing Org: ALL

Attribute Type: TraianaParticipant Value: CME

Id	Processing Org	Legal Entity	Role	Attribute Type	Attribute Value
336963	ALL	CME	ALL	TraianaParticipant	CME

Add default contact to CCP LE.

Contact Window -Version - 0 [140018SP1/LOCAL_V140000_2013/calypso_user]

Utilities Help

Legal Entity: CME Role: ALL Product: ALL Contact Type: Default

Processing Org: ALL Effective From: Effective To: Static Data Filter: Contact Id: 338950

Last Name: Doe First Name: John Title:

Address: City: New York State: Zip Code: Country: UNITED STATES

Phone: Telex: Fax:

Swift: E-Mail: JD@CMF1.com

External Ref: Codes:

Comment:

Id	Legal Entity	Role	Product	Type	Name	Title	Email	Phone	Fax	Telex	Swift	City
27767	CME	ALL	ALL	Operation	John Doe		JD@CMF1.com					New York
27766	CME	ALL	ALL	Settlement	John Doe		JD@CMF1.com					New York
338950	CME	ALL	ALL	Default	John Doe		JD@CMF1.com					New York

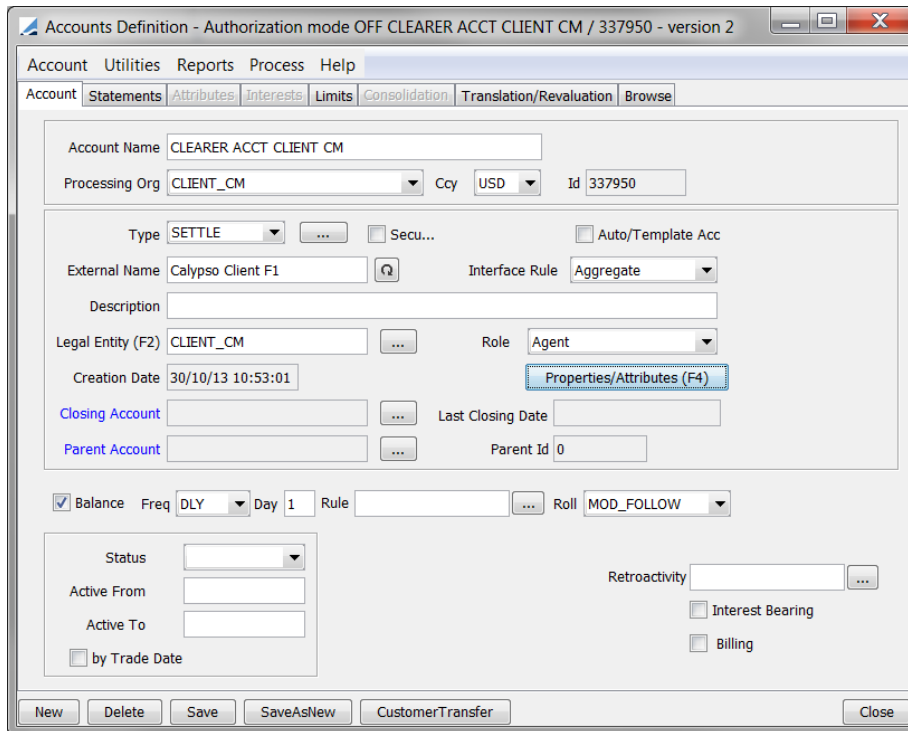
Load New Delete Authorization Save Save As New Validate Contact Close

Show Pending Authorizations Valid On 31/10/2013 Refresh

3.4 Account

Below shows a sample setup of the Account. The External Name has to be specified. It is to match the Account Reference of the source message.

XPath in FpML: /requestConsent/trade/tradeHeader/partyTradeIdentifier/accountReference/@href.



Accounts Definition - Authorization mode OFF CLEARER ACCT CLIENT CM / 337950 - version 2

Account Utilities Reports Process Help

Account Statements Attributes Interests Limits Consolidation Translation/Revaluation Browse

Account Name: CLEARER ACCT CLIENT CM

Processing Org: CLIENT_CM Ccy: USD Id: 337950

Type: SETTLE ... ☐ Secu... ☐ Auto/Template Acc

External Name: Calypso Client F1 Interface Rule: Aggregate

Description:

Legal Entity (F2): CLIENT_CM Role: Agent

Creation Date: 30/10/13 10:53:01 Properties/Attributes (F4)

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

Parent Account: ... Parent Id: 0

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

Status: ...

