CDML Release Notes

VERSION 3.4.2

May 2021

These release notes describe the changes between CDML version 3.0 and CDML version 3.4.2.

You can download the Calypso Installer for Calypso from the download site.

▶ Please refer to the *Calypso Installation Guide* for details on the Calypso Installer.

Revision date	Comments
September 2014	Updates for version 3.0.
August 2017	Updates for version 3.1.2.
November 2017	Updates for version 3.1.6.
January 2018	Updates for version 3.2.1.
March 2018	Updates for version 3.3.0.
March 2018	Updates for version 3.1.7.
August 2018	Updates for version 3.4.2.
August 2018	Updates for version 3.3.4.
December 2018	Updates for version 3.3.8.
January 2019	Updates for version 3.3.10.
March 2019	Updates for version 3.3.11.
April 2019	Updates for version 3.3.15.
February 2021	Updates for versions 3.3.16 – 3.3.26.
May 2021	Updated for version 3.3.27.

Contents

Section 1.   CDML 3.4.2

Issue Id	HelpDesk Id	Description
CDML-184		Issue – Support EUREX market data: FX Rates, Interest Rates, Non-cash Collateral Prices.
CDML-197		Issue – Support ICE market data: FX Rates, Interest Rates, Non-cash Collateral Prices.
CDML-206	162487	Issue - Direction of PL Mark NPV_ADJUSTED_PREV is incorrect for EUREX trades.
CDML-213	161349	Issue - Incorrect direction for LIQUIDITY_MARGIN while uploading IM report for ICE.
CDML-208	162482	Issue – PL Mark NPV_ADJUSTED_PREV is not generated for ICE Trades.
CDML-219	162191	Issue - EUREX: Non cash collateral report issues (CD031).
CDML-222	162191	Issue - ICE interest rates are not imported if the text values in the csv files are enclosed in double quotes.
CDML-225	163988	Issue - ICE VM processing issue.
CDML-228	164353	Issue - CLEARING_TRANSLATE_TO_CDML throws error when value of DV01 or OisRate is empty in Eurex file.
CDML-236	164688	Issue - CLEARING_TRANSLATE_FROM_CDML fails and throws error while processing file containing seg type ISOC-I and ISOC-J. Fix – These segregation types are currently not supported and are now ignored.
CDML-250		Issue - ICC: GBFX report file name needs to be renamed from GEN_GBFX_20180614.csv to GBFX_20180614.csv before importing FX rates.
CDML-237	164653	Issue - CME rate resets are imported as Yield regardless of what is set in the Rate index definition. The system should look up the rate index definition and set the quote type definition accordingly.

Section 2.   CDML 3.3.27

HD/Case	Issue Id	Type	Description
	CDML-809	Enh	Issue – Support new fee types EUREX Trade Valuation report CC203: Termination Fee Clearer Change and Upfront Fee Clearer Change. Fix – Added integration of fee types TERMINATION_FEE_CLEARER_CHANGE and UPFRONT_FEE_CLEARER_CHANGE.

