

Nasdaq Calypso ClearConnect Integration Guide

Version 2.7.0

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Document History

Revision	Published	Summary of Changes
1.0	November 2023	First edition for version 1.3.0
2.0	January 2024	Updates for version 2.3.0 (compatibility with version 18)
3.0	April 2024	Updates for version 2.4.0 – Added mapping to define message attribute display values
4.0	September 2024	Updates for version 2.7.0 – Added LookupMessageAttributeValue column to lookup existing trade

This document describes the ClearConnect interface.

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.

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



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Overview

The Eurex ETD interface Module allows connecting to a Eurex FIXML account and capture live ETD clearing trades from Eurex exchange.

Eurex sends trade details in FIXML syntax file format through various queues to Calypso with support of jks and third-party JAR files.

The FCM Trade interface supports this interface which reads ETD Eurex FIXML syntax and convert into calypso uploader format.

The purpose of this interface is to understand the ETD incoming message from the FIXML based file and translate to Uploader XML format and save the trade using the Data Uploader FCM Trade Interface framework.

1.1 In Scope

- Eurex ETD integrated with ClearConnect.
- Eurex ETD Give-up, Take-Up, OpenClose, Text and Account Adjustments
- Eurex ETD ClearConnect integrated with workflow where Executing and Clearing Give-up firm and Takeup firm are different

1.2 Out of Scope

- Other CCPs
- Eurex ETD Exercise/assignment, Merge/demerge, split and transfers etc.
- Eurex ETD ClearConnect default configuration is not supported where Executing and Clearing give-up firm and Take-up firm are the same



Installation and Configuration

2.1 Software Installation

ClearConnect is installed as part of the Calypso Installer when you select the "ClearConnect" interface.

Select Components Which components should be installed?
Select the components you want to install; dear the components you do not want to install. Click Next when you are ready to continue.
Optional Modules (Please consult with your Calypso Account Executive for licensing questions) Calypso Business Services Layer (CBSL) Collateral Collateral Monte Carlo XVA Data Uploader Front Office Workstation Margin Engine Margin Engine Microsoft Active Directory Integration Regulatory Risk Structured Finance Symphony Compute Grid Integration Symphony Compute Grid Integration Security Finance SFTR Calypso Recon Cart Integration

ClearConnect depends on ETD Clearing Direct connectivity modules with the combination of Eurex ETD, Data Uploader, FCM Trade Interface and Clearing Member Module.

Eurex ETD connectivity is integrated with ClearConnect solutions.

Calypso Installer

Please refer to the Calypso Installation Guide for complete details.

Database Upgrade

When you run Execute SQL the ClearConnect data files will be already loaded.



2.2 Logging Category

To fetch & Trace the ClearConnect GUI operations for EUREX in Log files, configure the below parameters in your Environment.

	new 1	21 🔚 OutgoingFeed_Calypso_172381_17231101.log 😰 🚍 new 3.txt 🔯 📇 calypsouser,properties.Calypso_172381_ 🔀
	19	USE KAHA DB=true
8	80 🔵	LOG_CATEGORY=LOG, EXCEPTION, UPLOADER, BUILD_CONFIG_QUERY, com.calypso.clearing.log.default, MESSAGE_TRACE, EurexETD, UPLOADER_STATS, CLEAR_CONNECT
8	31	MESSAGING_SERVER_MONITORING_ENABLED=true
8	32	MESSAGING_SERVER_MONITORING_INTERVAL=8000
	0	

Add CLEAR_CONNECT to LOG_CATEGORY - This log category will log fixml syntax used to capture message attribute, workflow action and ClearConnect GUI operations.

ClearConnect Setup Requirements

▶ Please refer to the Calypso ETD Clearing Setup Requirements for information on setting up ETD Clearing.

3.1 ClearConnect UI

Add favorite tile or menu action as needed using menu action etd.ETDDashboard.



3.2 Upload Mapping Data

Upload the below file that contain ClearConnect mapping data using the Data Uploader.

<calypso home>/docs/calypso-clear-connect/samples/mapping/CALYPSOMAPPING_EurexETD_ClearConnect.csv



🔀 Data Uploader	A Data Uploader: Uploader - UploaderXML - 🗆 🗙												
Uploader Utilitie	Uploader Utilities												
Source:	Uploader	 Format: 	UploaderXML	Select File /	/ Folder cs\calypso-c	lear-connect\samples	\mapping\CALYPSOMAPPING_EurexETD_ClearCo	nnect.csv		🤹 Refresh	🛃 Upi	oad	
Persist Message:	None	~											
CALYPSOMAPP	ING_EurexETD_Cle	arConnect.csv	×										
Q Filter Data													
UploadStatus	Action	InterfaceName	TypeName	InterfaceValue	CalypsoValue	ReverseDefaultB				Upload Field	Value		
	NEW	EurexETD	MessageAttrib	Account	Account	0			~	Action	NEW		
	NEW	EurexETD	MessageAttrib	AllocStatus	Stat	0				InterfaceName	EurexET	D	
	NEW	EurexETD	MessageAttrib	AllocType	RptType	0				TypeName	Message	Attribute	s
	NEW	EurexETD	MessageAttrib	AltID	AltID	0				InterfaceValue	Account		
	NEW	EurexETD	MessageAttrib	AltIDSrc	AltIDSrc	0				CalypsoValue	Account		
	NEW	EurexETD	MessageAttrib	BuySellDirection	Buy SellDirection	0				ReverseDefaultB	0		

