

# DTCC MarkitServ DSMatch Integration Guide

June 2015 – Fifth Edition

This document guides you through the setup, generation and reconciliation of DTCC payments and DTCC confirmations.

Online help is provided from the individual windows referred to in this document.

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### **Section 1. Overview**

The DTCC MarkitServ DSMatch integration with Calypso is three-fold:

- Payment Reconciliation and DTCC Central settlement: Generation of payments and reconciliation with imported payments – as defined in DTCC V4.1 specifications, using CSV files format.
- Confirmation matching:
  - Generation of confirmations and reconciliation with imported confirmations as defined in DTCC V11.0 specifications for Credit Derivatives, DTCC V6.0 for Equity Linked Swaps -Equity Perfomance only (service will be deprecated in August 2015 as announced by MarkitServ), using FPML files and MQSeries middleware V7.5
  - o Possibility to use GTR link for Regulatory Reporting
- Novation Consent: Generation of confirmations and reconciliation with imported confirmations as defined in DTCC V4.0 specifications for Credit Derivatives

#### **Payment Reconciliation Process**

The DTCC payment reconciliation process works in the following manner: you send a file to DTCC containing payments to be made using the scheduled task DTCC\_PAYMENT\_EXPORT, then you import a file from DTCC that contains the status of the payments, using the scheduled task DTCC\_PROCESS\_PAYMENTS. The Calypso payments are updated accordingly, and you can then net matched payments.

#### **Confirmation Reconciliation Process**

The DSMatch confirmation reconciliation process works in the following manner: you generate DTCC confirmations using the message engine, then you send the confirmations to DTCC using the Sender engine. The DTCC gateway used to send the confirmation is real-time, it uses dedicated lines and the message transfer protocol is MQSeries.

Finally you import confirmations from DTCC in real-time using the Import Message engine (and the MQSeries protocol as for the export). The incoming confirmations are reconciled with the Calypso outgoing confirmations, and based on the status sent by DTCC will be confirmed or not.

Calypso currently supports DTCC confirmations for the products: Credit Default Swap, CDS Index, CDS ABS Index, CDS Index Tranche, CreditDefaultSwaption and CDIndexOption and Equity Linked Swap (Equity Performance only) and for the activities: Trade, Full Termination, Partial Termination, Increase, Assignment, Amendment, and Exit from DTCC.

#### Note that Confirmation reconciliation for ELS will be deactivated in DTCC in August 31<sup>s</sup>, 2015.

Credit Confirmation Reconciliation incorporates support for establishing connectivity to the Reporting Repository (DTCC Global Trade Repository) and Triparty ticket model. If clients have subscribed to this service, they will be able to send their regulatory obligation under DFA.

#### **Novation Consent Process**

The DTCC novation consent process is based on the same technical architecture as DTCC confirmations.

# Section 2. Installation

The DTCC libraries are not part of the core Calypso product. You need to download the DTCC integration module from the download website, calypso-dtcc-2.2.0-c...-rel.zip, that includes files for DTCC Dsmatch:

Calypso Version	jars version 1.5.0.2
V11.1.02	calypso-dtcc-derivserv-protocol-2.X.X-c11102 calypso-dtcc-derivserv-core-2.X.X-c11102
V11.1.04.SP4	calypso-dtcc-derivserv-protocol-2.X.X-c11104sp4 calypso-dtcc-derivserv-core-2.X.X-c11104sp4
V12	calypso-dtcc-derivserv-protocol-2.X.X-c12 calypso-dtcc-derivserv-core-2.X.X-c12
V13	calypso-dtcc-derivserv-protocol-2.X.X-c13 calypso-dtcc-derivserv-core-2.2.X-c13
V14	calypso-dtcc-derivserv-protocol-2.X.X-c14 calypso-dtcc-derivserv-core-2.X.X-c14

1- Connectivity to DTCC (MQ series setup, account opening at DTCC for eligible asset classes) should have been performed.

2- Install DTCC Common jar: calypso-dtcc-common-2.X.X-c...jar

DTCC module uses DTCC Common jar as basement: refer to documentation "DTCC Common Guide"

You have to download DTCC Common from the website

calypso-dtcc-common-2.X.X-c....jar (included in DTCC integration module)

- You have to run DTCCCommonSchemaData.xml to create domain values (select GTR Common and GT Domains categories)
- You have to execute ReportingAttributes.xml that describes the reporting attributes used for reporting depending on your needs

The "rel" jars contains the main following folders:

- resources: DTCCXferWorflow.wf, DTCCNovationsTradeWorkflow.wf, DTCCNovationsMsgWorkflows.wf, DTCCMsgWorkflows.wf
- jars
- bin : DTCCSchemaData.xml

The following engines to be run:

- Message engine, for outgoing message generation
- Sender engine, to send message to MQ
- Import message engines, to import message from MQ

### 2.1 DTCC Data

Unzip the file, add the required jars to your CLASSPATH. Apply the XML script DTCCSchemaData.xml to initialize DTCC static data.

