



Nasdaq Calypso

Anna DSB Integration Guide

Version 3.14.0

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Approved

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Document History

Revision	Published	Summary of Changes
1.0	September 2023	First revision for version 2.3.0 (compatibility with version 17)
2.0	November 2023	Updates for version 2.6.0 – Added import of ISIN code and CFI code for all DTCC GTR Products
3.0	January 2024	Updates for version 3.4.2 (compatibility with version 18)
4.0	February 2024	Updates for version 3.5.0
5.0	April 2024	Updates for version 3.6.0 – Change to ANNADSB engine logic for trade product code updates, new scheduled task ARCHIVE_ANNA_DSB_PRODUCT_CODES.
6.0	June 2024	Updates for version 3.8.0 - Added support for FX Options on Precious Metals.
7.0	August 2024	Updates for version 3.11.0 – Changes to NotionalSchedule logic - The NotionalSchedule mapping is no longer used.
8.0	December 2024	Updated for version 3.14.0 – Added ability to disable the copy of Instrument* trade keywords to product codes using the following domains: UploaderSkipCopyToProductCode, AnnaDsbCopyTradeKeyword, AnnaDsbCopyEngineValue.

This document describes the Calypso Anna DSB Interface setup.

The Anna DSB interface allows uploading CFI, ISIN and UPI information using the scheduled task LOAD_ANNA_DSB_PRODUCT_CODES and updating trades using the AnnaDsb engine.

i 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.

i IMPORTANT NOTE: For Cloud deployments please contact your application management team as the deployment procedure for Cap Cloud is different.

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Supported Products

1.1 Interest Rates

ISDA UPI	ANNA DSB Product Name	Calypso product	
		Product Type	Description
InterestRate:FRA	Rates.Forward.FRA_Index	FRA	FRA
InterestRate:IRSwap:OIS	Rates.Swap.Basis_OIS	Swap	Swap leg OIS / Float
	Rates.Swap.Fixed_Float_OIS	Swap (extended type	Swap leg OIS / Fix
InterestRate:IRSwap:Basis	Rates.Swap.Basis	Cancellable)	Swap, leg Float/ Float
InterestRate:IRSwap:FixedFixed	Rates.Swap.Fixed_Fixed	CancellableSwap	Swap leg Fix / Fix
InterestRate:IRSwap:FixedFloat	Rates.Swap.Fixed_Float	ExtendibleSwap	Swap leg Fix / Float
InterestRate:IRSwap:FixedFloat	Rates.Swap.Fixed_Float_Zero_Coupon		Swap leg Fix / Float & 1 Leg Payment frequency = ZC
InterestRate:Inflation	Rates.Swap.Inflation_Swap		Swap with 1 leg Float index type= inflation
InterestRate:Inflation Swap:FixedFloat:ZeroCoupon	Rates.Swap.Inflation_Fixed_Float_Zero_Coupon		Swap with 1 leg Float index type= inflation & 1 Leg Payment Frequency = ZC
InterestRate:Inflation	Rates.Swap.Inflation_Basis		Swap Float/Float with 1 leg Float index type= inflation
InterestRate:InflationSwap:Basis:ZeroCoupon	Rates.Swap.Inflation_Basis_Zero_Coupon		Swap Float/Float with 1 leg Float index type= inflation & 1 Leg Payment Frequency = ZC
InterestRate:CrossCurrency:Basis	Rates.Swap.Cross_Currency_Basis	SwapCrossCurrency	SwapCrossCurrency leg float/float
InterestRate:CrossCurrency:FixedFixed	Rates.Swap.Cross_Currency_Fixed_Fixed	'SwapCrossCurrency (extended type Cancellable)	SwapCrossCurrency leg fix/fix
InterestRate:CrossCurrency:FixedFloat	Rates.Swap.Cross_Currency_Fixed_Float		SwapCrossCurrency leg fix/float
InterestRate:CrossCurrency:FixedFloat:ZeroCoupon	Rates.Swap.Cross_Currency_Zero_Coupon		SwapCrossCurrency leg fix/float & 1 Leg Payment frequency = ZC
InterestRate:CrossCurrency	Rates.Swap.Cross_Currency_Inflation_Swap		Swap with 1 leg Float index type= inflation
InterestRate:CrossCurrency:FixedFloat	Rates.Swap.Cross_Currency_Fixed_Float_NDS		SwapCrossCurrency leg fix/float
InterestRate:CapFloor	Rates.Option.CapFloor	CapFloor	CapFloor (Strategy: Cap and Floor)
InterestRate:InflationCapFloor	Rates.Option.Inflation_CapFloor	CapFloor SpreadCapFloor Inflation CapFloor	Float index type= inflation

ISDA UPI	ANNA DSB Product Name	Calypso product	
		Product Type	Description
InterestRate:Option:Swaption	Rates.Option.Swaption	Swaption	Swaption (Strategy: RTR and RTP)

1.2 Credit Derivatives

ISDA UPI	ANNA DSB Product Name	Calypso product	
		Product Type	Description
Credit:SingleName:...	Credit.Swap.Corporate	CreditDefaultSwap	CreditDefaultSwap Single Name Settlement Matrix Name contains Corporate
Credit:SingleName:...	Credit.Swap.Municipal	CreditDefaultSwap	CreditDefaultSwap Single Name Settlement Matrix Name contains Municipal
Credit:SingleName:...	Credit.Swap.Sovereign	CreditDefaultSwap	CreditDefaultSwap Single Name Settlement Matrix Name contains Sovereign
Credit:Index:.....	Credit.Swap.Index	CDSIndex	CDSIndex
Credit:IndexTranche:...	Credit.Swap.Index_Tranche	CDSIndexTranche	CDSIndexTranche
Credit:Swaptions:<sub-product>:<TransactionType> Credit:Swaptions:iTraxx:...	Credit.Swap.Index_Swaption	CDSIndexOption	CDSIndexOption
Credit:Swaptions:<sub-product>:<TransactionType> Credit:Swaptions:iTraxx:...	Credit.Swap.Single_Name_Swaption	CreditDefaultSwaption	CreditDefaultSwaption
Credit:TotalReturnSwap	Credit.Swap.Total_Return_Swap	PerformanceSwap	TRS on Bond, and Market Index

1.3 FX

ISDA UPI	ANNA DSB Product Name	Calypso product	
		Product Type	Description
ForeignExchange:Forward	Foreign_Exchange.Forward.Forward	FXForward	FXForward excluding Precious Metals
ForeignExchange:Swap	Foreign_Exchange.Swap.FX_Swap	FXSwap	FXSwap excluding Precious Metals
ForeignExchange:NDF	Foreign_Exchange.Forward.NDF	FXNDF	FXNDF excluding Precious Metals
ForeignExchange:Swap	Foreign_Exchange.Swap.Non_Deliverable_FX_Swap	FXNDFSwap	FXNDFSwap excluding Precious Metals
ForeignExchange:VanillaOption	Foreign_Exchange.Option.Vanilla_Option	FXOption	FXOption, Option Type = Vanilla (European or American)