Section 3.   CDML 3.3.16 – 3.3.26

HD/Case	Issue Id	Type	Description
173830	CDML-392	Issue	Issue - Performance issue with scheduled task CLEARING_IMPORT_MARKET_DATA for uploading Eurex curves.
	CDML-537	Enh	Issue – Add Intraday IM processing for HKEX OTC Clearing. Fix – Added support for WEB MRCleared report. You need to add HKEXITD to the domain "Clearing.CML.producerNames".
180552 178831	CDML-553	Enh	Issue - CME IRSTR file – Add pricer measure for LEG1_COUPON_AMT and LEG2_COUPON_AMT. Fix – Added LEG1_COUPON_AMT and LEG2_COUPON_AMT.
180552	CDML-558	Issue	Issue - CME IRSTR file - CS_COUPON getting wrongly converted.
169777	CDML-562	Enh	Issue - EUREX OTC - Add pricer measures for ACCRUAL for fix and floating leg. Fix – Added ACCRUAL_PAYLEG and ACCRUAL_RECLEG.
	CDML-566	Enh	Issue - EUREX - IM File CC050 has been replaced by CC750.
167293	CDML-568	Issue	Issue – Scheduled task CLEARING_TRANSLATE_TO_CDML for LCH Marks and Exposures takes too long.
181047	CDML-579	Issue	Issue - ICE: Upfront fee not translated on terminated trade (resulting from netting).
184561	CDML-584	Enh	Issue -ICE Clear Credit - Initial margin file name / column name changes for client and house file. Fix - The file names for Clear Credit are now: Client: [CPCODE]_[REPORTTYPE]_[PORTFOLIO]_[DATE].csv House: [CPCODE]_[REPORTTYPE]_[PORTFOLIO]_[DATE].csv The column "IM SR Requirement" is now "IM Portfolio SR Requirement". The column "IM RR Requirement" is now "IM RR Sensitivity Requirement".
182193	CDML-594	Enh	Issue - CDML VM does not support ICE-CLIENT-ISOC-I and ICE-CLIENT-ISOC-J segregation Types.

HD/Case	Issue Id	Type	Description
			Fix - The segregation types ICE-CLIENT-ISOC-I and ICE-CLIENT-ISOC-J are now supported.
182533	CDML-595	Enh	Issue - Incorporate filename and column changes for IM / VM file for LCH FX NDF.
183013	CDML-597	Enh	Issue - Incorporate file name change for LCH FX Clear Market data file.
184974	CDML-606	Issue	Issue – HKEX CDML object not created if client is not setup in Calypso.
186301	CDML-625	Enh	Issue - FXClear – FXNDF – Add IMNovatedTrades, sVaR and CompletionMargin to IM calculation.
			Fix - IM = IMNovatedTrades + CRiM + IMM or LRM + BAM + SRM + MER + sVaR + CompletionMargin.
			The following pricer measures have been added:
			IM_NOVATED TRADES - Report 14 (H), 26 (C/c) – IM_NovatedTrades
			STRESSED_VALUE_AT_RISK - Report 14 (H), 26 (C/c) – sVaR
			COMPLETION_MARGIN - Report 14 (H), 26 (C/c) – CompletionMargin
170859	CDML-600	Enh	Issue – LCH PPS Change - Store CCYHolNPVChange on CE PL Marks for EOD processes.
			Fix – Added Margin Call Contract attribute LCH_VM_HOLIDAY:
			If False or null, the system does not process CCYHolNPVChange.
			If set to True, the system includes any NPV debit reflected in CCYHolNPVChange in the Initial Margin (MAINTENANCE_REQUIREMENT P&L mark).
185470	CDML-617	Issue	Issue - CS_NPV_REV is calculated incorrectly for file REP00016c.
187762	CDML-632	Issue	Issue – Scheduled task CLEARING_TRANSLATE_TO_CDML fails for FXCLEAR.
188600	CDML-641	Issue	Issue - FXCLEAR statement measures of FREP0026C and FREP0014 reports are not getting converted to CDML correctly.
182532	CDML-622	Enh	Issue - Eurex – Add support for cross currency swap product.
	CDML-644	Enh	Issue – Support Initial Margin CDML processing for LCH CDS Clear.
	CDML-646	Enh	Issue – Support Variation Margin CDML processing for LCH CDS Clear.

HD/Case	Issue Id	Type	Description
	CDML-658	Enh	Issue – Add ability to identify LCH CCP by product type. Fix – The following mapping has been added: Interface Name = LCH/CCP Interface Value - <product type> (example: CDS, IRD, NDF) Calypso Value = <CCP legal entity> (example: LCHSA, LCH, FXCLEAR) – This is mapped to the CCP legal entity attribute LCH_CPTY and account attribute CCP_Account_Reference.
189180	CDML-661	Issue	Issue - LCH FXCLEAR FXMD0003- Curve Offsets points are multiplied by 100.
193219	CDML-686	Issue	Issue - EUREX Curve market data import populates the value of <OffsetValue> as Value Date instead of Maturity Date.
193972	CDML-692	Issue	Issue - Translate CDML performance issue. Fix - Fixed the logic to make DB calls to fetch contracts only once for each combination of (CCP-memberId-ClearingService).
195275 186306	CDML-700	Enh	Issue – LCH SA - CCP TradeID - Source column change. Fix - Source column for "clearedTradeId" has been changed from <clearingMemberTRI> to <CCPTRI> for the Trade Valuation report for both house and client trades.
	CDML-778	Enh	Issue – Upgrade org.apache.camel library to version 3.4.2.