Note that, depending on whether you want to install, you will have to synchronize the corresponding data category:

	DTCC payments	DTCC Confirm	DTCC Novation Consent	Triparty	DTCC Matching
DTCC central settlement	Х				
DTCC Confirm		Х			
DTCC novations			х		
DTCC payments	Х				
DTCC required	Х	Х	х		Х
DTCC Triparty		Х			

	Execute SQL (1.55) on jo	dbc:oracle:thin:@localhost:1521:CAL	YPSO using oracle.jdbc.Oracle	Driver						
URI	jdbc:oracle:thin:@localhos	t: 1521:CALYPSO User BIAB	3	Version Major: 14	Minor: 3 Sub: 0 Patch: 1					
ſ	Data Model Definition (Sourc	es)								
		l-BACKOFFICE \client \bin \dbscripts \Sche L-BACKOFFICE \client \bin \dbscripts \DTC								
	C:\calypso\calypso-14.3.0.1-BACKOFFICE\client\bin\dbscripts\DTCCGTRSchemaData.xml C:\calypso\calypso-14.3.0.1-BACKOFFICE\client\bin\dbscripts\DTCCSchemaData.xml C:\calypso\calypso-14.3.0.1-BACKOFFICE\client\bin\dbscripts\DTCCSchemaBase.xml  Data included in synchronization All DTCC Common DTCC GTR Domain (demo) DTCC GTR Domain (required): DTCC GTR Message (demo) OTCC TriParty OTCC central settlement OTCC confirm OTCC novations OTCC payments									
	All	DTCC Common	DTCC GTR Domain (demo)	DTCC GTR Domain (required	) DTCC GTR Message (demo)					
	DTCC TriParty	☑ DTCC central settlement	DTCC confirm	DTCC novations	DTCC payments					
	DTCC required	✓ Required	🔲 domain	hedgeAccounting	startup					
	•				•					
	(	Synchronize Columns and Data	G Load Stored Procedure	SQL 🛛 🦂 Load Drop Table S	SQL					
S	QL Preview									
L										
E	xecuted SQL Output			- C						
ſ										
1										

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Static data created by the above XML script: **Domain addressMethod** – value DTCC

#### Domain masterConfirmAdditionalField - values

- isDTCC
- Holidays

- Calculation Agent
- Calculation Agent City

Domain calcAgentCityCode - values: all valid cities and corresponding codes

**Domain masterConfirmationType** – values: all valid FPML/DTCC master confirmation types, including the new 2014 Credit ISDA Definitions

**Domain masterConfirmationTypeMatrix** – values: only valid FPML/DTCC master confirmation types which correspond to physical settlement matrix or standard terms. , including the new 2014 Credit ISDA Definitions. This is a subset of the masterConfirmationType domain.

**Domain masterConfirmationTypeAPS** – values: only valid FPML/DTCC master confirmation types which correspond to Master confirmation types to be considered as Asia/Pacific and Sovereign, including the new 2014 Credit ISDA Definitions. This is a subset of the masterConfirmationType domain.

#### Domain masterConfirmationRelevantDates - value:

- DTCC\_BackloadEffectiveDate
- TerminationTradeDate
- ➡ TransferTradeDate

For Master confirmation selection: the relevant date used to compare a trade to the "from" and "to" dates of a MC, will be Max(trade date, "MasterConfirmationRelevantDates")

In order not to have discrepancies in the novation DTCC templates, where the old transaction part of the message needs to match the original confirmation, we will stop using the current templates, and use only short form templates.

#### Domain MsgAttributes - values:

- Error Code/s
- Incoming Msg Status
- Contra TradeId-PartyReference
- Contra Trade Ref. Supplement Id
- Your Trade Id
- Your Trade Ref. Supplement Id
- PO Super Id
- New PO Super Id
- Incoming Msg Activity
- Incoming Msg Transaction Type

- DK Reason
- Consent Type
- Consent Type Comment
- Contra Super Id
- New Contra Super Id
- PO Desk Id
- Contra Desk Id
- New PO Desk Id
- New Contra Desk Id

#### Domain workflowRuleTrade - values:

- CheckMasterConfirmation
- CheckDTCCNovation

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- CheckNotDTCCNovation
- DTCCCleanupGTRUSI

#### Domain workflowRuleMessage - values:

For Confirm:

- IncomingReply
- CancelAlleged
- CleanupAlleged

For DTCC Novation:

- DTCCNovationReply
- IncomingNovationRequest
- CleanupOutgoingNovationRequest

- DKAlleged
- IndexAlleged
- UnIndexDTCC
- CleanupIncomingNovationRequest
- DTCCApplyNovation
- SetAttributes

For DTCC Central Settlement:

- DTCCSplitGross
- DTCCUpdateTransfer

### 2.2 Environment Properties and domains

### 2.2.1 Calypso trade id management

The environment properties AUTO\_FEED\_INTERNAL\_REF must be set to true.

In the DTCC module, Calypso internal reference is used as the DTCC TradeReferenceNumber and as a result it has to be filled for all trades to be sent to DTCC.

Using internal\_reference instead of Calypso trade\_id has various advantages. Among them are:

- When implementing Calypso, if you have a collection of trades already confirmed in DTCC in your old trading system, you can set Calypso internal reference to be the trade reference used to confirm these trades in DTCC originally. As a result the switch from the old system to DTCC will be transparent from a DTCC and counterparty point of view.
- Various trade lifecycle events in Calypso such as partial termination, notional increase or novation, terminate the existing trade and create a new one. But because this is still the same deal, you need to keep the same TradeReferenceNumber in DTCC. When performing these actions, the Calypso internal reference is propagated from the old trade to the new one when AUTO\_FEED\_INTERNAL\_REF is true.