ISDA UPI	ANNA DSB Product Name	Calypso product	
		Product Type	Description
			exercise type) excluding Precious Metals
ForeignExchange:NDO	Foreign_Exchange.Option.NDO		FXOption, Option Type = Vanilla AND European exercise type AND Settlement Source <> NULL excluding Precious Metals
ForeignExchange:SimpleExotic:Barrier	Foreign_Exchange.Option.Barrier_Option		FXOption, Option Type = Barrier excludingPrecious Metals
ForeignExchange:SimpleExotic:Digital	Foreign_Exchange.Option.Digital_Option		FXOption, Option Type = Digital or DigitalWithBarrier excluding Precious Metals
ForeignExchange:Exotic	Foreign_Exchange.Option.Non_Standard		FXOption, Option Type = Asian excluding Precious Metals
ForeignExchange:Forward	Foreign_Exchange.Forward.Forward	FXFlexiForward	FXFlexiForward Subtype: TakeUpSchedule Subtype: WindowForward

1.4 Equity Derivatives

ISDA UPI	ANNA DSB Product Name	Calypso product	
		Product Type	Description
Equity:Option:PriceReturnBasicPerformance:SingleName	Equity.Option.Single_Name	EquityStructuredOption	OTC Equity Option - Vanilla, Barrier and Asian - Underlying: Equity
Equity:Option:PriceReturnBasicPerformance:SingleIndex	Equity.Option.Single_Index	EquityStructuredOption	OTC Equity Option - Vanilla, Barrier and Asian - Underlying: Equity Index
Equity:Swap:PriceReturnBasicPerformance:SingleName	Equity.Swap.Price_Return_Basic_Performance_Single_Name	EquityLinkedSwap	Equity Swap - Swap Type = PriceReturn and TotalReturn - Underlying: Equity (against Interest Rate)
Equity:Swap:PriceReturnBasicPerformance:SingleIndex	Equity.Swap.Price_Return_Basic_Performance_Single_Index	EquityLinkedSwap	Equity Swap - Swap Type = PriceReturn and TotalReturn - Underlying: EquityIndex (against Interest Rate)

ISDA UPI	ANNA DSB Product Name	Calypso product	
		Product Type	Description
Equity:Swap:PriceReturnBasicPerformance:Basket	Equity.Swap.Price_Return_Basic_Performance_Basket	EquityLinkedSwap	Equity Swap - Swap Type = Swap Type = PriceReturn and TotalReturn - Underlying: Basket (against Interest Rate)
Equity:Swap:ParameterReturnVariance:SingleName	Equity.Swap.Parameter_Return_Variance_Single_Name	VarianceSwap	Variance Swap Underlying : Equity
Equity:Swap:ParameterReturnVariance:SingleIndex	Equity.Swap.Parameter_Return_Variance_Single_Index	VarianceSwap	Variance Swap Underlying : Equity Index
Equity:Swap:ParameterReturnDividend:SingleName	Equity.Swap.Parameter_Return_Dividend_Single_Name	EquityLinkedSwap	Equity Swap - Swap Type = Dividend - Underlying: Basket (against Equity)
Equity:Swap:ParameterReturnDividend:SingleIndex	Equity.Swap.Parameter_Return_Dividend_Single_Index	EquityLinkedSwap	Equity Swap - Swap Type = Dividend - Underlying: Basket (against Equity Index)
Equity:Swap:ParameterReturnDividend:Basket	Equity.Swap.Parameter_Return_Dividend_Basket	EquityLinkedSwap	Equity Swap - Swap Type = Dividend - Underlying: Basket (against Interest Rate)
Equity:Forward:PriceReturnBasicPerformance:SingleName	Equity.Forward.Price_Return_Basic_Performance_Single_Name	EquityForward	Equity Forward Underlying : Equity
Equity:Forward:PriceReturnBasicPerformance:SingleIndex	Equity.Forward.Price_Return_Basic_Performance_Single_Index	EquityForward	Equity Forward Underlying : Equity Index
Equity:Forward:PriceReturnBasicPerformance:Basket	Equity.Forward.Price_Return_Basic_Performance_Basket	EquityForward	Equity Forward Underlying : Basket
Equity:PortfolioSwap:PriceReturnBasicPerformance:SingleName	Equity.Portfolio_Swap_Single_Name	PortfolioSwap	Portfolio Swap Underlying : Equity
Equity:PortfolioSwap:PriceReturnBasicPerformance:SingleIndex	Equity.Portfolio_Swap_Single_Index	PortfolioSwap	Portfolio Swap Underlying : Equity Index

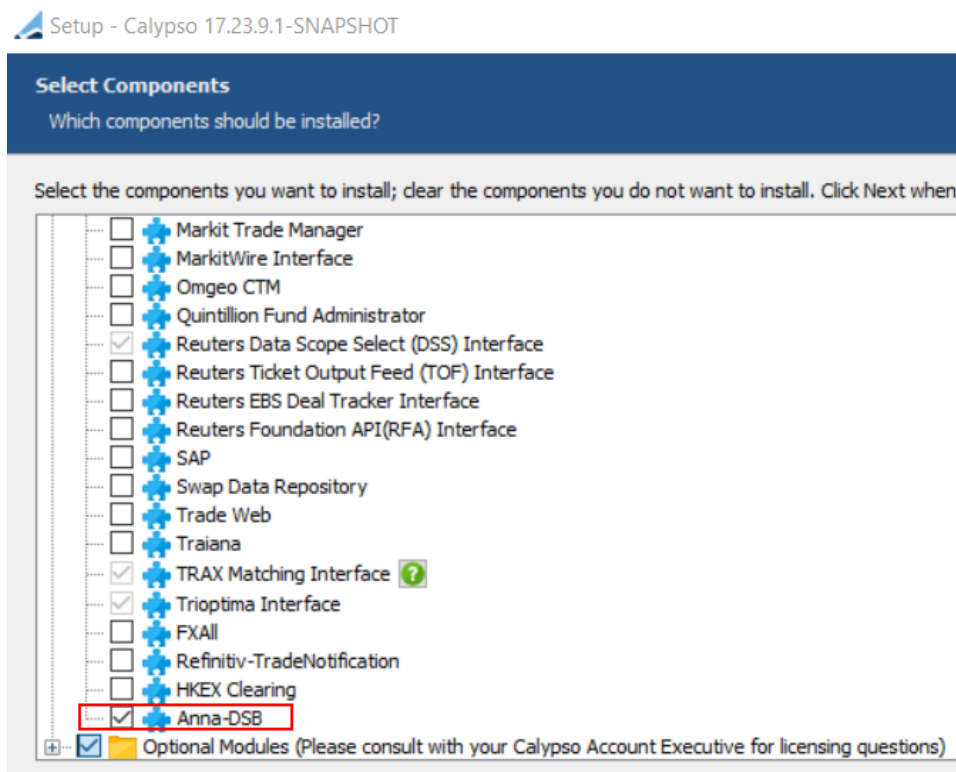
1.5 Commodities

ISDA UPI	ANNA DSB Product Name	Calypso product	
		Product Type	Description
Commodity:Option:Cash/Physical:<commodity>:<sub-commodity> Ex: Commodity:Option:Physical:Energy:Oil	Commodities.Option.Option	CommodityOTCOption2 FXOption on precious metals	Strategies: Vanilla, Barrier, and Digital FXOption on precious metals
Commodity:Swap:Cash/Physical:<commodity>:<sub-commodity> Ex: Commodity:Swap:Cash:Energy:Oil	Commodities.Swap.Swap	CommoditySwap2	Commodity Swap Fixed leg vs Float leg or Float leg vs Float leg
Commodity:Swaption:Cash/Physical:<commodity>	Commodities.Option.Swaption	CommoditySwaption	CommoditySwaption
Commodity:Swap:Cash/Physical:<commodity>	Commodities.Swap.Single_Index	PerformanceSwap	TRS on MarketIndex where MarketIndex Type = Commodity