Section 4.   CDML 3.3.15

Issue Id	HelpDesk Id	Description
CDML-378		Issue – EOD and Intraday Margin File name changes for LCH SR 10.2. Fix - House reports have been changed from report 86 to 86z, and client reports have been changed from 86c to 86cz.
CDML-532		Issue – HKEX OTC VM - Add support for cross currency swaps. Please refer to the *Calypso Clearing Member Setup Guide* for details.

Section 5.   CDML 3.3.11

Issue Id	HelpDesk Id	Description
CDML-372		Issue –HKEX - OTC Clearing - For IM processing, use account attribute HKEXAccountName for searching clearing account.
CDML-354		Issue - HKEX-FX Rate Market Data File Import Failure.

Section 6.   CDML 3.3.10

Issue Id	HelpDesk Id	Description
CDML-314	172213	Issue – EUREX IM Processing: Consider report CI050 in addition to report CC050. Fix – If CC050 is not available, then process CI050, otherwise process CC050 only.
CDML-329 CDML-330 CDML-331		Issue – HKEX file names are incorrect for Market Data, VM and IM. The system should ignore the timestamp and report count in file name.
CDML-334		Issue - Remove attribute HKEXAccountName to store position account id. Fix - The position account id is stored on the Clearing Account's External Name.

Section 7.   CDML 3.3.8

Issue Id	HelpDesk Id	Description
CDML-250		Issue – ICC: GBFX report file name needs to be renamed from GEN_GBFX_20180614.csv to GBFX_20180614.csv before importing FX rates.
CDML-254	166405	Issue - Eurex CDML IM to consider file CC050 along with CC204 for cross margin (Prisma) clients. Fix - If CC204 is available, the system processes the CC204 report, otherwise it looks for CC050. CC204 shows IM for OTC products only, whereas CC050 provides IM number for OTC and Listed products, and considers cross margined numbers.
CDML-211 CDML-251		Issue – Add support for HKEX CCP, margin calculations, market data reports.
CDML-246	162715	Issue – CLEARING_IMPORT_MARKET_DATA scheduled task uploads EUREX curves with wrong offset.
CDML-261		Issue - LCH Initial Margin - Store SLMargin from report 86c as SLM P&L marks on Customer Exposure trade. Fix – SLM P&L mark is now stored on Collateral Exposure trades.
CDML-266	167833	Issue - CLEARING_IMPORT_MARKET_DATA scheduled task throws camel error on uploading Collateral quotes.
CDML-267	167834	Issue - CLEARING_IMPORT_MARKET_DATA scheduled task uploads EUREX rate reset in decimal format.