## 2.2.2 Counterparty trade id management

When an incoming message received from DTCC contains counterparty trade id information, it is stored on the trade itself for future use. Therefore Calypso users are able to query trades knowing only the counterparty trade id or can do trade reporting including this information.

By default, the counterparty trade id (DTCC's "Contra Trade Id") is store in trade external\_reference. If your setup doesn't allow to use this field for this purpose (typically this would be the case when this field is

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already used to store FO system trade id when Calypso is a BO only system) then you can ask Calypso to store this information in a trade keyword instead of external\_reference.

Domain DTCCKeywordCptyTradeId has been added. If this domain contains a keyword, the counterparty trade id is stored on that keyword. Otherwise, it is stored on the external trade reference. In the example below, it is stored in the "DTCCContraTradeId" keyword.

🔀 Domain Values		
🚸 Reload 📓 Save 🦏 Save All 🛛 🕷 Constraints Setu	ıp	Ø
Q - DTCCKeywordCptyTradeId       Image: Constraint of the system       Water and the system         DTCC-GTR-TradeRetractableStatus       DTCC-GTR-TradeRetractableStatus       Image: Constraint of the system         DTCC-GTR-TradeRetractableStatus       DTCC-GTR-TradeRetractableStatus       Image: Constraint of the system         DTCC-GTR-TradeRetractableStatus       Image: Constraint of the system       Image: Constraint of the system         DTCC-MTM-ReportingData       Image: Constraint of the system       Image: Constraint of the system         DTCC.Templates       Image: Constraint of the system       Image: Constraint of the system         DTCCGTR-Collateral_Version       Image: Constraint of the system       Image: Constraint of the system         Image: DTCCContraint of the system       Image: Constraint of the system       Image: Constraint of the system         Image: DTCCIninkRefEntityName       Image: DTCCNCTradeAction.Accept       Image: Constraint of the system         Image: DTCCNCTradeAction.Complete       Image: Constraint of the system       Image: Constraint of the system		Name:       DTCCKeywordCptyTradeId         Value:       DTCCContraTradeId         Comment:

# Section 3. DTCC Payment Matching

The Payment reconciliation process uses a dedicated transfer workflow in order to match transfers with the counterparty. At the end of the process, transfers are either matched or unmatched, matched ones are netted, and both netted and remaining unmatched are finally settled in the "normal" (non-DTCC) workflow.

### 3.1 Additional Settings

Run DTCCSchemaData.xml. See section 2.1 DTCC Data

In order to create the DTCC transfer workflow, choose Navigator > Configuration > Workflow > Workflow Configuration. Then import the workflow contained in the DTCCXferWorkflow.wf file.

# 3.1.1 Domain Values

The following domain values are created by executing the DTCCSchemaData.xml

Choose Navigator > Configuration > System > Domain Values if you want to modify these domain values.

Domain XferProfileType - value: DTCC.

Domain XferWorkflowType - value: DTCC.

Domain XferAttributes - values:

- DTCCParticipantId
- DTCCUserId
- IndexStartDate
- MatchingSystem
- RefEntity
- RefTradeId

- ScheduledMatDate
- SettleDate
- TradeCcy
- TradeDate
- TradeNotional
- DTCCCashflowId

- DTCCNetPaymentId
- DTCCPmtMsgStatus
- Incoming Msg Status
- Incoming Msg Product Type

- MsgAttributes values:
  - DTCCCashflowId
    - DTCCNetPaymentId
    - PAYRECEIVE\_TYPE
    - Payment Amount
    - Payment Currency
    - RecordQualifier
    - RecordType
    - SettleDate

**Domain DTCCProcessPaymentsTransferStatus** - The values here define the list of transfer status loaded during the scheduled task DTCC\_PROCESS\_PAYMENT. For example, MATCHED, UNMATCHED, WAITINGMATCH, WAITINGCANCEL.

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**Domains DTCCTransferAction.**<action name> - This set of domains allows to map DTCC matching statuses with the corresponding action in Calypso (MATCH/UNMATCH). For example:

- ➡ DTCCTransferAction.Linked/MisMatched value: UNMATCH
- DTCCTransferAction.Linked/NoCpty/Input value: UNMATCH
- ➡ DTCCTransferAction.MatchedPayments value: MATCH

#### **Domain scheduledTask** - values:

- ➡ DTCC\_PAYMENT\_EXPORT
- ➡ DTCC\_PROCESS\_PAYMENTS
- ➡ EOD\_TRANSFER\_NETTING

#### Domain exceptionType - values:

- ➡ EX\_DTCC\_PAYMENT\_EXPORT
- ➡ EX\_DTCC\_PROCESS\_PAYMENTS

#### Domain workflowRuleTransfer - value ResetWorkflowType

#### Domain workflowRuleMessage - values:

- DTCCSplitGrossMessageRule: this rule splits a DTCC Gross Settlement message into separate messages.
- DTCCUpdateTransferDescriptionMessageRule: This rule updates a message's transfer

These are used for Central Settlement.