ISDA UPI	ANNA DSB Product Name	Calypso product	
		Product Type	Description
Commodity:Forward:Physical:<commodity>:<sub-commodity>	Commodities.Forward.Forward	CommodityForward FXForward FXNDF	CommodityForward FXForward on precious metals FXNDF on precious metals

Installation

Anna DSB is installed as part of the Calypso Installer when you select the Anna-DSB interface.



[IMPORTANT NOTE: Anna DSB requires the Data Uploader module to be installed as well – This is mandatory as Anna DSB uses the calypsoServicesInterfacesMs server for its REST APIs]

Calypso Installer

► Please refer to the Calypso Installation Guide for complete details.

Database Upgrade

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

Setup Requirements

3.1 Anna DSB Properties

Please review `<calypso_home>/client/resources/annadsb_config.properties` and copy to `<calypso_home>/tools/calypso-templates/resources/annadsb_config.properties`.

Set the connection details as needed.

```
annadsb.host.ip - anna dsb host name
annadsb.host.port - port number. Default is 443
annadsb.host.protocol - protocol
annadsb.host.records.destinationpath - Root location where the files are present on a server
annadsb.user.name - Username for authorization
annadsb.user.password - Password for authorization. Encrypted password can also be used.
```

If proxy is enabled, you can add the following properties to `annadsb_config.properties`.

```
annadsb.proxyhost.ip - proxy host name
annadsb.proxyhost.port - proxy port number
annadsb.proxy.user - proxy user
annadsb.proxy.password - proxy password
```

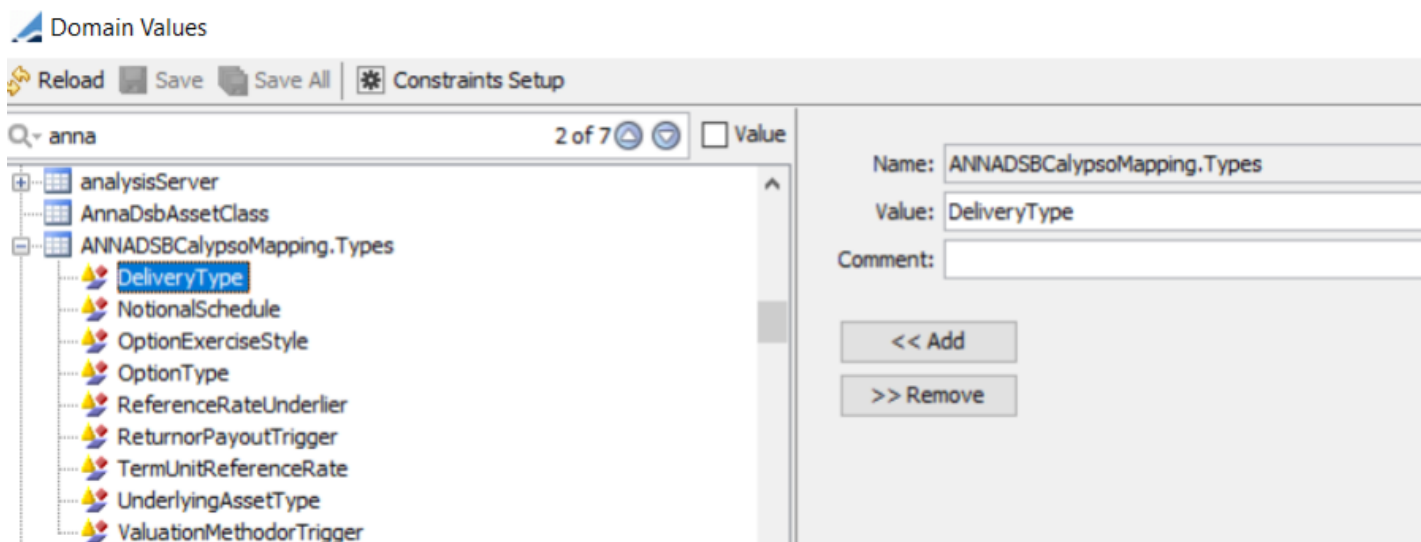
Otherwise, the default proxy details of the Environment file are used.

3.2 Domain Values

Domain "CalypsoMapping.Interfaces"