The following mapping data are uploaded:

Interface Name	TypeName	InterfaceValue	CalypsoValue	Description
EurexETD	MessageAttribute s	Account	Account	These Mappings help to capture ClearConnect info
EurexETD	MessageAttribute s	AllocStatus	Stat	as message attributes.
EurexETD	MessageAttribute s	AllocType	RptType	
EurexETD	MessageAttribute s	AltID	AltID	
EurexETD	MessageAttribute s	AltIDSrc	AltIDSrc	
EurexETD	MessageAttribute s	BuySellDirection	BuySellDirection	
EurexETD	MessageAttribute s	CCPRptRefID	RptRefID	
EurexETD	MessageAttribute s	ClearingExchangeTicker	Sym	
EurexETD	MessageAttribute s	ClearingFirm	GiveUpClearingFir m	
EurexETD	MessageAttribute s	ClientRef	Txt2	
EurexETD	MessageAttribute s	ContractFrequency	ContractFrequenc y	



Interface Name	TypeName	InterfaceValue	CalypsoValue	Description
EurexETD	MessageAttribute s	ContractPromptMonth_Dat e	ContractDate	
EurexETD	MessageAttribute s	Currency	Ссу	
EurexETD	MessageAttribute s	ETO_SVN	OptAt	
EurexETD	MessageAttribute s	ElectronicExchangeTicker	ProdCmplx	
EurexETD	MessageAttribute s	EurexTradeStatus	TransType	
EurexETD	MessageAttribute s	Trade-Type	TrdTyp	
EurexETD	MessageAttribute s	ExecutedBy	ExecutedBy	
EurexETD	MessageAttribute s	ExtRef	RptID	
EurexETD	MessageAttribute s	ExternalReference	RptID	
EurexETD	MessageAttribute s	FlexInd	FlexInd	
EurexETD	MessageAttribute s	GiveUpFirm	GiveUpFirm	
EurexETD	MessageAttribute s	GiveUpTradingFirm	GiveUpTradingFir m	
EurexETD	MessageAttribute s	ID2	ID2	
EurexETD	MessageAttribute s	MatDt	MatDt	
EurexETD	MessageAttribute s	OpenClose	OpenClose	
EurexETD	MessageAttribute s	OptionType	PutCall	



Interface Name	TypeName	InterfaceValue	CalypsoValue	Description
EurexETD	MessageAttribute s	Orderld	OrdID	
EurexETD	MessageAttribute s	Party96	Party96	
EurexETD	MessageAttribute s	Party97	Party97	
EurexETD	MessageAttribute s	Party98	Party98	
EurexETD	MessageAttribute s	PricePremium	LastPx	
EurexETD	MessageAttribute s	PromptMonth_Date	MMY	
EurexETD	MessageAttribute s	Quantity	Qty	
EurexETD	MessageAttribute s	Run_Date	BizDt	
EurexETD	MessageAttribute s	SettlMeth	SettlMeth	
EurexETD	MessageAttribute s	StrikePrice	StrkPx	
EurexETD	MessageAttribute s	SubAccount	Txt1	
EurexETD	MessageAttribute s	TS_Trade_Date	TrdDt	
EurexETD	MessageAttribute s	TakeUpBroker	TakeUpBroker	
EurexETD	MessageAttribute s	TakeUpFirm	TakeUpFirm	
EurexETD	MessageAttribute s	Trade_Date	TrdDt	
EurexETD	MessageAttribute s	TransferReason	TransferReason	



Interface Name	TypeName	InterfaceValue	CalypsoValue	Description
EurexETD	MessageAttribute s	Txt3	Txt3	
EurexETD	MessageAttribute s	Txt2	Txt2	
EurexETD	MessageAttribute s	TakeUpClearer	TakeUpClearer	
EurexETD	MessageAttribute s	Party95	Party95	
EurexETD	MessageAttribute s	CustOrdHdllnst	CustOrdHdllnst	
EurexETD	MessageAttribute s	ExerStyle	ExerStyle	
EurexETD	FieldMapping	AllocRpt@ID2	ID2	Additional field mappings
EurexETD	FieldMapping	TrdCaptRpt/Instrmt/AID@A ItID	AltID	stored as message attributes from fixml message, to know what
EurexETD	FieldMapping	TrdCaptRpt/Instrmt/AID@A ItIDSrc	AltIDSrc	Message. Also certain fields are
EurexETD	FieldMapping	TrdCaptRpt/Instrmt@Settl Meth	SettlMeth	required when generating request messages.
EurexETD	FieldMapping	TrdCaptRpt/Instrmt@ExerS tyle	ExerStyle	
EurexETD	FieldMapping	TrdCaptRpt/RptSide@Cust OrdHdlInst	CustOrdHdllnst	
EurexETD	FieldMapping	TrdCaptRpt/Pty[R=1]@ID	GiveUpTradingFir m	
EurexETD	FieldMapping	TrdCaptRpt/Pty[R=4]@ID	ClearingFirm	
EurexETD	FieldMapping	TrdCaptRpt/Pty[R=95]@ID	ExecutedBy	
EurexETD	FieldMapping	AllocRpt/Alloc/Pty[R=95]@ ID	GiveUpFirm	
EurexETD	FieldMapping	AllocRpt/Alloc/Pty[R=96]@ ID	TakeUpFirm	