#### messageType - values:

- IncomingTIWSettlement
- IncomingTIWPayment

These are used for Central Settlement.

### 3.1.2 Processing Org and Counterparty Attributes

Choose Navigator > Configuration > Legal Data > Legal Entities and load a legal entity (processing org or counterparty). Then click Attributes to specify the attributes.

The **DTCC\_LE\_ID** has been created by the SQL scripts. It should be set to the DTCC member id for the processing organization, AND for the trade counterparty.

The DTCC\_PAYREC\_PARTICIPANT attribute should be added. For each Legal Entity, this attributes will be used to define if it uses DTCC form payments matching. Therefore you should set this attribute to "Y" for every Processing Organization and Counterparty for which transfers will be sent to DTCC.

Sample Processing Org Attributes

	∠ Legal Entity Attributes Window - Version - 0								
	Lega	l Entity				Role	ALL	•	
	Processi	ng Org	ALL		-				
Attribute Type DTCC_LE_ID		E_ID	<b>•</b>	Value	00008692				
,									
	ld	Proces	ssing Org	Legal Entity	Role		Attribute Type	Attribute Value	
	8503	ALL		BNP PARIBAS	ALL	DTCC_L	E_ID	00008692	
	8504	ALL		BNP PARIBAS	ALL	DTCC_P	AYREC_PARTICIPANT	Y	

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## 3.1.3 Date Rules

The following date rule should be created. It will filter all payments with settlement date as of the 20<sup>th</sup> of each quarter. It will be used in the static data filter definitions.

Choose Navigator > Configuration > Definitions > Date Schedule Definitions > Date Rule to define a date rule.

🔀 Date Rul	les							
Name	DTCC_Pa	ayments		]	Туре	DAY_FIXED	•	
Day	20	Add	Days 0		WeekDay	NONE	Ŧ	
Month	JAN		-		Rank	NONE	Ŧ	
Sel	ect All		UnSelect All		Date Roll	MOD_FOLL	ow 🗸	]
📄 Jan	E Feb	📝 Mar 📝 Jun	Add Relative Month Relative Type:	s 0	Bus	⊚ Cal [	Bus Days	-
📃 Jul	📄 Aug	📝 Sep	Relative		Holiday	s NYC,EUR		,
📃 Oct	Nov 📃	📝 Dec	Relative	•		📝 Check	Holiday	
F Descrij From Date			Ge	nerate				
To Date				x Previous				
	ame 🔬			Гуре	<u> </u>	ank Month		A
100 DT	CC_Paym	ients	D	AY_FIXED		0 JAN	NONE	

### 3.1.4 Static Data Filters

Before being netted and settled, transfers sent to DTCC will follow a dedicated Workflow, apart from the standard one. This particular workflow will be chosen by the Transfer Engine based on the static data filter defined below

Choose Navigator > Configuration > Filters > Static Data Filter to define static data filters.

### **DTCC Profile**

[NOTE: This static data filter does not need to be attached to anything. It must just exist. It must be named DTCC\_profile. The name is case sensitive]

This static data filter will be used to identify transfers that have the XferProfileType = DTCC.

### Sample DTCC\_profile

🔀 Static Data Filter Window [144003/BO_INTERFACI	ES/calypso_bo]		- • •
Name: DTCC_profile		Attributes	Simulate
Comment:		Pending Modifs	
Groups: ANY			
Attribute	Criteria	Filter Value(	s)
CPTY_ATTRIBUTE.DTCC_PAYREC_PARTICIPANT	IT IN	Add Y	
KEYWORD.ExcludeFromDTCCPayment	▼ NOT_LIKE	► Y	
PO_ATTRIBUTE.DTCC_PAYREC_PARTICIPANT	T IN	Add Y	
Xfer Settle Date	TENOR_RANGE	Range From 0D to N	JONE
Xfer Settle Date	▼ DATE_RULE	DTCC_Pay	ments
	Save as		Usage Close

### **DTCC Transfer Workflow**

[NOTE: This static data filter does not need to be attached to anything. It must just exist. It must be named DTCC\_workflow. The name is case sensitive]

This static data filter will upload all transfers related to DTCC so that they will follow the DTCC transfer workflow (XferWorkflowType = DTCC).

🛃 Static Data Filter Wind	ow [144003/BO_INTERFAC	CES/calypso_bo]		
Name: DTCC_workflow	W		Attributes	Simulate
Comment:				Pending Modifs
Groups: ANY				
Attribute	Criteria		Filter Value(s)	
IN Static Data Filter	⊤ IN	Add	DTCC_profile	

You may customize these filters to adjust to the exact list of payments you want to send to DTCC

### 3.1.5 Transfer Workflow

You need to setup a workflow for the subtype DTCC, and modify the standard workflow.

You can import the default Workflow DTCCXferWorkflow.wf provided by Calypso.

Choose Navigator > Configuration > Workflow > Workflow Config, or Workflow Graph Config to define workflows.

#### **DTCC Workflow**

This workflow will be used by transfers, provided the static data filter DTCC\_workflow is specified in the system.