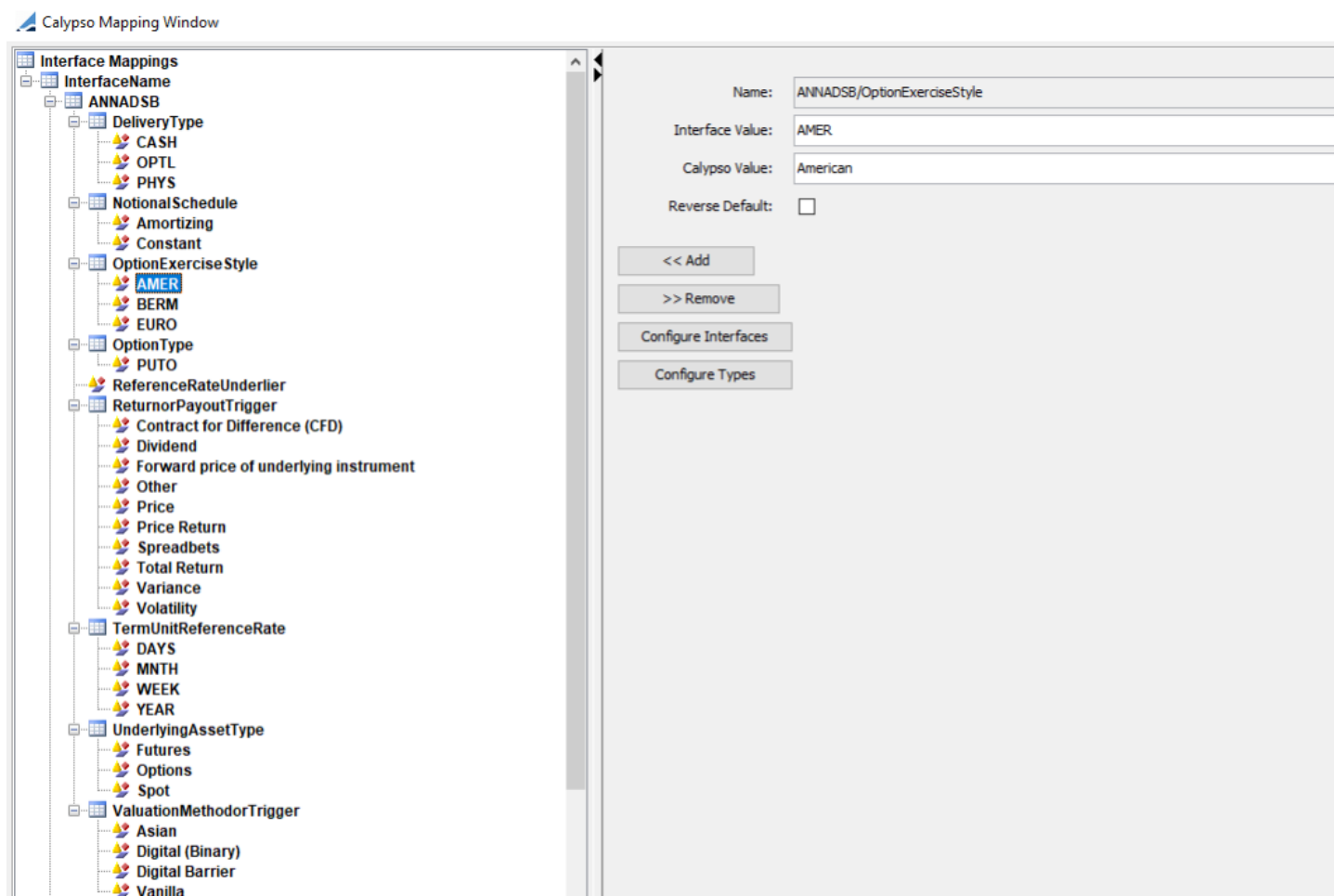
Value = ANNADSB

Domain "ANNADSBCalypsoMapping.Types"



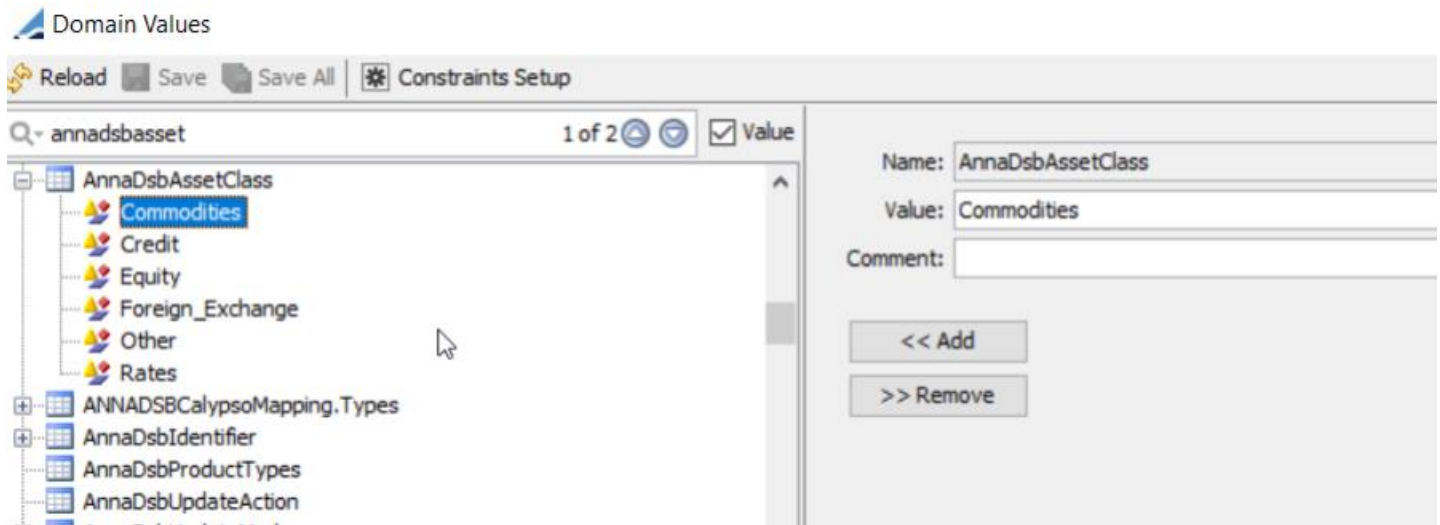
You can define mapping values for these in the Calypso Mapping window.

Example:



Domain "AnnaDsbAssetClass"

Asset classes in scope.



Domain "AnnaDsbIdentifier"

Identifiers to be imported.

Value = UPI

Value = ISIN

Value = CFI

Domain "AnnaDsbUpdateMode"

Value = Delta

Value = Snapshots

Domain "AnnaDsbProductTypes"

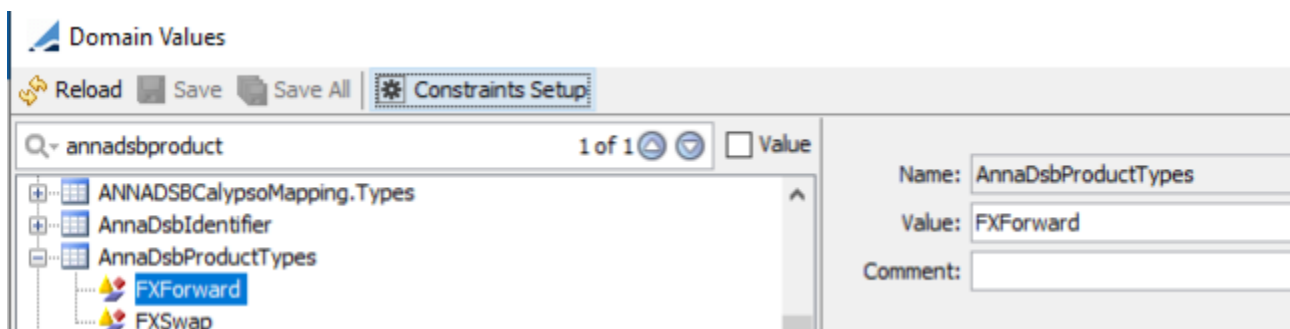
Product type for which the Anna DSB engine should process trade events.