Interface Name	TypeName	InterfaceValue	CalypsoValue	Description
EurexETD	FieldMapping	AllocRpt/Alloc/Pty[R=98]@ ID	TakeUpClearer	
EurexETD	FieldMapping	AllocRpt/Alloc/Pty[R=95]/S ub@ID	Party95	
EurexETD	FieldMapping	TrdCaptRpt/RptSide@Txt3	Txt3	
EurexETD	FieldMapping	AllocRpt@TransTyp	EurexTradeStatus	
EurexETD	FieldMapping	TrdCaptRpt@TransTyp	EurexTradeStatus	
EurexETD	FieldMapping	AllocRpt/Alloc@Txt2	Txt2	
EurexETD	FieldMapping	AllocRpt/Alloc@Txt3	Txt3	
EurexETD	TradeClearingActi on	AUTOTAKEUP	TakeUpTradingFir m,Account,Txt1,Tx t2,Txt3,OpenClose	ClearConnect GUI Clearing Info Library action and attributes are derived from
EurexETD	TradeClearingActi on	AUTO_GIVEUP	Account,Txt1,Txt2, Txt3,OpenClose	Interface value = Action
EurexETD	TradeClearingActi on	CANCEL_GIVEUP		Attributes
EurexETD	TradeClearingActi on	MANUAL_GIVEUP	TakeUpTradingFir m,Account,Txt1,Tx t2,Txt3,OpenClose	
EurexETD	TradeClearingActi on	MANUAL_TAKEUP	TakeUpTradingFir m,Account,Txt1,Tx t2,Txt3,OpenClose	
EurexETD	TradeClearingActi on	REJECT_TAKEUP		
EurexETD	TradeClearingActi on	ACCOUNT_ADJUSTMENT	NewAccount,Txt1, Txt2,Txt3	
EurexETD	TradeClearingActi on	ADJUSTMENT	Txt1,Txt2,Txt3	
EurexETD	TradeClearingActi on	OPEN_CLOSE	Txt1,Txt2,Txt3,Op enClose	



Interface Name	TypeName	InterfaceValue	CalypsoValue	Description
EurexETD	Translator	EnableClearConnect	TRUE	Enable ClearConnect message flow.
				True = to enable the ClearConnect messages
				False = stop generating ClearConnect messages
				When field is switched from true to false or false to true, the system restart will be required
EurexETD	CLEAR_CONNECT _PROPERTIES	RESTATE_COLUMN_DATE _FORMAT	yyyy-MM-dd	In ClearConnect GUI, the Restate UI (Clearing Date)
EurexETD	CLEAR_CONNECT _PROPERTIES	RESTATE_COLUMN_NAME	Msg_Attr.BizDt	is filtered based on Bizdt of fixml message.
EurexETD	CLEAR_CONNECT _PROPERTIES	AUTOCLEAR_ACTIONS	AUTO_GIVEUP,AU TOTAKEUP	Auto clear actions
EurexETD	CLEAR_CONNECT _PROPERTIES	REQUEST_FILE_PATH	C:\calypso	Provide path to store the request messages.
ClearCon nect	Properties	RealTimeEnabled	Y	Y to enable auto refresh incoming messages and status updates
ClearCon nect	Properties	RefreshInterval	1000	Refresh interval in milliseconds
ClearCon nect	Properties	RealTimeReportRefreshInt erval	1000	
EurexETD	Queue	FeedNames	OUTGOINGFEED,E UREXETDREQUES TRESPONSEINCO MINGFEED,FEEDT RANSLATOR,EURE XETDUPLOADERI NCOMINGFEED,E UREXETDWORKFL OWINCOMINGFEE D.EUREXFTDWOR	Feeds for which the status should be displayed ClearConnect GUI



Interface Name	TypeName	InterfaceValue	CalypsoValue	Description
			KFLOWNCMINCO MINGFEED,EUREX ETDTRADECONFI RMATIONINCOMI NGFEED,EUREXET DTRADECONFIRM ATIONNCMINCOM INGFEED	

3.3 Defining Message Attribute Display Values

You can use the following mapping to define message attribute display values.

Name = <interface>/CC<message attribute>

Interface Value = <interface value>

Calypso Value = <ClearConnect display value>

Example:

Name = EurexETD/CCBuySellDirection

Interface Value = 1

Calypso Value = Buy

The interface value 1 will be displayed as Buy for message attribute BuySellDirection in ClearConnect.

3.4 Workflow

You can upload the EUREX_ETD_MSG workflow using <calypso home>/Client/Resources/EUREX_ETD_MSG.wf.



📕 Import Wo	\times	
Import Worl		
Choose the	Workflow to import	
Event Class	PSEventMessage	\sim
Processing Org	ALL	
Product	ALL	\sim
SubType	EUREX_ETD_MSG	→ ∋
	Import	Cancel

3.4.1 Workflow Rule to Lookup ClearingInfoLibrary

📫 Rules		E 📑 📑 😵 🕄
Name	Rule Param	Task Comment
ETDGenerateRequest		

The rule "ETDGenerateRequest" will automatically be added through workflow import.

When workflow rule ETDGenerateRequest is attached on certain actions, it will check the ClearingInfoLibrary attribute values and filter conditions to create a request message and send to Eurex exchange which are performed automatically or manually through ClearConnect GUI

Example: Manual/auto give-up, cancel Giveup, Reject Takeup, Manual/Auto Takeup, adjustments (text / account / Openclose).