Orig Status	Action	Resulting Status	Use STP	Subtype	Rules	Kick Off/ Cut Off	Filter
MATCHED	ASSIGN	CANCELED	false	DTCC		false	
MATCHED	CANCEL	TOBECANCELED	false	DTCC		false	
MATCHED	DTCC_UPDATE	TOBESENT	false	DTCC		false	
MATCHED	NEW	PENDING	false	DTCC		false	
MATCHED	UPMATCH	UNMATCHED	false	DTCC		false	
MATCHED	UPDATE	MATCHED	false	DTCC		false	
NONE	NEW	PENDING	true	DTCC		false	
PENDING	CANCEL	CANCELED	false	DTCC		false	
PENDING	DTCC_UPDATE	PENDING	false	DTCC		false	
PENDING	EXECUTE	TOBESENT	true	DTCC	CheckKickOff	true	
PENDING	МАТСН	DTCCMATCHED	false	DTCC		false	
PENDING	UPDATE	PENDING	false	DTCC		false	
TOBECANCELED	CANCEL	TOBECANCELED	false	DTCC		false	
TOBECANCELED	DTCCCANCEL	CANCELED	false	DTCC		false	
TOBECANCELED	EXECUTE	WAITINGCANCEL	false	DTCC		false	
TOBECANCELED	UPDATE	TOBECANCELED	false	DTCC		false	
TOBESENT	CANCEL	CANCELED	false	DTCC		false	
TOBESENT	DTCC_UPDATE	TOBESENT	false	DTCC		false	
TOBESENT	EXECUTE	WAITINGMATCH	false	DTCC		false	
TOBESENT	UPDATE	TOBESENT	false	DTCC		false	
UNMATCHED	ASSIGN	CANCELED	false	DTCC		false	
UNMATCHED	CANCEL	TOBECANCELED	false	DTCC		false	
UNMATCHED	DTCC_UPDATE	TOBESENT	false	DTCC		false	
UNMATCHED	EXECUTE	VERIFIED	false	DTCC	ResetWorkflowType	false	
UNMATCHED	МАТСН	MATCHED	false	DTCC		false	
UNMATCHED	UPDATE	UNMATCHED	false	DTCC		false	

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Orig Status	Action	Resulting Status	Use STP	Subtype	Rules	Kick Off/ Cut Off	Filter
WAITINGCANCEL	CANCEL	WAITINGCANCEL	false	DTCC		false	
WAITINGCANCEL	DTCC_UPDATE	TOBECANCELED	false	DTCC		false	
WAITINGCANCEL	МАТСН	CANCELED	false	DTCC		false	
WAITINGCANCEL	UPDATE	WAITINGCANCEL	false	DTCC		false	
WAITINGMATCH	ASSIGN	CANCELED	false	DTCC		false	
WAITINGMATCH	CANCEL	TOBECANCELED	false	DTCC		false	
WAITINGMATCH	DTCC_UPDATE	TOBESENT	false	DTCC		false	
WAITINGMATCH	МАТСН	MATCHED	false	DTCC		false	
WAITINGMATCH	UNMATCH	UNMATCHED	false	DTCC		false	
WAITINGMATCH	UPDATE	WAITINGMATCH	false	DTCC		false	

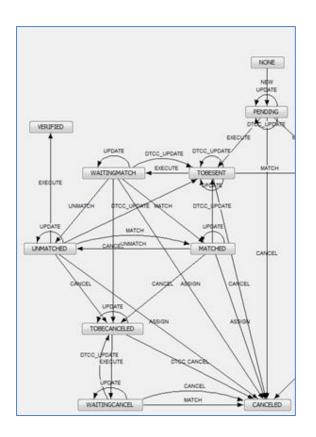
The STP transition PENDING – EXECUTE – TOBESENT is applied with a kick-off, see Kick-Off Configuration.

The **DTCC\_UPDATE** action is hard-coded. It impacts the transfer matching. DTCC does not accept cancel/correct in case of changes in the settlement amount or in the currency. However, the standard logic of the Transfer engine is to cancel and create a new transfer in case of such changes. Therefore the Transfer engine logic has been modified in that case. This is why we have added the notion of transfer Profile.

See §3.2 for more details about how the transfer engine knows, in case of DTCC transfers, when a modification should lead to an update of existing transfers, or a cancellation+creation of a new transfer.

The **ResetWorkflowType** rule set in the UNMATCHED – EXECUTE – VERIFIED transition allows to settle transfers that, at the end of the DTCC payment matching process, are still unmatched.

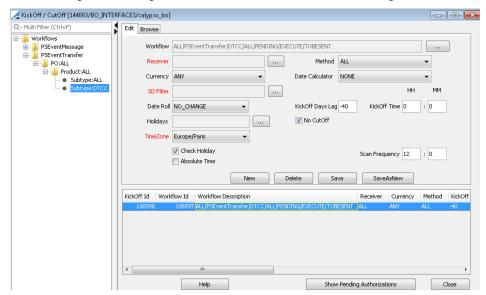
This rule resets the workflow type of the transfer to "NONE" so that the transfer will follow the "standard" workflow for transfers. Note: this rule can only be set on an action where the resulting status exists in the standard workflow, otherwise transition will fail.