Active From: ...

Active To: ...

☐ by Trade Date

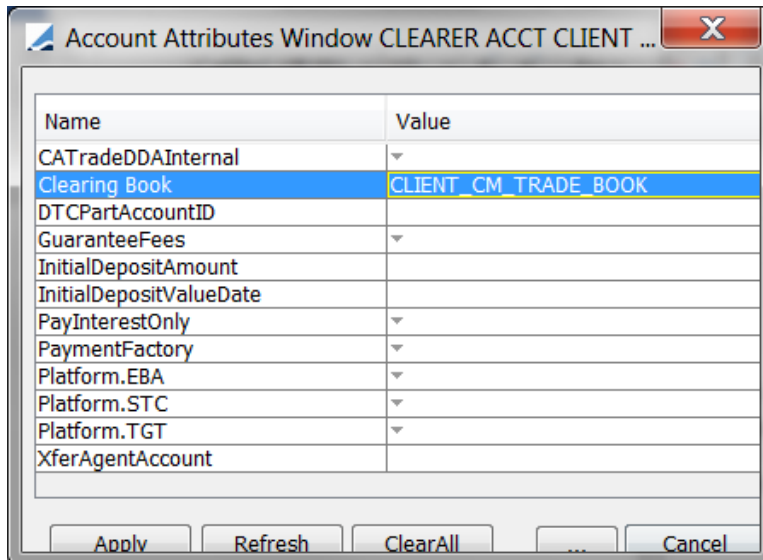
Retroactivity: ...

☐ Interest Bearing

☐ Billing

New Delete Save SaveAsNew CustomerTransfer Close

Add attribute Clearing Book, with the name of the corresponding Trade Book as value.



Account Attributes Window CLEARER ACCT CLIENT ...

Name	Value
CATradeDDAInternal	▼
Clearing Book	CLIENT_CM_TRADE_BOOK
DTCPartAccountID	
GuaranteeFees	▼
InitialDepositAmount	
InitialDepositValueDate	
PayInterestOnly	▼
PaymentFactory	▼
Platform.EBA	▼
Platform.STC	▼
Platform.TGT	▼
XferAgentAccount	

Apply Refresh ClearAll ... Cancel

3.5 Trade Book

Below shows a sample setup of the Trade Book.

Book Window - Version -1 [140018SP1/LOCAL_V140000_2013/calypso_user]

View Help

Book Id: 336964 Attributes: ...

Name: CLIENT_CM_TRADE_BOOK

Activity:

Accounting Link: AFS

Legal Entity: CLIENT_CM

Location: Asia/Hong_Kong

End Of Day: 23 Hour 59 Min

Base Ccy: USD

Holidays:

Comment:

Name	Value
ACCT_TYPE	
AccAdjustmentDays	
AccDateRule	
AccReversalRule	
BB_TRADER_PORTFOLIO	
BLOOMBERG_IFIT_BOOK	
BookBundle	
CAMoneyDiff Book	
CME_ACCOUNT	
CMF_ID	
CTC Compounding	
CTC Consolidator	
CTC Offset	

Id	Name	Legal Entity	Location	Base Currency	End Of Day Time	BOOK_ATTR.ACCT_TY
336964	CLIENT_CM_TRADE_BOOK	CLIENT_CM	Asia/Hong_Kong	USD	2359	