3.4.2 Workflow Incoming Feed Rules

From the resource folder remove .sample extension from the below two files.

EurexETD_AllocRptWorkflowRules.csv.sample to EurexETD_AllocRptWorkflowRules.csv

EurexETD_TrdCaptRptWorkflowRules.csv.sample to EurexETD_TrdCaptRptWorkflowRules.csv

The **incoming feeds such as new trades and amendments actions** are decided based on the above two files NRL conditions.

File structure:

Trade Capture report NRL conditions:





RULE	ACTION	NewETDMessage	LookupMessageAttribute LookupMessageAttributeValue
<pre>#TransType != null && #TransType.equals('4') && (#TransferReason != null && #TransferReason.equals('002') #TransferReason.equals('004') #TransferReason.equals('005') #TransferReason.equals('006') #TransferReason.equals('011') #TransferReason.equals('012'))</pre>	CANCEL_ADJ_TRDRPT	FALSE	LookupMessageAttribute = RptID LookupMessageAttributeValue = RptRefID
#TransType != null && #ExecutedBy != null && #TransType.equals('0') && #TransferReason != null && #TransferReason.equals('030')	TAKEUP_TRDRPT	FALSE	
#TransType != null && #TransType.equals('4') && #TakeUpBroker != null && #TransferReason != null && #TransferReason.equals('020')	GIVENUP_TRDRPT	FALSE	
#TransType != null && #TransType.equals('0') && #TakeUpBroker != null && (#Txt1 != null #Txt3 != null)	T7_DIRECT_GIVEUP	TRUE	
#TransType != null && #TransType.equals('0') && ((#Txt1 != null && #Txt1.endsWith('%')) (#Txt3 != null && #Txt3.endsWith('%')))	AUTO_GIVEUP	TRUE	
#TransType != null && #TransType.equals('0') && (#Txt1 != null #Txt3 != null) && #TransferReason != null && #TransferReason.equals('000')	MANUAL_GIVEUP_REQUIRED	TRUE	
#TransType != null && #TransType.equals('0') && #Txt1 == null && #Txt2 != null && #Txt3 == null	CLEAR	TRUE	



RULE	ACTION	NewETDMessage	LookupMessageAttribute LookupMessageAttributeValue
<pre>#TransType != null && #TransType.equals('0') && (#TransferReason != null && #TransferReason.equals('002') #TransferReason.equals('004') #TransferReason.equals('005') #TransferReason.equals('006') #TransferReason.equals('011') </pre>	ADJ_TRDRPT	TRUE	
#TransType != null && #TransType.equals('0')	NEWETD	TRUE	

Allocation report NRL conditions:

RULE	ACTION	NewETDMessage
#RptType != null && #RptType.equals('15') && #TransType != null && (#TransType.equals('0') #TransType.equals('7')) && #Party97 != null && #Party97.equals('1') && #Party96 != null && #Party96.equals('0') && #Stat != null && #Stat.equals('6')	GIVE-UP	FALSE
<pre>#RptType != null && #RptType.equals('15') && #TransType != null && (#TransType.equals('0') #TransType.equals('7')) && #Party97 != null && #Party97.equals('1') && #Party96 != null && #Party96.equals('1') && #Party98 != null && #Party98.equals('1') && #Stat != null && #Stat.equals('9')</pre>	TCF_ACCEPTED	FALSE
#RptType != null && #RptType.equals('15') && #TransType != null && #TransType.equals('2') && #Stat != null && #Stat.equals('12')	GTF_CANCEL	FALSE
<pre>#RptType != null && #RptType.equals('16') && #TransType != null && (#TransType.equals('0') #TransType.equals('7')) && #Party97 != null && (#Party97.equals('0') #Party97.equals('1')) && #Party96 != null && (#Party96.equals('0') #Party96.equals('1')) && #Stat != null && #Stat.equals('6') && ((#Txt1 != null && #Txt1.endsWith('%')) (#Txt3 != null && #Txt3.endsWith('%')))</pre>	AUTOTAKEUP	TRUE
<pre>#RptType != null && #RptType.equals('16') && #TransType != null && (#TransType.equals('0') #TransType.equals('7')) && #Party97 != null && (#Party97.equals('0') #Party97.equals('1')) && #Party96 != null && (#Party96.equals('0') #Party96.equals('1')) && #Stat != null && #Stat.equals('6')</pre>	TAKEUP	TRUE



RULE	ACTION	NewETDMessage
#RptType != null && #RptType.equals('16') && #TransType != null && #TransType.equals('2') && #Stat != null && #Stat.equals('12')	CANCEL	FALSE
<pre>#RptType != null && #RptType.equals('16') && #TransType != null && (#TransType.equals('0') #TransType.equals('7')) && #Party97 != null && #Party97.equals('1') && #Party96 != null && #Party96.equals('1') && #Party98 != null && #Party98.equals('1') && #Stat != null && #Stat.equals('9') && #TakeUpClearer != null && #TakeUpClearer.equals(#GiveUpFirm)</pre>	AFFILIATED_TAKEUP	TRUE
<pre>#RptType != null && #RptType.equals('16') && #TransType != null && (#TransType.equals('0') #TransType.equals('7')) && #Party97 != null && #Party97.equals('1') && #Party96 != null && #Party96.equals('1') && #Party98 != null && #Party98.equals('1') && #Stat != null && #Stat.equals('9') && #TakeUpClearer != null && !(#TakeUpClearer.equals(#GiveUpFirm))</pre>	ACCEPT_TAKEUP	FALSE
#RptType != null && #RptType.equals('15') && #TransType != null && (#TransType.equals('0') #TransType.equals('7')) && #Party96 != null && #Party96.equals('2') && #Stat != null && #Stat.equals('10')	TCF_REJECT	FALSE
#RptType != null && #RptType.equals('16') && #TransType != null && (#TransType.equals('0') #TransType.equals('7')) && #Party96 != null && #Party96.equals('2') && #Stat != null && #Stat.equals('10')	TTF_REJECT	FALSE

RULE – This column is expressed with NRL (Natural rule language). The workflow is checked from the top to bottom sequence and if any condition passes, then the NRL check is stopped, and the corresponding action is applied.