## 3.1.6 Kick-Off Configuration

This kick-off configuration indicates how many days, before the next settlement date payment, the system can start sending payment declarations to DTCC.

Choose Navigator > Configuration > Workflow > Kick-off Cut-off Config to define a kick-off configuration.



Usually, you will set the day lag to a little more than one month in order to start sending messages to DTCC a reasonable number of days before the settlement date, but less than a quarter in order to send only messages related to the next payment date and not the following ones.

For example, on the 1<sup>st</sup> of August, you would expect the 20/09 transfer being "TOBESENT" while the followings remaining "PENDING":

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back Office window for	r Trade 913840 / Internal Re	1. 915040							
BO Trade Browser 👻	🔀 🏹 🍇 BO Tra	de Browser (913840) 🗙							
e Id ID 🛛 🔻 91384	40 📧 🖳 🌊	🧳 鶅 🙀 🗸 SDI Trans	fers Messages Postin	gs CREs Tasks [	Diary				
ansfers								Ð	<b>Ļ</b>
eport Data View	Export Window 🛛 📴	🖳 🎒							
xrerAttributes.xrerProf	ileType Transfer Status	Transfer_id Transfer Type	Xrer Product Type	XFer Pay/Rec	Transfer Amount	SettleCurrency	Settle Date	Value Date	1
DTCC	TOBESENT	148107 INTEREST	CreditDefaultSwap	RECEIVE	29,674.31	USD	06/22/2015	06/22/2015	
DTCC	PENDING	148108 INTEREST	CreditDefaultSwap	RECEIVE	28,424.86	USD	09/21/2015	09/21/2015	
DTCC	PENDING	148109 INTEREST	CreditDefaultSwap	RECEIVE	28,424.86	USD	12/21/2015	12/21/2015	Ξ
DTCC	PENDING	148110 INTEREST	CreditDefaultSwap	RECEIVE	28,424.86	USD	03/21/2016	03/21/2016	
DTCC	PENDING	148111 INTEREST	CreditDefaultSwap	RECEIVE	28,424.86	USD	06/20/2016	06/20/2016	-
DTCC	PENDING	148112 INTEREST	CreditDefaultSwap	RECEIVE	28,737.22	USD	09/20/2016	09/20/2016	-
DTCC	PENDING	148113 INTEREST	CreditDefaultSwap	RECEIVE	28,424.86	USD	12/20/2016	12/20/2016	
DTCC	PENDING	148114 INTEREST	CreditDefaultSwap	RECEIVE	28,112.50	USD	03/20/2017	03/20/2017	-
•	III								•
ttlements								Ð	Ŧ
eport Data View	Export Window 🛛 📑	u 🛃							
	r Type Xfer Product Type	Transfer Amount Xfer Oth	er Amount SettleCu	Irrency Xfer Pa	y/Rec Value Date	Netting Type	Transfer Sta	itus Deliver	
Transfer id Transfer	Type mentioddee type	Hansion Hilloand Arci Od	ior Amodric Doccide	anoney aronne			TOBESENT	DFP	<i>'</i>
Transfer_id Transfer	Credit Defeult Swee	20,674,21	0.00 USD	DECETU	E 06/22/201E			UFP	
148107 INTERES		29,674.31	0.00 USD	RECEIV				DEP	-
148107 INTERES 148108 INTERES	T CreditDefaultSwap	28,424.86	0.00 USD	RECEIV	E 09/21/2015	None	PENDING	DEP	Î
148107 INTERES 148108 INTERES 148109 INTERES	T CreditDefaultSwap T CreditDefaultSwap	28,424,86 28,424,86	0.00 USD 0.00 USD	RECEIV RECEIV	E 09/21/2015 E 12/21/2015	None None	PENDING PENDING	DFP	
148107 INTERES 148108 INTERES 148109 INTERES 148109 INTERES 148110 INTERES	T CreditDefaultSwap T CreditDefaultSwap T CreditDefaultSwap	28,424,86 28,424,86 28,424,86	0.00 USD 0.00 USD 0.00 USD	RECEIV RECEIV RECEIV	E 09/21/2015 E 12/21/2015 E 03/21/2016	None None None	PENDING PENDING PENDING	DFP DFP	
148107 INTERES 148108 INTERES 148109 INTERES 148110 INTERES 148111 INTERES	T CreditDefaultSwap T CreditDefaultSwap T CreditDefaultSwap T CreditDefaultSwap	28,424,86 28,424,86 28,424,86 28,424,86 28,424,86	0.00 USD 0.00 USD 0.00 USD 0.00 USD	RECEIV RECEIV RECEIV RECEIV	E 09/21/2015 E 12/21/2015 E 03/21/2016 E 06/20/2016	None None None None	PENDING PENDING PENDING PENDING	DFP DFP DFP	
148107 INTERES 148108 INTERES 148109 INTERES 148109 INTERES 148110 INTERES	T CreditDefaultSwap T CreditDefaultSwap T CreditDefaultSwap T CreditDefaultSwap T CreditDefaultSwap	28,424,86 28,424,86 28,424,86	0.00 USD 0.00 USD 0.00 USD	RECEIV RECEIV RECEIV	E 09/21/2015 E 12/21/2015 E 03/21/2016 E 06/20/2016 E 09/20/2016	None None None None None	PENDING PENDING PENDING	DFP DFP	

# 3.2 Processing DTCC Payments

The DTCC payment reconciliation process works in the following manner: you send a file to DTCC containing payments to be made using the scheduled task DTCC\_PAYMENT\_EXPORT, then you import a file from DTCC that contains the status of the payments, using the scheduled task DTCC\_PROCESS\_PAYMENTS. The Calypso payments are updated accordingly, and you can then net matched payments.