Example:

Value = FXForward

Value = FXSwap

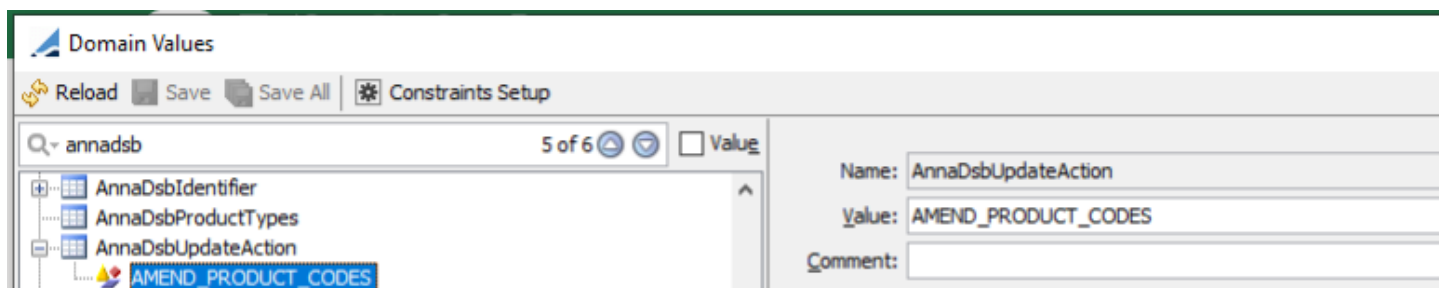
Example:



Domain "AnnaDsbUpdateAction"

Action applied to trades by Anna DSB engine when updating the identifiers. It is AMEND by default if not set.

Example:



The selected action needs to be added to the trade workflow as needed. For example, VERIFIED – AMEND_PRODUCT_CODES – VERIFIED.

Domain "CalculateCFI"

You need to set Value = false in order to import CFI codes through Anna DSB so that the CFI codes are not automatically set by the system.

3.3 Product Codes

The Anna DSB interface is using the following product codes:

- CFI
- CFI Leg2 for OTC options
- ISIN
- ISIN Leg 2 for OTC options
- UnderlierISIN for swaptions
- NearLegISIN and FarLegISIN for FX Swap and NDF FX SwapISIN

- UPI
- UPI Leg2 for OTC options

Example – They all share the same setup

Product Code Window

Name	ISIN	...	Type	string
☒ Unique (Securities Only)		☐ Mandatory (Securities Only)		
☒ Searchable		☒ OTC		
Product	ALL			

3.4 Mapping Requirements

Mapping for the following items is done in the Calypso Mapping window.

3.4.1 CDS Settlement Matrix

Example:

CDS Settlement Matrix

Definition	Configuration
Details	
Product	CreditDefaultSwap
Type	
Key	
Region	N.Amer
Type	ANY
Standard	ANY
Jurisdiction	ANY
Sector	ANY
Seniority	ANY
Data	
Matrix Name	north american corporate
Effective Date	03/07/2005
Add	

Name:	ANNADSB/ContractSpecification
Interface Value:	NorthAmericanCorporate
Calypso Value:	north american corporate,north american corporate cash

3.4.2 Debt Seniority

Example:

Calypso Mapping Window

Interface Mappings	
InterfaceName	
ANNADSB	
CommodityHierarchy	
DebtSeniority	
SNDB	
DeliveryType	

Name:	ANNADSB/DebtSeniority
Interface Value:	SNDB
Calypso Value:	SENIOR_SECURED, SENIOR_UNSECURED

3.4.3 Instrument Index

Example

Calypso Mapping Window

Interface Mappings	
InterfaceName	Name: ANNADSB/InstrumentIndex
ANNADSB	Interface Value: CDX.EM.DIVERSIFIED
DeliveryType	Calypso Value: %CDX.EMDIVS*%
InstrumentIndex	
CDX.EM.DIVERSIFIED	
NotionalSchedule	

3.4.4 Reference Rate Underlier

Examples:

Name:	ANNADSB/ReferenceRateUnderlier
Interface Value:	USD-LIBOR-BBA
Calypso Value:	USD-LIBOR-T3750

Name:	ANNADSB/ReferenceRateUnderlier
Interface Value:	USD-SOFR
Calypso Value:	USD-SOFR-SOFR

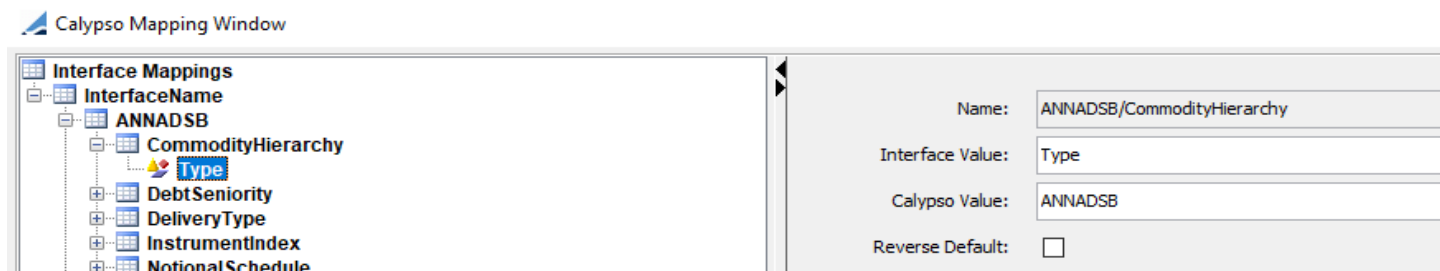
3.4.5 Market Index Type

Examples:

Name:	ANNADSB/MarketIndexType
Interface Value:	Commodities.Swap.Single_Index
Calypso Value:	Commodity

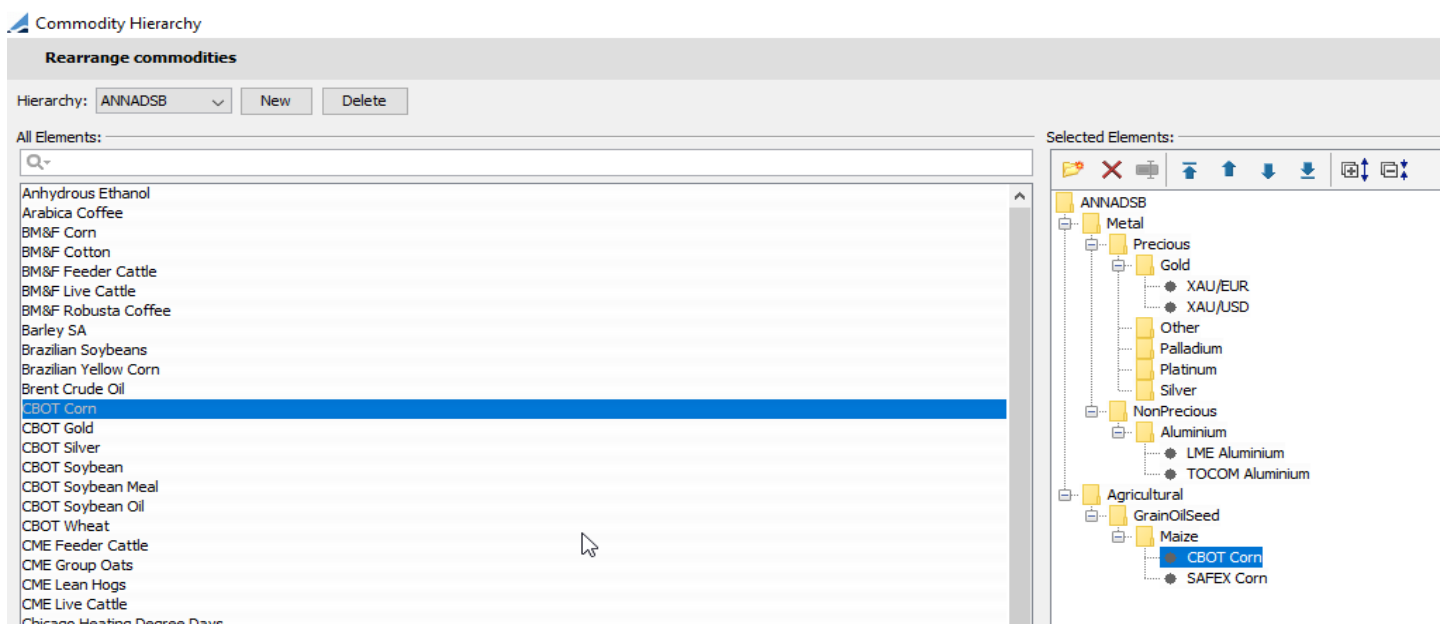
Name:	ANNADSB/MarketIndexType
Interface Value:	Credit.Swap.Total_Return_Swap
Calypso Value:	FixedIncome