Section 8.   CDML 3.3.4

Issue Id	HelpDesk Id	Description
CDML-199		Issue – "Trade Valuation Data" element should consider SettlementCCY from 91xe/c instead of Currency.
CDML-184		Issue – Support EUREX market data: FX Rates, Interest Rates, Non-cash Collateral Prices.
CDML-197		Issue – Support ICE market data: FX Rates, Interest Rates, Non-cash Collateral Prices.
CDML-206	162487	Issue - Direction of PLMark NPV_ADJUSTED_PREV is incorrect for EUREX trades.
CDML-213	161349	Issue - Incorrect direction for LIQUIDITY_MARGIN while uploading IM report for ICE.
CDML-208	162482	Issue – PL Mark NPV_ADJUSTED_PREV is not generated for ICE Trades.
CDML-219	162191	Issue - EUREX: Non cash collateral report issues (CD031).
CDML-222 CDML-223 CDML-226	162191	Issue - ICE interest rates are not imported if the text values in the csv files are enclosed in double quotes, and issues with collateral quotes.
CDML-225	163988	Issue - ICE VM processing issue.
CDML-228	164353	Issue - CLEARING_TRANSLATE_TO_CDML throws error when value of DV01 or OisRate is empty in Eurex file.
CDML-236	164688	Issue - CLEARING_TRANSLATE_FROM_CDML fails and throws error while processing file containing seg type ISOC-I and ISOC-J. Fix – These segregation types are currently not supported and are now ignored.
CDML-244		Issue – EUREX - Mapping for NPV and NPV REV needs to be changed. - CS_NPV_ADJUSTED clearing fee and NPV_ADJUSTED PL Mark should be mapped to MtM0_exCF instead of MtM0 - CS_NPV_REV clearing fee and NPV_ADJUSTED_PREV PL Mark should be mapped to MtM-1_exCF instead of

Issue Id	HelpDesk Id	Description
		MtM-1 • For PLMarks, change NPV_NET mapping from NPV_NET to MtM_CLEAN

Section 9.   CDML 3.3.0

Issue Id	HelpDesk Id	Description
CDML-181 CDML-190		Issue - LCH SR 9.1 Support report 305 (House and Client). Fix – Added support of intraday processing of LCH GBP FRA Variation Margin in CDML. To process intraday flows with CDML, you must set the legal entity attribute SKIP_ITD_FLOW = false on the Clearing Member.
CDML-191		Issue – NPVAdjustment should be the opposite direction of NPVPreviousCOB.
CDMLI-11 CDMLI-15		Issue - ICE Market Data Report: Non Cash Collateral prices - Store bond prices pertaining to Non Cash Collateral using MBCOB file instead of GBCP file. Fix – The scheduled task CLEARING_IMPORT_MARKET_DATA allows importing bond quotes from ICE.
CDMLI-12 CDMLI-14		Issue - ICE Market Data Report: FX Rates - Store FX rate for ICE Credit clearing service from GBFX file. Fix – The scheduled task CLEARING_IMPORT_MARKET_DATA allows importing FX quotes from ICE.
CMLI-10		Issue - ICE Market Data Report: Interest Rates – Store interest rates for ICE Credit clearing service from GBIR file. Fix – The scheduled task CLEARING_IMPORT_MARKET_DATA allows importing quotes from ICE.

Section 10. CDML 3.2.1

Issue Id	HelpDesk Id	Description
CDML-84 CDML-174		Issue - Additional column in EOD report to populate VM classification, and ensure that VM Classification element is populated for all CDML Translators. Fix – Clearing Transfer trades are generated with trade keyword VMClassification. It can be set to CTM or STM based on the CCP legal entity attribute VMClassification. If the CCP legal entity attribute is not set, it is based on the Import files. The default value is STM otherwise. You can setup an MCC contract for each trade classification using the attribute VM_CLASSIFICATION, set to CTM or STM. This applies to both Client and CCP facing Clearing Transfer trades.

Section 11. CDML 3.1.7

Issue Id	HelpDesk Id	Description
CDML-84 CDML-174 CDML-173		Issue - Additional column in EOD report to populate VM classification, and ensure that VM Classification element is populated for all CDML Translators. Fix – Clearing Transfer trades are generated with trade keyword VMClassification. It can be set to CTM or STM based on the CCP legal entity attribute VMClassification. If the CCP legal entity attribute is not set, it is based on the Import files. The default value is STM otherwise. You can setup an MCC contract for each trade classification using the attribute VM_CLASSIFICATION, set to CTM or STM. This applies to both Client and CCP facing Clearing Transfer trades.
CDML-188		Fee settle dates for TV ITD transfers MUST equal trade processing date.
CDML-181 CDML-190		Issue - LCH SR 9.1 Support report 305 (House and Client). Fix – Added support of intraday processing of LCH GBP FRA Variation Margin in CDML. To process intraday flows with CDML, you must set the legal entity attribute SKIP_ITD_FLOW = false on the Clearing Member.
CDML-191		Issue – NPVAdjustment should be the opposite direction of NPVPreviousCOB.