ACTION - Once the rule is passed, the corresponding action is applied.

When applying the action to the trade message, the system checks the previous status of the message. If the previous status is not correct, the action is not applied.

NewETDMessage – When the action is applied, the system checks whether this field is true or false.

If true, the system will create new message in ClearConnect.

If false, the system will amend the existing message in ClearConnect.

LookupMessageAttribute - For the entire lifecycle of give-up and take-up transactions, the

uploadObjectExternalRef will be same. When the taken-up trade is amended multiple times due to open/close adjustments or text adjustments, the parent trade uploadObjectExternalRef will be different from the cancel trade. Cancel trade and new trade will have the same uploadObjectExternalRef.



To pick the right message to amend the cancel instruction message, this attribute is used to lookup the cancel fixml message (amend action) where uploadObjectExternalRef is equal to this attribute value.

Message attribute "RptID" is used in place of uploadObjectExternalRef to look up an existing trade.

LookupMessageAttributeValue - The value of the "RptRefID" field in the incoming message is utilized to find the existing transaction with the "RptID" field's value mapping from the LookupMessageAttribute.

3.5 EurexETD and ClearConnect Properties Configuration

From the resource folder remove .sample extension on the property file EUREXETDREQUESTRESPONSEService.properties.sample

😑 EUREX_	ETD_MSG.wf 🖾 🧮 EUREXETDREQUESTRESPONSEService.properties 🛛 🗮 EUREXETDREQUESTRESPONSEService.properties.sample 🛛
9	#ibmSource *
$\frac{10}{11}$	#Change the following property to point to the Queue where the we get
	messages from Trade confirmation NCM (Non Clearing Member) perspective, it
12	ExternalIncomingURI=responseAddress
13	#CAL.ADZETD.UAT.RESPONSE.RCV.FEED
14	
15	#Do not change this property
16	ExternalincomingURIParams=?connectionFactory=#etdamqpConnectionFactory&destina tionResolver=#etdjndiDestinationResolver
18	#comment for IBMqueue
19	#Change the following property to point to the request Queue where the we
	send the request. it represents the JNDI Name defined in eurexetd.properties
20 🔵	ExternalOutgoingURI=requestAddress
21	#CAL.ADZ.EUREXETD.UAT.C/.SEND.FEED
23	#Do not change this property
24	#Donot remove the parameter preserveMessageQos, it is needed to preserve the
	JMSReplyTo Header.
25	ExternalOutgoingURIParams=
26	
28	#the following parameter represents the response queue where the FCM expects
20	the responses from EUREX
30	ReplyToAddress=
31	roby Trouveroop
32 🔵	BusinessFlow=FCM
33	Features=AuditOn,AutoRejectOn
34	# The value should be left empty unless a value is provided by Calupso out of
55	the box. This attribute is mandatory to be present even if its value is empty
36	<pre># If 'logMessages' property is true, then transformation files will be generated.</pre>
37	# By default 'messageFileDir' is an optional field. If messageFileDir is not
	provided then transformation file will be generated in
20	CALYPSO_HOME\ <source_name> folder</source_name>
39	messageFileDir=C:\\EurexETDConnect\\Response

Add the below details:

ExternalIncomingURI=responseAddress

ExternalOutgoingURI=requestAddress

BusinessFlow=FCM

```
logMessages=true
```

messageFileDir=C:\\EurexETDConnect\\Response (client folder location to store the response message files)



Request Message file path:

To store the request message in folder, provide the file path on the below Calypso mapping.

Calypso Mapping Window	- 🗆 ×
Buy SellDirection CLEAR_CONNECT_PROPERTIES CLEAR_CONNECT_PROPERTIES CLEAR_CONNECT_PROPERTIES CLEAR_CONNECT_PROPERTIES ClearingExchangeTicker CopyKeywords CopyKeywo	Name: EurexETD/CLEAR_CONNECT_PROPERTIES ce Value: REQUEST_FILE_PATH so Value: C; \EurexETDConnect\Request :: Default:

REQUEST_FILE_PATH = (client folder location to store the request message files), request message will fail if the location is not configured.