3.4.6 Commodity Hierarchy



You then need to map the base product, sub product, additional sub product (optional), commodity reference rate (not needed for precious metals).

Example:



Here is the corresponding Calypso Mapping for CBOT Corn and XAU/EUR / XAU/USD.

Base Product



Calypso Mapping Window

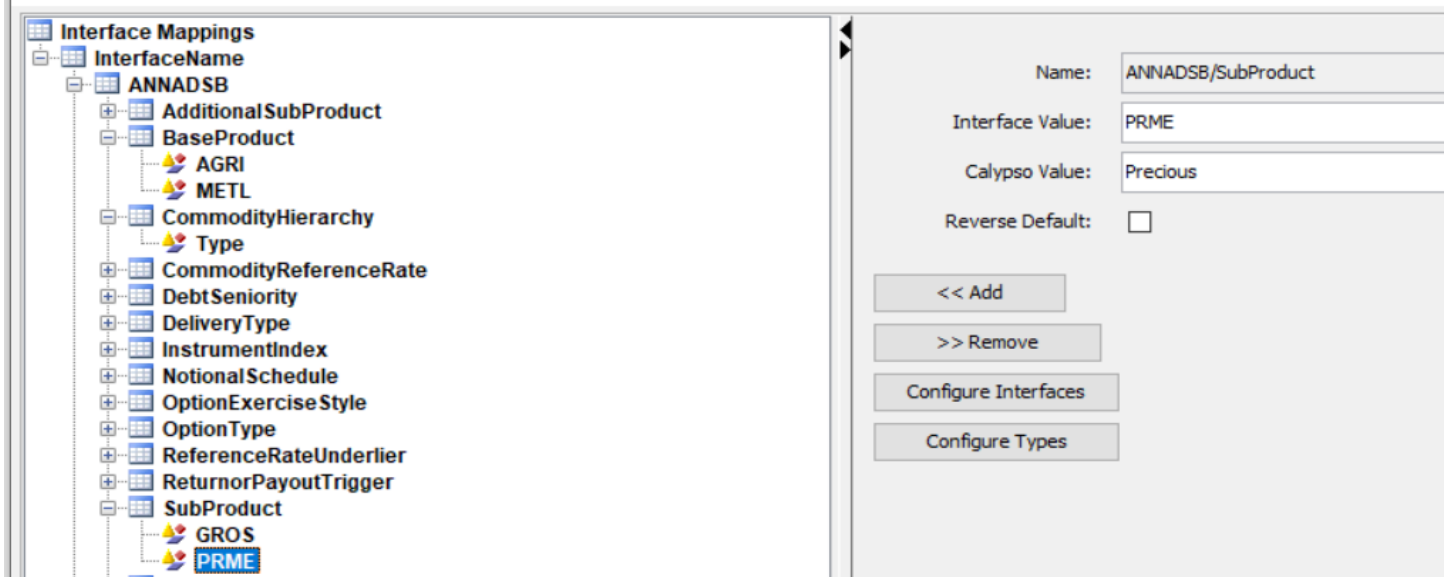


The screenshot shows the Calypso Mapping Window for the interface **ANNADSB/BaseProduct**. The left pane displays a tree structure under **InterfaceName** with **ANNADSB** expanded, showing **AdditionalSubProduct** (containing **CORN** and **GOLD**) and **BaseProduct** (containing **AGRI** and **METL**). The right pane shows the configuration for the selected interface:

Name:	ANNADSB/BaseProduct
Interface Value:	AGRI
Calypso Value:	Agricultural
Reverse Default:	☐

Sub Product

Calypso Mapping Window



The screenshot shows the Calypso Mapping Window for the interface **ANNADSB/SubProduct**. The left pane displays a tree structure under **InterfaceName** with **ANNADSB** expanded, showing **AdditionalSubProduct** (containing **AGRI** and **METL**), **CommodityHierarchy** (containing **Type**), **CommodityReferenceRate**, **DebtSeniority**, **DeliveryType**, **InstrumentIndex**, **NotionalSchedule**, **OptionExerciseStyle**, **OptionType**, **ReferenceRateUnderlier**, **ReturnorPayoutTrigger**, and **SubProduct** (containing **GROS** and **PRME**). The right pane shows the configuration for the selected interface:

Name:	ANNADSB/SubProduct
Interface Value:	PRME
Calypso Value:	Precious
Reverse Default:	☐

Buttons at the bottom of the right pane include: << Add, >> Remove, Configure Interfaces, and Configure Types.

Calypso Mapping Window



The screenshot shows the Calypso Mapping Window for the interface **ANNADSB/SubProduct**. The left pane displays a tree structure under **InterfaceName** with **ANNADSB** expanded, showing **AdditionalSubProduct** (containing **CORN** and **GOLD**) and **BaseProduct** (containing **AGRI** and **METL**). The right pane shows the configuration for the selected interface:

Name:	ANNADSB/SubProduct
Interface Value:	GROS
Calypso Value:	GrainOilSeed
Reverse Default:	☐

Additional Sub Product

Calypso Mapping Window

Interface Mappings	InterfaceName
ANNADSB	AdditionalSubProduct
CORN	GOLD
BaseProduct	AGRI
METL	

Name:	ANNADSB/AdditionalSubProduct
Interface Value:	GOLD
Calypso Value:	Gold
Reverse Default:	☐

Calypso Mapping Window

Interface Mappings	InterfaceName
ANNADSB	AdditionalSubProduct
CORN	GOLD
BaseProduct	AGRI
METL	

Name:	ANNADSB/AdditionalSubProduct
Interface Value:	CORN
Calypso Value:	Maize
Reverse Default:	☐