Section 12. CDML 3.1.6

Issue Id	HelpDesk Id	Description
CDML-168		Issue - CDML-FXCLEAR causes PatternSyntaxException.

Section 13. CDML 3.1.2

Issue Id	HelpDesk Id	Description
CDML-138 CDML-159	151024	Issue - CDML creates Collateral Transfer trades with incorrect attributes. Fix – Segregation Account Id is set H for house deals where MCC account is not found.
CDML-151 CDML-154		Issue - Segregation id is not populated correctly for clients in Trade Valuation report.
CDML-122		Issue – CDML CME - PAI naming convention change in Reports. Fix - IRS Trade register file (IRSTR) - PAI column name is changed to PAA. FX Trade register file (Trade_Register) - PAI column name is changed to PAA.
CDML-123	149613	Issue – Error when processing Eurex legal entities with Eurex CDML translator.
CDML-106	147397	Issue - Rep86 is not translated for IM house contracts when LCH entity has role CCP.

Section 14. CDML 3.0

14.1 XML based

- A **family of reports** to encode EOD (and ITD) clearing information, from the perspective of the CCPs, but **avoiding CCP or FCM specific details**

    - CDML API is not Calypso specific, and does not rely on any Calypso or clearing code. That includes the CDML report datatypes

    - It is currently distributed along clearing to simplify packaging and maintenance

- As of clearing 2.8./3.3.0, 2 reports

    - **tradeValuationReport** : daily valuation and settlement flows

    - **initialMarginReport** : daily margin flows

- As of clearing 2.8.0/3.3.0, 3 XML namespaces and schemas

    - `urn:cdml:schema:common:types` (CDML-dataypes-001.xsd) : common datatypes

    - `urn:cdml:schema:position:tradeValuation` (CDML-TradeValuationReport-001.xsd)

    - `urn:cdml:schema:margin:initialMargin` (CDML-InitialMarginReport-001.xsd)

- A single CDML file/document can contain information for

    - multiple CCPs

    - multiple clearing services (products)

    - multiple POs (members)

    - multiple accounts

    - FCM or Client activity

- CDML reports are date based: information encoded in them relates to a given business date - This date is encoded as the `<cdml:reportDate>` element

14.2 CDML Clearing Setup

14.2.1 Execute SQL

CDML reports are stored in DB for their processing. These files are shipped along clearing, and have to be added to the Execute SQL run:

```
bin/dbscripts/CDMLSchemaData.xml
bin/dbscripts/CDMLSchemaBase.xml
```

14.2.2   Data Server Service (V13 only)

The CDML backend service has to be registered in Data Server. To do so, modify

```
resources/appconfig/ApplicationConfigurations.xml
```
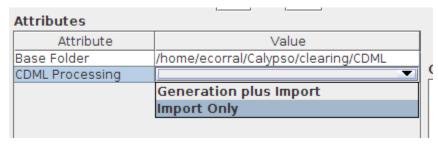
to include a reference to `CDMLBackend.DataServer.serviceconfig.xml` in the optional services section. E.g (truncated):

```
<value>classpath*:ReconciliationService.Data.serviceconfig.xml</value>

<value>classpath*:CDMLBackend.DataServer.serviceconfig.xml</value>

<value>classpath*:CalypsoScheduler.DataServer.serviceconfig.xml</value>

<value>classpath*:ClearingExternalData.DataServer.serviceconfig.xml</value>
```

14.3 CDML Scheduled Tasks

14.3.1   CLEARING_TRANSLATE_TO_CDML

The CLEARING_TRANSLATE_TO_CDML scheduled task is the preferred way to load CDML content into the DB for later processing. It can load already existing CDML, or transform CCP EOD files into CDML, for its posterior loading (provided the right configuration exists, see below).