EurexETD.Properties

Remove "_be" and ".C7" on the below queue details.

```
🔚 eurexetd.properties.sample  🛛
       ###AMQP 1.0###
       java.naming.factory.initial=org.apache.qpid.jms.jndi.JmsInitialContextFactory
  3
  5
      connectionfactory.etdgpidConnectionfactory=amgps://90.162.253.101:10170?transport.verifyHost=false&transport.ke
      yStoreLocation=c\:/Work/rell6l libor/etd-eurex/src/main/resources/EUREXETD KEYSTORE.jks&transport.keyStorePassw
      ord=calypso&transport.trustStorePassword=calypso&transport.trustStoreLocation=c\:/Work/rell61_libor/etd-eurex/s
      rc/main/resources/EUREXETD_TRUSTSTORE.jks&transport.keyAlias=calxv_calxvcalypsofix
  6
      #Internal
  8
      queue.calypso.queue.persistor=calypso.queue.persistor
  9
      queue.calypso.queue.translator=calypso.queue.translator
      queue.calypso.queue.outgoing=calypso.queue.outgoing
 11
      gueue.eurexetd.calvpso=gueue.eurexetd.calvpso
 12
      queue.calypso.eurexetd=queue.calypso.eurexetd
 13
 14
 15
      #FixML
 16
      queue.broadcastAddressTradeConfirmation=broadcast.CALXV CALXVCALYPSOFIX.TradeConfirmation
 17
      queue.broadcastAddressTradeConfirmationNCM = broadcast.CALXV_CALXVSOFIX.TradeConfirmationNCM
 18
      queue.broadcastAddressWorkflow = broadcast.CALXV CALXVCALYPSOFIX.Workflow
      queue.broadcastAddressWorkflowNCM = broadcast.CALXV_CALXVCALYPSOFIX.WorkflowNCM
 19
 20
      queue.broadcastAddressPublic = broadcast.CALXV CALXVCALYPSOFIX.Public
 21 topic.requestAddress = request_be.CALXV_CALXVCALYPSOFIX.
 22 🔵 queue.responseAddress = response.CALXV_CALXVCALYPSOFIX
 23
       #topic.requestAddress = request.CALXV CALXVCALYPSOFIX
 24
       #topic.replyAddress = response/response.CALXV CALXVCALYPSOFIX
 25
      #topic.responseAddress = response.CALXV CALXVCALYPSOFIX
```

From topic.requestAddress = request_be.CALXV_CALXVCALYPSOFIX.C7

To topic.requestAddress = request.CALXV_CALXVCALYPSOFIX



3.6 UpdateManagerEngine Configuration

This engine sends outgoing request messages in real-time.

Engine Configuration		
Engine Name: 🕖	Max Queue Size: 😮	Max Batch Size: 0
UpdateManagerEngine	1000	1000
Engine ID:	Number of Threads: 😗 E	event Pool Policy: 🛛
421011	1	FIFO ¥
Engine Class:	F	Pricing Environment: 1
com.calypso.tk.engine.UpdateManagerEngine	l	×
Display Name: 🛛	Save settle position chang	es: 😢
Update Manager Engine		
Application Type:	Configuration attributes	
EngineServer	USE_BOOK_PRICING_ENV	Î
Description:	VALUATION_TIMES	
	VALUATION_TIMEZONES	
Persisted Event Configuration:	VERSION CHECK	
PSEventAccountBilling 🗸 🗸 🗢	VEER CHECK EIRST	
PSEventDataPersistor		
PSEventMessage	XFER_NEVER_BV	
PSEventRepublish	XFER_NEXT_EVENT	
	XFER_PAST_GENERATION	
Event Filters:	XFER_POS_AGGREGATION	NAME
ProductEventFilter	XFER_PRODUCT_FORCEPA	ST
UpdateManagerEngineEventFilter	XFER_USE_AUTOMATIC_AC	COUNT
	XFER_USE_MONEYDIFF	
Engine Manager Configuration: Start on Startup:	XFER_USE_POS_AGGREGA	TION_ONLY
engineserver V	XFER_USE_REVERSE	
€	adapterConfig	
	config	
	tcid	*
Delete Engine		Cancel Save

Add the below details:

Persisted Event configuration = PSEventMessage

Event Filters = UpdateManagerEngineEventFilter

Tick "Start on Startup"





3.7 Request Template Configurations

In the resource folder you will find the below folder.

This folder contains request message templates with extension of .sample.



Open all the files and update SSub="SIM001" (value should be Eurex clearing user id without prefix of member id) and save them all.



ClearConnect Usage

4.1 Defining Markets

Market	
+ Add Market Tile	

Click Add Market Tile to add tiles for the markets you want to monitor.

It opens the following window.

ing date : 25/10/2023	All Give-Up Requested CLEARED Manaul Give-Up Rgd GivenUp TakenUp UnCleared Pending Recon
Market	C Reload Q-Fiter Data
+ Add Market Tile	SELECTION ACTION Mog Status Trade Date RptRefiD RptID OpenClose LastPx Qty Direction Symbol ContractDate Ccy Txt1 Txt2 Txt3 CounterParty Account GiveLipTradingFirm GiveLipTr
Q Filter Tile	
Market List Status	
CME	Add Market Tile ×
	l Open X
	Lookin: Rags
	Exchange Exces
	Local Dak (C:)
	interface Name Europe 17-5NAPSHOT
	Icon
	Figs Cupng
	Memoer ID Cally Pretwork Transport
	Message Type LUREX_ETD_MSG in d bjong i cd.png i
	Documents ng bm.png bc.g.png bd.epng
	ng a bh.png a ch.png a d.png
	Add Status Reset Cancel
	This PC ing a bisping a cliping a doping
	Network per de prog
	Files of type: Image Files Cancel

Tile = EUREX

Exchange = EUREX

InterfaceName = EurexETD

Upload Icon = Flag icons are available at the following location: <calypso home>/docs/calypso-clear-connect/flags.

Member ID = <Enter Member Id>

Message Type = EUREX_ETD_MSG (message workflow name)

Then click Add Status to define market timings.