Commodity Reference Rate

Calypso Mapping Window

Interface Mappings	InterfaceName
ANNADSB	AdditionalSubProduct
CORN	GOLD
BaseProduct	AGRI
METL	

Name:	ANNADSB/CommodityReferenceRate
Interface Value:	CORN-CBOT
Calypso Value:	CBOT Corn
Reverse Default:	☐

3.4.7 Currency Pair – Precious Metal Location

Example:

Name:	ANNADSB/CcyPair.PreciousMetalLocation
Interface Value:	GOLD-A.M. FIX
Calypso Value:	XAU/USD.London
Reverse Default:	☐

3.4.8 FX Reset

Example

Name:	ANNADSB/FXReset
Interface Value:	GOLD-A.M. FIX
Calypso Value:	XAU/USD
Reverse Default:	☐

3.5 Engine Configuration

Engine Configuration

Engine Name: 	Max Queue Size: 	Max Batch Size: 																																
AnnaDsbEngine																																		
Engine ID:	Number of Threads: 	Event Pool Policy: 																																
421021																																		
Engine Class:	Pricing Environment: 	Save settle position changes: 																																
com.calypso.tk.annadsb.engine.AnnaDsbEngine																																		
Display Name: 	Configuration attributes																																	
AnnaDsbEngine	<table> <thead> <tr> <th>Attribute Name</th> <th>Attribute Value</th> </tr> </thead> <tbody> <tr><td>BALANCE_MODE</td><td></td></tr> <tr><td>CLASS_NAME</td><td></td></tr> <tr><td>DISPLAY_NAME</td><td></td></tr> <tr><td>DateType</td><td></td></tr> <tr><td>EVENT_ORDER</td><td></td></tr> <tr><td>EXCLUDE_PRODUCTTYPE</td><td></td></tr> <tr><td>EXCLUDE_STATUS</td><td>PRICING</td></tr> <tr><td>HANDLE_FUTURE_LIQ_CASH_FLOWS</td><td></td></tr> <tr><td>IGNORE_ACTION</td><td>CANCEL,AMEND_PRODUC</td></tr> <tr><td>INSTANCE_NAME</td><td></td></tr> <tr><td>INV_MAX_POSITION</td><td></td></tr> <tr><td>LIQUIDATION_TIMEOUT</td><td></td></tr> <tr><td>MAX_TIMER_POSITION</td><td></td></tr> <tr><td>MCC_DATE_KEYWORD</td><td></td></tr> <tr><td>MCC_FEED_NAME</td><td></td></tr> </tbody> </table>		Attribute Name	Attribute Value	BALANCE_MODE		CLASS_NAME		DISPLAY_NAME		DateType		EVENT_ORDER		EXCLUDE_PRODUCTTYPE		EXCLUDE_STATUS	PRICING	HANDLE_FUTURE_LIQ_CASH_FLOWS		IGNORE_ACTION	CANCEL,AMEND_PRODUC	INSTANCE_NAME		INV_MAX_POSITION		LIQUIDATION_TIMEOUT		MAX_TIMER_POSITION		MCC_DATE_KEYWORD		MCC_FEED_NAME	
Attribute Name	Attribute Value																																	
BALANCE_MODE																																		
CLASS_NAME																																		
DISPLAY_NAME																																		
DateType																																		
EVENT_ORDER																																		
EXCLUDE_PRODUCTTYPE																																		
EXCLUDE_STATUS	PRICING																																	
HANDLE_FUTURE_LIQ_CASH_FLOWS																																		
IGNORE_ACTION	CANCEL,AMEND_PRODUC																																	
INSTANCE_NAME																																		
INV_MAX_POSITION																																		
LIQUIDATION_TIMEOUT																																		
MAX_TIMER_POSITION																																		
MCC_DATE_KEYWORD																																		
MCC_FEED_NAME																																		
Application Type:																																		
EngineServer																																		
Description:																																		
Persisted Event Configuration:																																		
PSEventAccountBilling																																		
PSEventProcessTrade																																		
PSEventTrade																																		
Event Filters:																																		
AllTransfersKnownEventFilter																																		
Engine Manager Configuration:	Start on Startup: ☒																																	
engineserver																																		
Delete Engine	Cancel	Save																																

Process Description

The CFI, ISIN and UPI identifiers are imported using the scheduled task LOAD_ANNA_DSB_PRODUCT_CODES, and set on trades using the AnnaDsb engine.

4.1 Servers to Run

The following servers need to be running in addition to the Data Server and the servers needed to start the system.

- engineserver.bat\sh
- calypsoServicesInterfacesMs.bat\sh
- scheduler.bat\sh

4.2 Scheduled task LOAD_ANNA_DSB_PRODUCT_CODES

The identifiers are imported using the scheduled task LOAD_ANNA_DSB_PRODUCT_CODES.

Task Description	
Task Type:	LOAD_ANNA_DSB_PRODUCT_CODES
External Reference:	LOAD ANNA DSB TEST 1
Comments:	
Description:	
Execution Parameters	
Attempts:	1
Retry After:	0 minutes
Expected Execution Time (SLA):	10 minutes
JVM Settings:	-Xms512m -Xmx1024m
Log Settings:	
Task Notification Options	
☐ Send Emails	☐ Publish Business Events
To User:	
Common Attributes	
Task ID	63001
Processing Org	
Trade Filter	
Filter Set	
Pricing Environment	
Timezone	Europe/London
Valuation Time Hour	
Valuation Time Minute	
Undo Time Hour	0
Undo Time Minute	0
Valuation Date Offset	
From Days	0
To Days	0
Pricer Measures	
Business Holidays	
Task Attributes	
DownloadFiles	False
LocalDirectory	C:\AnnaDSb
StartDate	
EndDate	
AssetClass	Rates
Identifier	UPI
UpdateMode	Snapshots
DeleteDownloadedFile	False
DeleteAssetClass	

Task Attributes

- **DownloadFiles** – True or False.

When True, files are downloaded from the ANNA DSB URL to local directory and imported. Connection details to ANNA DSB are specified in `annadsb_config.properties`.

When False, files are imported from local directory.

- **LocalDirectory** – Local directory where files are downloaded and from which files are imported.
- **StartDate** – Only applies to Delta UpdateMode – Select the Start Date of date range from which the files will be downloaded and/or imported into Calypso.

When the UpdateMode is set to 'Snapshots', this property is not applicable, and files with dates equal to the Valuation Date are processed.

- **EndDate** – Only applies to Delta UpdateMode – Select the End Date of date range from which the files will be downloaded and/or imported.

When the UpdateMode is set to 'Snapshots', this property is not applicable, and files with dates equal to the Valuation Date are processed.

- **AssetClass** – Select the asset classes to process. Values are taken from domain “AnnaDsbAssetClass”.
- **Identifier** – Select the identifiers to import. Values are taken from domain “AnnaDsbIdentifier”.
- **UpdateMode** – Select Delta or Snapshots.