In DTCC, you cancel very rarely a payment. You update it. In order to change the Transfer engine logic of matching, we have added the notion of transfer profile. This allows to define a specific matching and also to set the DTCC attributes on the transfers. Those will then be used in the files sent to DTCC.

The action CANCEL is applied only if:

- ➡ The DTCC participant Id is changing
- ➡ The Profile Type is changing
- ➡ The Value Date is changing

Depending on the situation, the filters might decide if a payment needs status TOBECANCELED, this means that a file will be generated containing a row with the keyword CAN.

The action DTCC\_UPDATE is applied if:

- ➡ The settlement amount is changing
- ➡ The settle currency is changing
- The trade currency is changing
- The trade direction is changing (from PAY to RECEIVE and vice versa)
- ➡ The maturity date
- ➡ The trade notional

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The reset rate

In these cases the original trade must be resent to the DTCC containing the changes but the keyword will be NEW. This means that upon reception of the file containing the update, the DTCC will replace the former payment with the new one.

# 3.2.1 Exporting Payments to DTCC

In order to export payment to DTCC, run the scheduled task DTCC\_PAYMENT\_EXPORT. It will generate a file that contains the payments for the next payment iteration.

Choose Navigator > Configuration > Scheduled Tasks > Scheduled Tasks to configure and run the scheduled task DTCC\_PAYMENT\_EXPORT.

Scheduled Task Definition	X					
Scheduled Task Definition						
Use the dialog below to define the attributes l control the behavior of the task. There are to	for the task to be executed. These attributes will wo types of attributes, general attributes which are the tes. Scheduling of the task is performed using the Task					
Task Description						
Task Type: DTCC_PAYMENT_EXPORT	Г <b>Т</b>					
External Reference: DTCC Export Payment Util						
Comments:						
Description: Export Payment to Upload in DTCC Website						
Execution Parameters Attempts: Retry After: minutes E JVM Settings: -Xms512m -Xmx1024m -XX:MaxPe Log Settings:	Expected Execution Time (SLA): minutes ermSize=256m					
Task Notification Options	To User:					
Common Attributes						
Task ID	11525					
Processing Org						
Trade Filter						
Filter Set Pricing Environment						
Timezone	Europe/Paris					
Valuation Time Hour						
Valuation Time Minute						
Undo Time Hour						
Undo Time Minute						
Valuation Date Offset						
From Days						
To Days						
Pricer Measures						
Business Holidays						
Task Attributes						
FILE NAME	DTCC_Export					
DIRECTORY NAME	C:\Test Case\DTCC\Test					
DTCC PENDING STATE	TOBESENT					
DTCC CANCEL STATE	TOBECANCELED					
DTCC SEND ACTION	EXECUTE					
SD Filter	DTCC_workflow					
PartialCommit						
Add Header						

Specify the following attributes:

FILE NAME — Name of the .csv file.

DIRECTORY NAME - Name of the directory to store the .csv file. The file will then be sent manually to DTCC.

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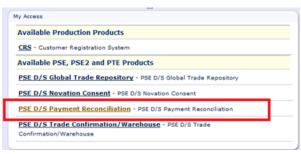
DTCC PENDING STATE — Enter the transfer status from which you want to send the payment to DTCC. It corresponds to the NEW (and therefore also the updated) types of payments.

DTCC CANCEL STATE — Enter the transfer status from which you want to send the CANCEL payments to DTCC. DTCC SEND ACTION — Enter the action that should be applied to the transfers in status DTCC PENDING STATE and DTCC CANCEL STATE.

The scheduled task will log exceptions of type EX\_DTCC\_PAYMENT\_EXPORT if the execution is not successful.

This csv file generated has to be uploaded on DTCC site:

- Go to DTCC payment reconciliation application.



Then upload > Payment Upload

earch Download	Uplond -	Admin 👻	Web User Guide	Contact Us	Logout	
	Paylents	Upload				
	Deal Instructions Upload		d			
	Data Quali	ty Check				
George California	Data Qualit	y Check Histor	ry			
Search Criteria	SSI Upload	1				
International Advances in the Intern						
Search Criteria						
Search Criteria Asset Class:		Credit Def	ault Swap 👻 🕷			
ENDORSE AND		Credit Def				Value (MM/D Unmat
Asset Class:	eri					(MM/D



# 3.2.2 Importing Payments from DTCC

You can import a file from DTCC that will contain the status of each payment previously sent (MATCHED, UNMATCHED, etc.) using the scheduled task DTCC\_PROCESS\_PAYMENTS.

On DTCC, in the Download menu, select Full Data Extract Report.

Choose Navigator > Configuration > Scheduled Tasks> Scheduled Tasks to configure and run the scheduled task DTCC\_PROCESS\_PAYMENTS.