It opens the following window.



			<u> </u>								
A E	UREX1									>	<
Time	Zone	CET								~	
Holida	ay Calender	ECB							Select	Holiday Calender	
Speci	fic Dates	Add Generic Date							× .	Add Specific Date	
List	t/Dates	Market S	tart Time	Market E	nd Time	GU	I End Time	1	Alert		
			🥖 Add Market Tir	nings %				×			
			Market Start Time	10	нн	00	MM				
			Market End Time	16	нн	00	MM				
			GUI End Time	16	нн	59	MM				
			A <mark>lert</mark>	15	HH	50	MM				
	Note: Time should be in 24 hrs										
						Save	Reset Ca	ancel			
									Save Re:	et Cancel	
-				N	ote : Timings ir	24 hrs					
Inc	dicators	8									
-	Market Curre	ent time is between Market start	and end time.								
•	When curren	nt time is near to Market End time	e which is before alert :	specified time.							
•	Market End time is greater than specified time.										

Time Zone: Select the market time zone.

Holiday Calendar: Select the market Holiday calendar.

Note: Once the market is created, the Time Zone and Holiday Calendar cannot be modified.

Specific Dates:

Click Add Generic Date to set the standard market timings.

Market Start Time: Enter the market start time HH and MM

Market End Time: Enter the market end time HH and MM

GUI End Time: Enter the time HH and MM which will show a popup in ClearConnect GUI indicating that the market is closed.





Alert: Enter the time HH and MM which will show in the ClearConnect GUI status bar that the market is going to close

Click Add Specific Date to define additional market timings as needed.

EUREX1									×
Time Zone	CET								~
Holiday Calender	ECB	ECB							
Specific Dates	Add Generic Date	Add Generic Date October 25, 2023 Add Specific Date							
List/Dates		Market Start Time		Market End Ti	me	GUI End Time		Alert	
			Add Marke	t Timings				×	
			Market Start Tim	ne 09	НН	00	MM		
			Market End Time	16	HH	00	MM		
			GUI End Time	15	HH	55	MM		
			Alert	15	НН	50	MM		
					Note: Time should	l be in 24 hrs			
						Save	Reset Can	cel	

Once the date and times are created, they will appear as sown below:

% = Generic date

DD/MM/yyyy = Specific day.

-					
List/Dates	Market Start Time	Market End Time	GUI End Time	Alert	
%	09:15	16:00	15:55	15:50	
25/08/2023	09:30	16:00	15:55	15:50	



You can choose **Configuration > View/Update Market Tile** to modify existing market tiles.

4.2 Creating Clearing Info Library

Click **Clearing Info Library** on the right-hand side to create templates for sending request messages.

It opens the following window.

🛃 Add Clearing info Library					
Template Name	LBBW_AUTO_TAKEUP_LB0009				
Tile Name	EUREX				
Action	MANUAL_TAKEUP				
AutoClear Criteria	🔿 Yes 💿 No				
Attribute		Values			
TakeUpTradingFirm					
Account					
Txt1					
Txt2					
Txt3					
OpenClose					

Enter the template name, select the market and action.

Available actions are defined in Calypso mapping EurexETD/TradeClearingAction and must be defined in the EUREX_ETD_MSG message workflow.

Calypso Mapping Window		- 🗆 X
	Name:	EurexETD/TradeClearingAction
	Interface Value:	AUTOTAKEUP
AND AND A CANCEL_GIVEUP	Calypso Value:	TakeUpTradingFirm,Account,Txt1,Txt2,Txt3,OpenClose
MANUAL_TAKEUP	Reverse Default:	

The Interface Value contains the action.

The Calypso Value contains a number of attributes that you can set.

If you select AutoClear Criteria = No, you can set values for the attributes as needed.



If you select AutoClear Criteria = Yes, you can set values for the attributes as needed and define criteria for performing auto clear.

Criteria will show along with filter values.

Note: Autoclear only applies to actions defined in the following Calypso mapping:

				—		
	Name:	EurexETD/CL	EAR_CONNECT_PROP	PERTIES		
Interfac	e Value:	AUTOCLEAR	_ACTIONS			
Calype	so Value:	AUTOTAKEU	P,AUTO_GIVEUP			
Reverse	Default:					
🛃 Add Clearing	info Library				×	<
Template Name	LBBW_AUTO_T	AKEUP_LB0009				
Tile Name	EUREX				~	Q- Search Clearing Info Library
Action	AUTOTAKEUP				~	AUTO_GIVEUP
AutoClear Criteria	🖲 Yes 🔵 No					AUTO_TAKEUP_GS AUTO_TAKEUP_JPM
Attribute		Values	Criteria	Filter Value(s)		AUTOTAKEUP CANCEL_GIVEUP
Account		P1	~			CLIENT ADJUSTMENT
Txt1		LB0009		LB01		CPTY ADJUSTMENT
Txt2		CL0009		Ť		MANUAL GIVEUP
Txt3			EQUALS_TO			
OpenClose		0	NOT_EQUALS_TO			MANUAL_TAKEUP
			IN			Open/Close
			BEGINS WITH			REJECT TAKEUP

If filter value is blank, that attribute will not be considered for autoclear. Otherwise, you can select criteria and filter values

- EQUALS_TO = If the fixml file value and filter values are the same, that attribute will be considered for autoclear
- NOT_EQUALS_TO = If the fixml file value and filter values are not equal then that attribute will be considered for autoclear
- IN = If the fixml file value is in the list of filter values, that attribute will be considered for autoclear
- BEGINS_WITH = Do autoclear if the text begins with filter value
- END_WITH = Do autoclear if the text ends with filter value

Upon saving, the templates are added to the Clearing Info Library.