Snapshots files provide the entire repository of Product Identifiers for a specific date, whereas Delta files contain the changes from one day to another. The values are obtained from domain “AnnaDsbUpdateMode”.

- **DeleteDownloadedFile** – True or False.

When True, the downloaded zip files are deleted after they have been imported. They are not deleted otherwise.

- **DeleteAssetClass** – True or false. Only applies to Snapshots UpdateMode. When reimporting Snapshots file, this is used to delete existing data for the selected Asset Classes in order to prevent duplicate values.

The files provided by ANNA DSB are split per Product Code and Asset Class. For example, you will have one file for UPI of Asset Class Rates, one file for ISIN of Asset Class Equity, etc.

Those files are in JSON format and are stored in two specific tables of the Calypso database: one for UPI, and one for ISIN. The files are available in two formats: zipped and unzipped. The scheduled task downloads / imports the zipped version of the files.

The first time the scheduled task is run, it should be in Snapshots mode in order to load the whole set of data. Afterward, the scheduled task should be run daily, in Delta mode.

In Snapshots mode, no parsing of the file is made, contents of the JSON file are directly imported into the ANNA-DSB tables. In this case, DeleteAssetClass must be set to true to prevent the creation of duplicate entries.

In Delta mode, each file is parsed and for all rows in the file that are not in NEW status, the system will search for entries in the ANNA-DSB tables with the same CFI, UPI or ISIN in order to do updates.

Here are the available values for the "Status" tag of the files:

- UPI: New, Updated, Deleted, Deprecated
- ISIN: New, Updated, Deleted, Expired

For example, a UPI record may be updated with a status of "Updated" when one of the following scenarios below occurs:

- Update of an attribute value - For example: when an underlying name of a UPI changes
- Addition of a derived value - For example: when CFI-2019 attribute is added (to either ISIN and/or UPI) or UPI added to ISIN record.
- Deletion of a derived attribute - For example deletion of old CFI codes

The status "Expired" does not exist for UPI because the trade expiry date is not a criterion for generating a UPI identifier.

ISIN code is stored in product codes:

- ISIN
- UnderlierISIN for swaptions
- NearLegISIN and FarLegISIN for FX Swap and NDF FX Swap

Notional Schedule Logic

The Notional Schedule is set as below:

- Bullet is mapped to Constant
- Annuity, Equal, AnnuityAdj, Mortgage are mapped to Amortizing
- Step down and Schedule are mapped to Amortizing for decreasing schedule, Accreting for increasing schedule, and Custom for increasing and decreasing schedule
- Custom is mapped to Custom.

4.3 Trade Updates

The AnnaDsb engine updates the identifiers upon manual trade update (through PSEventTrade events) or using the Process Trades window and PROCESS_TRADE scheduled task (through PSEventProcessTrade events).

The action to be applied to the trades is defined in domain “AnnaDsbUpdateAction”, or AMEND if not set.

The product types managed by the AnnaDsb engine are defined in domain “AnnaDsbProductTypes”.

If no value is fetched by the AnnaDsb engine (engine value), and there is no value stored on the trade Product Code, the system checks if there is a value in the Instrument<product code> trade keyword corresponding to this case.

- If there is no value, raise an exception
- If there is a value, populate the trade Product Code with Instrument<product code> trade keyword if domain “AnnaDsbCopyTradeKeyword” contains Value = true, and product type is not listed in domain “UploaderSkipCopyToProductCode” (or domain contains All) – Otherwise raise an exception

If a value is fetched (engine value) and there is no value stored on the trade Product Code, the system checks if there is a value in the Instrument<product code> trade keyword corresponding to this case.

- If there is no value, populate the trade Product Code with the engine value.
- If there is a value, populate the trade Product Code with Instrument<product code> trade keyword if domain “AnnaDsbCopyTradeKeyword” contains Value = true, and product type is not listed in domain “UploaderSkipCopyToProductCode” (or domain contains All) – Raise an exception if the engine value is different from the Instrument<product code> trade keyword.

If the product type is listed in domain “UploaderSkipCopyToProductCode” (or domain contains All), populate the trade Product Code with the engine value if domain “AnnaDsbCopyEngineValue” contains Value = true.

If a value is fetched (engine value) and it is equal to the value already stored in the trade Product Code, then no additional processing is required.

If a value is fetched (engine value) and it is different from the value already stored in the trade Product Code, then check if there is a value in the Instrument<product code> trade keyword corresponding to this case.

- If there is no value, populate the trade Product Code with the engine value.
- If there is a value, populate the trade Product Code with the engine value if domain “AnnaDsbCopyEngineValue” contains Value = true.

When implementing the ANNA DSB interface, in order to update CFI/UPI/ISIN for existing trades, you can use the Process Trade window or the PROCESS_TRADE scheduled task.

They could also be used to do a daily update of all the trades which are missing a CFI/UPI/ISIN using a trade filter that catches all trades missing the CFI/UPI/ISIN.

4.4 Customization Capability

You can customize the existing QueryBuild classes as needed.

You can create a class named `calypsox.cloud.annadsb.<product code>.querybuilder.<product code><asset class>QueryBuilder` that extends `com.calypso.cloud.annadsb.<product code>.querybuilder.<product code><asset class>QueryBuilder`.

In this class, you can provide your implementation in `buildQuery()` method.

Examples:

```
calypsox.cloud.annadsb.upi.querybuilder.UPICommoditiesQueryBuilder extends
com.calypso.cloud.annadsb.upi.querybuilder.UPICommoditiesQueryBuilder
```

```
calypsox.cloud.annadsb.isin.querybuilder.ISINCommoditiesQueryBuilder extends
com.calypso.cloud.annadsb.isin.querybuilder.ISINCommoditiesQueryBuilder
```

Please contact Calypso Product Support to obtain those classes.

4.5 Archiving ANNA-DSB Tables

You can use the scheduled task ARCHIVE_ANNA_DSB_PRODUCT_CODES to archive ANNA-DSB tables:

- anna_dsb_product_isin_data
- anna_dsb_product_upi_data

Task Attributes	
AssetClass	Rates
Identifier	UPI
Phase	Delete permanently
InstrumentType	Forward
UseCase	
Status	New

Common Attributes

- Valuation Date Offset - Used to calculate the Valuation Date
- Business Holidays - Used to calculate the Valuation Date

Task Attributes

- **AssetClass** – Select the asset classes to process. Values are taken from domain “AnnaDsbAssetClass”.
- **Identifier** – Select the identifiers to process. Values are taken from domain “AnnaDsbIdentifier”.
- **Phase** – Select:
 - Delete permanently: physical deletions of the data in the live tables without having to go through the _HIST tables.
 - Archive: move data from live tables to _HIST tables.

- Restore: cancel the Archive and move data back from _HIST tables to live tables.
- Delete from archive: physical deletions of the data in the _HIST tables.
- **InstrumentType** – Select the instruments to process. Values are taken from domain “AnnaDsbProductTypes”.
- **Status** – Select the status to process. Values are taken from domain “AnnaDsbStatus”.