ST takes 2 mandatory attributes

- **Base Folder** : folder that will be used to load CDML or CCP EOD raw files from

- **CDML Processing** : processing mode
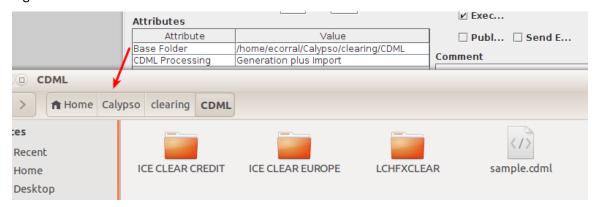
Import Only mode

In this mode, the configured Base Folder will be scanned for existing CDML files that comply with the following characteristics

- CDML valid, as per the schemas

- having a `<cdml:reportDate>` equal to the ST valuation date

- having `.xml` or `.cdml` file extension

All the matching files found in *Base Folder* will be loaded into DB.

Generation plus Import mode

In this mode, the ST will attempt to generate the CDML based on CCP EOD raw files. The ST assumes that, for every CCP to be processed, there is a *Base Folder* subfolder named after it. E.g.:
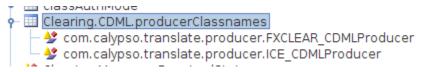

In this example, the Base Folder contains 3 subfolders, that represent 3 CCP LE in the system

- ICE CLEAR CREDIT

- ICE CLEAR EUROPE

- LCHFXCLEAR

The folder names must match the CCP LE short names.

For every CCP-valid folder, the ST will instantiate all known CDML producers, try to generate content from the files contained in them, and aggregate it into the final CDML documents to be imported into the system.

To register CDML producers, use the `Clearing.CDML.producerClassnames` domain. E.g.:

The CDMLProducer interface is offered by the **clearing-cdml-api** module (calypso-clearing-cdml-api in V14):

```
package cdml.producer;


import java.util.Collection;

import javax.xml.bind.JAXBElement;


import cdml.schema.common.types.CDMLReportType;


/**

 * Implementations are capable of producing CDML reports. Context information is

 * encoded in {@link ProducerContext} : implementations should validate that

 * report type and date have been configured. Although generation datetime is

 * optional, it is strongly recommended to configure it in the context, instead
```

```
* of delegating onto producer implementations to generate it.
*
* @author ecorral
*
* @param <D>
*             : type of date object. Must be capable of holding, at least, year,
*             month and day of the month components
* @param <C>
*             : generation context type
*
*/
public interface CDMLProducer<D, C extends ProducerContext<D>> {


    /**
     * Generate all reports the context information allows to. Implementations
     * should verify the context has enough information (mainly, report date and
     * type), and raise an error if not
     *
     * @return never <code>null</code> : an empty collection if no report could be generated
     * @throws ProducerException
     */
    Collection<JAXBElement<? extends CDMLReportType>> generateReports(C context) throws ProducerException;



}
```

The **clearing-translation-api** module contains CCP-agnostic code to write CDMLProducer implementations.

14.3.2   CLEARING_PROCESS_FROM_CDML

The CLEARING_PROCESS_FROM_CDML scheduled task uses CDML content previously stored in the DB to generate Calypso core objects for Clearing downstream processing.

As of 2.8.0/3.3.0, the ST allows to run margin and/or trade settlement + marks in a single run, with the following mandatory attributes

- CDML Report Type
- Pricing Environment[1]

---

1   Needed for trade valuation/marks purposes; initial margin processing uses the pricing environment configured on each collateral contract

When run, the ST will look for the selected report, on the given valuation date, parse it, and create as many Calypso core objects as possible, meaning

- initialMarginReport : collateral exposures will be created as needed, and marks for the given day will be stored, sourced from the reported

- tradeValuationReport : ClearingTransfer SETTLEMENT trades will be created, and marks for such trade, and the cleared trades too, if present in the system

14.4 CDML Viewer

To see the CDML stored in the system, the CDML viewer is shipped in **clearing-cdml-impl**. To add it to Main Entry / Navigator:

Action: "cdml.CDMLViewFrame".