Load New Delete Save SaveAsNew Close

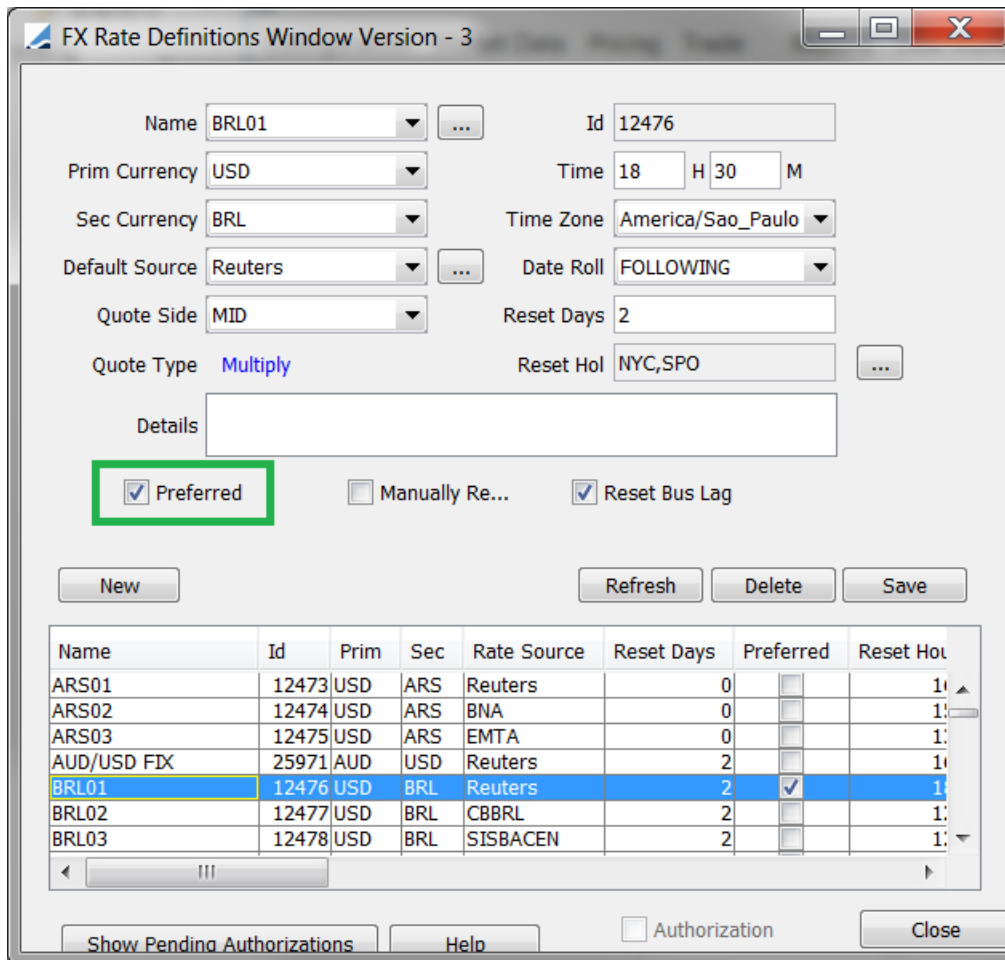
Show Pending Authorization

3.6 Reset Rate

For each traded currency pair, a preferred rate has to be defined. It will be taken as the reset rate.

Applicable to product(s): FXNDF

Below shows a sample setup of the preferred FX Rate (USD/BRL).



FX Rate Definitions Window Version - 3

Name: BRL01 Id: 12476

Prim Currency: USD Time: 18 H 30 M

Sec Currency: BRL Time Zone: America/Sao_Paulo

Default Source: Reuters Date Roll: FOLLOWING

Quote Side: MID Reset Days: 2

Quote Type: Multiply Reset Hol: NYC,SPO

Details:

☒ Preferred ☐ Manually Re... ☒ Reset Bus Lag

New Refresh Delete Save

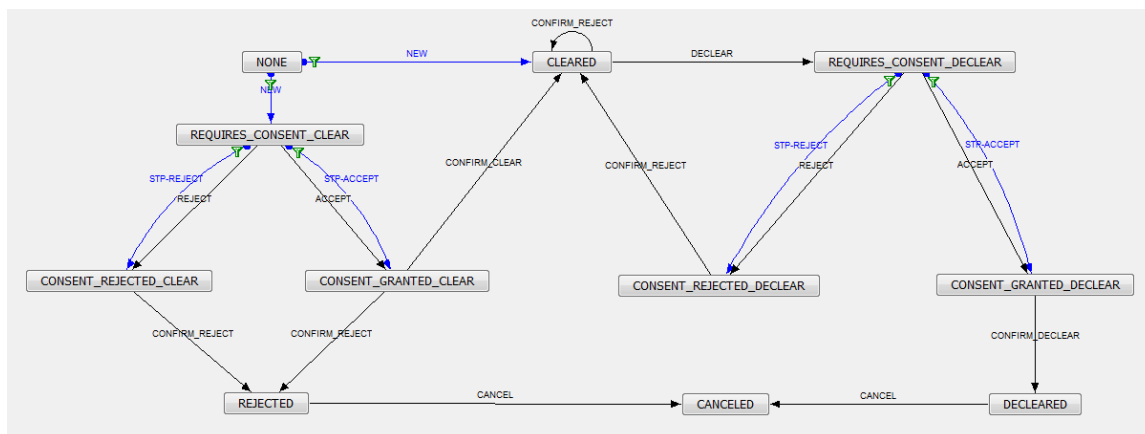
Name	Id	Prim	Sec	Rate Source	Reset Days	Preferred	Reset Hol
ARS01	12473	USD	ARS	Reuters	0	☐	1:
ARS02	12474	USD	ARS	BNA	0	☐	1:
ARS03	12475	USD	ARS	EMTA	0	☐	1:
AUD/USD FIX	25971	AUD	USD	Reuters	2	☐	1:
BRL01	12476	USD	BRL	Reuters	2	☒	1:
BRL02	12477	USD	BRL	CBBRL	2	☐	1:
BRL03	12478	USD	BRL	SISBACEN	2	☐	1:

Show Pending Authorizations Help ☐ Authorization Close

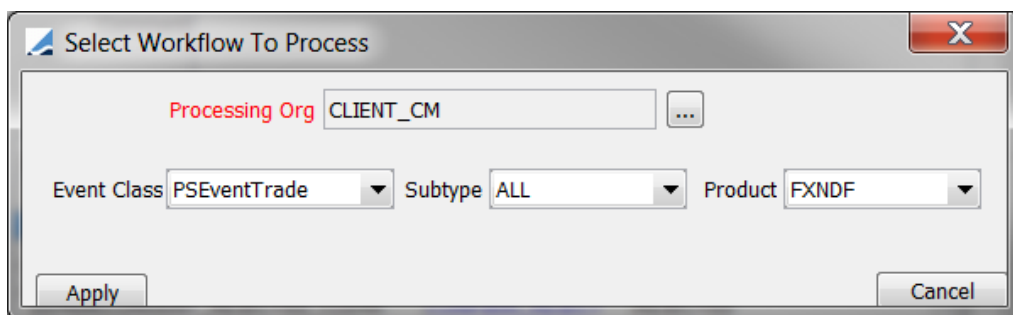
3.7 Trade Workflow (by importing *Traiana_FXNDF_Trade.wf*)

 [Note: The workflow files can be found in resources/workflow under the directory where the module is unzipped.]

Below shows a sample Trade Workflow.



Here is the suggested category to put the Trade Workflow in (Processing Org: CLIENT_CM or other as needed, Event Class: PSEventTrade, Subtype: ALL, Product: FXNDF).



Select Workflow To Process

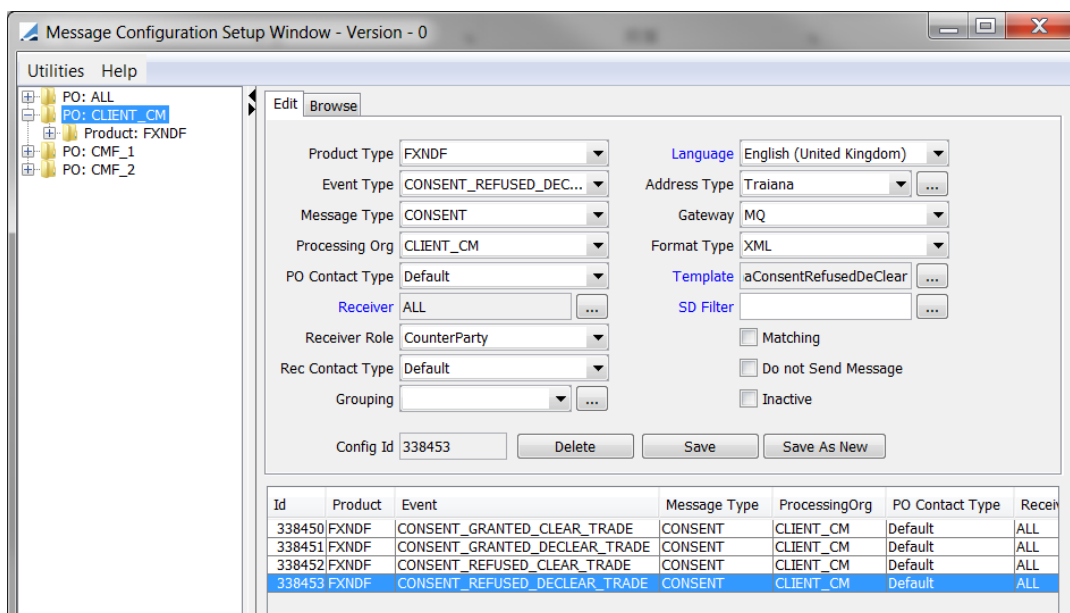
Processing Org: CLIENT_CM

Event Class: PSEventTrade Subtype: ALL Product: FXNDF

Apply Cancel

3.8 Message Setup

Set up Message Configuration for generating replies (Consent Granted or Consent Refused). Below shows a sample Message Configuration.