You can select a message from one of the report tabs and double-click a template to aply the corresponding action.



4.3 Adding Report Tabs

Choose **Configuration > Add Tabs** to add tabs for monitoring messages.

It opens the following window.

Clearing date : (07/11/2023		All CLE	EARED TakenUp	Give-Up Requested	Manaul Give-Up Rqd	GivenUp	UnCleared	Recon	Pending		
			🗘 Relo	ad Q,→ Filter Dat	а							
	- Add Harket Hie		ETD Tab	Filter Window	17231101/Calypso_17238	1/calypso_user]					_	
Q - Filter	Tile		Name	Manaul Give-Up	Rqd						/	Add New Tab
Icon	Market List	Status	Market Tile	EUREX							< Č) R	eload All Market
	CME											
	LME		Criter	ria								
	NOMX	ŏ	Co	llapse All Market	Attribute	Criteria			Filter Valu	ie(s)		
			Marke	>t	Message Status	▼ IN		Add	GIVEUP_IN	NITIATION_REQUIRED		
				ME UREX Give-Up Reques All CLEARED	ted							
				Manaul Give-Up GivenUp TakenUp UnCleared	Rgd							
				 Pending Recon ME OMX 								

Enter a tab name and select a market.

Then click Criteria to define the criteria to select the messages you want to display.

When you double-click a message in a tab, you can see the audit/track details of each stage of message flow.

🔀 Message Flow Viewer 199674			
Date	From	То	UserName
03/11/23 13:34:22.136 o'clock GMT	TAKEUP_ACCEPTED	TAKENUP	calypso_user
03/11/23 13:34:21.977 o'clock GMT	TTF_TAKEUP_APPROVED	TAKEUP_ACCEPTED	calypso_user
03/11/23 13:34:21.347 o'clock GMT	TAKEUP_REQUESTED	TTF_TAKEUP_APPROVED	calypso_user
03/11/23 13:34:19.899 o'clock GMT	TAKEUP_RECEIVED	TAKEUP_REQUESTED	calypso_user
03/11/23 13:33:39.839 o'clock GMT	PENDING	TAKEUP_RECEIVED	calypso_user

4.3.1 Configuring Tab Columns

Choose **Configuration > Configure Columns** to select the columns you want to display in the tabs.

You can select message attributes as well as message fields for display.

A number of message attributes are configured by default but you can add more message attributes as needed.

The message attributes from the MsgAttributes domain need to be mapped using the following mappings:



Х

🔀 Calypso Mapping Window		-	-	×
TrdCaptRpt/Pty[R=12]@ID	Name:	EurexETD/FieldMapping		
	Interface Value:	TrdCaptRpt/Pty[R=38]@ID		
	Calypso Value:	Account		

EurexETD/FieldMapping

Interface Value -= <FIXML info>

Calypso Value = <message attribute>

🛃 Calypso Mapping Window			-	×
	Name: Interface Value: C <mark>alypso Value:</mark> Reverse Default:	EurexETD/MessageAttributes Account		

EurexETD/MessageAttributes

Interface Value -= <ClearConnect info>

Calypso Value = <message attribute>

🛃 Column Names & Format Dialog

4.3.2 Configuring Tab Column Names

Choose **Configuration > Configure Column Names** to set column display names.

	-			
Name	Set Display Name	Format	Format Value	Column Color
SELECTION	▶ SELECTION			
MESSAGE_ID	MESSAGE_ID			
Trade Id	▶ Trade Id			
DOCUMENT_EDITED	DOCUMENT_EDITED			
TRADE_UPDATE_DATETIME	TRADE_UPDATE_DATETIME			
EVENT_TYPE	Incoming Event Type			
Family	▶ Family			
Product Type	Product Type			

You can set the display name and format of each column as needed.

4.3.3 Saving Report Tab Configurations

You can save the report tabs, configured columns and column names per market by choosing **File > Save as Template**. You can also set a default template.

Once a template is created, you can choose **File > Load Template** to load a template. You can also load the default template.



4.4 Setting the Clearing Date

Z ClearConnect - Calypso_172381 | calypso_user



The clearing date can be configured through the following mapping:

🛃 Calypso Mapping Window				-	
	1	Name: Interface Value: Calypso Value:	EurexETD/CLEAR_CONNECT_PROPERTIES RESTATE_COLUMN_NAME Msg_Attr.BizDt		

For Eurex the BizDt is considered a Clearing Date to add it in filter date in Restate UI

You can also choose Configuration > Restate UI to modify the clearing date.

📕 Restate	e UI	×
Tile Name	EUREX	~
Date	11/07/2023	~
		Save Reset

Select a market and odify the date as needed then click Save.

Then click **Reload** in the report tabs to view the corresponding data.

4.5 Receiving and Sending Messages

You need to start the necessary feeds in order to receive and send messages:

outgoingFeed.bat

eurexetdRequestResponseIncomingFeed.bat

4.6 Status Bar

The Status bar will show which template is loaded, volumes, Market alert and close status.



Coaded Exchange EUREX

Buy Avg Price 0.0 | Sell Avg Price 0.0

1/22 row Selected

EUREX : Open