Id	Product	Event	Message Type	ProcessingOrg	PO Contact Type	Receiver
338450	FXNDF	CONSENT_GRANTED_CLEAR_TRADE	CONSENT	CLIENT_CM	Default	ALL
338451	FXNDF	CONSENT_GRANTED_DECLAR_TRADE	CONSENT	CLIENT_CM	Default	ALL
338452	FXNDF	CONSENT_REFUSED_CLEAR_TRADE	CONSENT	CLIENT_CM	Default	ALL
338453	FXNDF	CONSENT_REFUSED_DECLAR_TRADE	CONSENT	CLIENT_CM	Default	ALL

In the above sample, four configurations are added.

1. Granting Consent to a Clear Trade Request

Product Type: FXNDF, **Event Type:** CONSENT_GRANTED_CLEAR_TRADE, **Message Type:** CONSENT, **Processing Org:** CLIENT_CM, **PO Contact Type:** Default, **Receiver Role:** CounterParty, **Rec Contact Type:** Default, **Language:** English, **Address Type:** Traiana, **Gateway:** MQ, **Format Type:** XML, **Template:** TraianaConsentGrantedClear

2. Granting Consent to a DeClear Trade Request

Product Type: FXNDF, **Event Type:** CONSENT_GRANTED_DECLAR_TRADE, **Message Type:** CONSENT, **Processing Org:** CLIENT_CM, **PO Contact Type:** Default, **Receiver Role:** CounterParty, **Rec Contact Type:** Default, **Language:** English, **Address Type:** Traiana, **Gateway:** MQ, **Format Type:** XML, **Template:** TraianaConsentGrantedDeClear

3. Refuse a Clear Trade Request

Product Type: FXNDF, **Event Type:** CONSENT_REFUSED_CLEAR_TRADE, **Message Type:** CONSENT, **Processing Org:** CLIENT_CM, **PO Contact Type:** Default, **Receiver Role:** CounterParty, **Rec Contact Type:** Default, **Language:** English, **Address Type:** Traiana, **Gateway:** MQ, **Format Type:** XML, **Template:** TraianaConsentRefusedClear

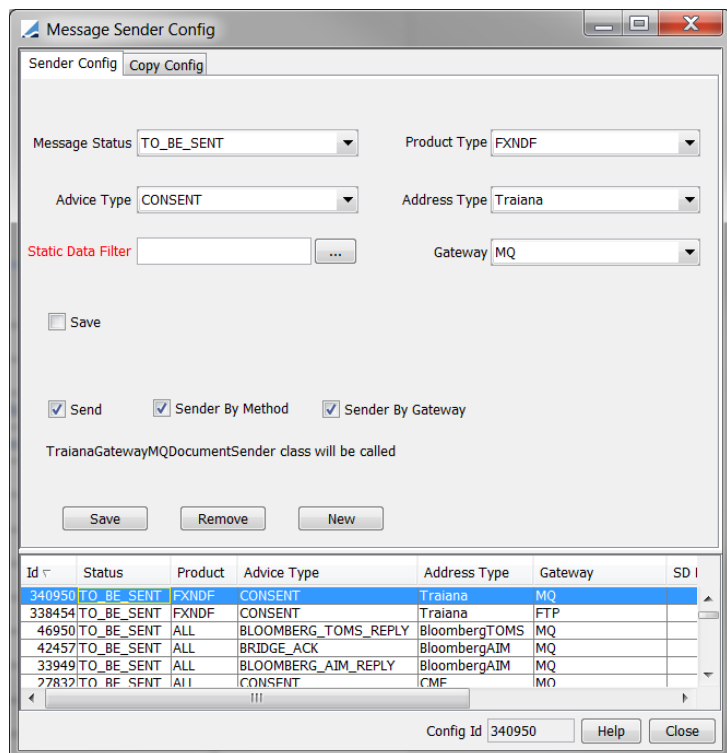
4. Refuse a DeClear Trade Request

Product Type: FXNDF, **Event Type:** CONSENT_REFUSED_DECLAR_TRADE, **Message Type:** CONSENT, **Processing Org:** CLIENT_CM, **PO Contact Type:** Default, **Receiver Role:** CounterParty, **Rec Contact Type:** Default, **Language:** English, **Address Type:** Traiana, **Gateway:** MQ, **Format Type:** XML, **Template:** TraianaConsentRefusedDeClear

3.9 Message Sender

Below shows a sample Message Sender Configuration.

Message Status: TO_BE_SENT, Advice Type: CONSENT, Product Type: FXNDF, Address Type: Traiana, Gateway: MQ



The screenshot shows the 'Message Sender Config' window. It has a 'Sender Config' tab and a 'Copy Config' button. The configuration fields are as follows:

- Message Status: TO_BE_SENT
- Product Type: FXNDF
- Advice Type: CONSENT
- Address Type: Traiana
- Static Data Filter: (empty)
- Gateway: MQ

Below the fields are checkboxes for 'Save', 'Send', 'Sender By Method', and 'Sender By Gateway'. The 'Send' checkbox is checked. Below these is the text: 'TraianaGatewayMQDocumentSender class will be called'. At the bottom are buttons for 'Save', 'Remove', and 'New'.

Below the configuration fields is a table with the following data:

Id	Status	Product	Advice Type	Address Type	Gateway	SD I
340950	TO_BE_SENT	FXNDF	CONSENT	Traiana	MQ	
338454	TO_BE_SENT	FXNDF	CONSENT	Traiana	FTP	
46950	TO_BE_SENT	ALL	BLOOMBERG_TOMS_REPLY	BloombergTOMS	MQ	
42457	TO_BE_SENT	ALL	BRIDGE_ACK	BloombergAIM	MQ	
33949	TO_BE_SENT	ALL	BLOOMBERG_AIM_REPLY	BloombergAIM	MQ	
27832	TO_BE_SENT	ALL	CONSENT	CMF	MQ	

At the bottom of the window, there is a 'Config Id' field with the value '340950', and 'Help' and 'Close' buttons.

3.10 Task Station

In order to facilitate message tracing and exception handling, it is suggested that some monitoring on the incoming source messages UPLOADSOURCEMSG is added in the Task Station.

Messages event types:



Available

ACCEPTED_UPLOADSOURCEMSG
 ACKED_UNMATCHED_UPLOADSOURCEMSG
 ACKED_UPLOADSOURCEMSG
 ALLEGED_UPLOADSOURCEMSG
 CANCELACKED_UPLOADSOURCEMSG
 CANCELED_UPLOADSOURCEMSG

Exception event types:



Available

EX_UPLOADSOURCEMSG
 EX_UPLOADSOURCEMSG_ERROR
 EX_UPLOADSOURCEMSG_IGNORE
 EX_UPLOADSOURCEMSG_REJECT
 EX_UPLOADSOURCEMSG_WARNING

3.11 Trade Keywords (added by schema data XML)

Here are the trade keywords added.

Key	Description
IS_CLIENT	Client Trade Indicator
LIMIT_IN_VIOLATION	Indicate whether trade amount exceeds limit
CCPClearedDate	Date of ClearingStatus message received.
CCPAccountReference	Account External Name
CCPTradeID	Clearer ID from Traiana
PlatformTradeID	Match ID from Traiana
TradeSource	Traiana

Key	Description
CCP	LCH
CCPMessageTimestamp	Current Time Stamp
CCPBlockTradeID	NA
Status	NA
USIValue	NA
USIPrefix	NA
CCPOriginatingEvent	NA
CCPTerminatingEvent	NA
ClientTradeID	Carrying Client's Trade ID
CCPHistory	NA
CCPRemainingTradeID	NA
CCPReplacementTradeID	NA
CCPOriginCode	Default to CLIENT

3.12 Calypso Mappings (added by schema data XML)

Here are the Calypso Mappings added.

Action

Interface Value	Calypso Value
requestConsent_trade	NEW
requestConsent_declear	DECLLEAR
clearingStatus_Novated	CONFIRM_CLEAR
clearingStatus_Cancelled	CONFIRM_DECLLEAR
clearingStatus_CBRejected	CONFIRM_REJECT
clearingStatus_Rejected	CONFIRM_REJECT

Interface Value	Calypso Value
confirmationStatus_declare_Confirmed	CONFIRM_DECLARE

Product Type

Interface Value	Calypso Value
FxNonDeliverableForward	FXNDF

Translator

Interface Value	Calypso Value
TradeIdScheme	TradeRefNbr
TradeStatus	CANCELED

Engines

In addition to the EventServer, AuthService and DataServer, the following engines will be used. Please make sure they are up and running before sending trades from Traiana CCPC.

1. TraianaImportMessageEngine
2. MessageEngine
3. SenderEngine