Scheduled Task Definition	X							
Scheduled Task Definition								
control the behavior of the task. There are tw	or the task to be executed. These attributes will to types of attributes, general attributes which are the es. Scheduling of the task is performed using the Task							
Task Description								
Task Type: DTCC_PROCESS_PAYMEN								
External Reference: DTCC Import Payment Utility								
Comments:								
Description: Import Downloaded file fro	m DTCC							
Execution Parameters         Attempts:       Retry After:         JVM Settings:       -Xms512m -Xmx1024m -XX:MaxPermSize=256m								
Log Settings:								
Task Notification Options	To User:							
Common Attributes								
Task ID	14525							
Processing Org	BRANCHE33							
Trade Filter								
Filter Set								
Pricing Environment								
Timezone	Europe/Paris							
Valuation Time Hour								
Valuation Time Minute								
Undo Time Hour								
Undo Time Minute								
Valuation Date Offset								
From Days								
To Days								
Pricer Measures								
Business Holidays								
Task Attributes								
File Name PartialCommit	C:\Test Case\DTCC\Test							

Specify the following attributes:

FILE NAME — Name of the .csv file with the source directory.

Partial Commit — If you are importing a large amount of payments, you can choose to import the payments in bulk (in order to avoid performance problems). For example, if you set the value to 5000, the scheduled task will import 5000 payments at a time.

The scheduled task will log exceptions of type EX\_DTCC\_PROCESS\_PAYMENTS if the execution is not successful.

### 3.2.3 Netting Matched Transfers

Once payments have been matched by DTCC, they can be netted using the scheduled task EOD\_TRANSFER\_NETTING.

Choose Navigator > Configuration > Scheduled Tasks > Scheduled Tasks to configure and run the scheduled task EOD\_TRANSFER\_NETTING.

Please refer to "Automatic Netting in Batch" paragraph in the TransferGeneration user guide for a full documentation of the EOD\_TRANSFER\_NETTING scheduled task.

Scheduled Task Definition	×
Scheduled Task Definition	
Use the dialog below to define the attribute behavior of the task. There are two type	utes for the task to be executed. These attributes will control the es of attributes, general attributes which are the same across all uling of the task is performed using the Task Trigger Definition
Task Description	
Task Type: EOD_TRANSFER_NE	
External Reference: EDO Transfer Netting	DTCC Utility
Comments:	
Description: EDO Transfer Netting	- DTCC Utility
Execution Parameters	
	Expected Execution Time (SLA): minutes
JVM Settings: -Xms512m -Xmx1024m -XX:M	IaxPermbize=256M
Log Settings:	
☐ Task Notification Options	
🗌 🔲 Send Emails 👘 Publish Business Eve	ents To User:
Common Attributes	
Task ID	14526
Processing Org	BRANCHE33
Trade Filter	
Filter Set	
Pricing Environment	
Timezone	Europe/Paris
Valuation Time Hour	
Valuation Time Minute	
Undo Time Hour	
Undo Time Minute	
Valuation Date Offset	
From Days	
To Days	
Pricer Measures	
Business Holidays	
Task Attributes	
TRANSFER_STATUS	MATCHED
EXTERNAL_ROLE	
TRANSFER_CPTY	CaucharDacha
NETTING_TYPE	CounterParty
TRANSFER_FILTER	hurre
CreateNetting	true
PartialCommit	
THREAD_POOL_SIZE WHERE_CLAUSE	
WHERE_CEMODE	

TRANSFER\_STATUS: MATCHED (this is the status of transfers eligible to netting).

NETTING\_TYPE — Counterparty.

CreateNetting — "true" (this means that during the netting process, existing underlying transfers will be updated, whereas "false" means that existing transfers would be cancelled and replaced by new ones).

Then save the configuration. You can start the scheduled task on the fly if you have checked the Execute checkbox. Otherwise it can be executed by the Scheduling engine.

### 3.2.4 Settlement of Unmatched Transfers

§3.2.3 shows how to net DTCC MATCHED transfer. But all DTCC transfers that are not matched must also be paid, outside of a netting process.

At this step, all DTCC transfers that have not been canceled or netted should be UNMATCHED. If some transfers are still in some other states (PENDING, TOBESENT, WAITINGMATCH), *process them manually to UNMATCHED*.

Then, apply the EXECUTE action to them: they are now VERIFIED and, due to the *ResetWorkflowType* rule, are now processed in the "standard" workflow and can be settled one by one.

# Section 4. DTCC Central Settlement

In partnership with CLS Bank International, DTCC provides central, automated settlement of payments for contracts processed through the Warehouse's Central Settlement service.

DTCC Central settlement enhances Payment reconciliation process by taking in account that:

- By default all transfers can be matched against a TIW cashflow and settled in CLS, whereas only quarterly roll coupons used to be matched during the payment reconciliation process
- Cashflows correctly calculated by DTCC in the TIW don't require their transfer to go through the payment reconciliation process
- Netted transfers settled by DTCC in CLS on behalf of the Processing Org don't need a "real" settlement message in Calypso.

Assumption: SDI have to be configured in order to select by default CLS SDI if transfers follow this behavior. SDI will not be updated automatically by transfer update.

To support DTCC Central settlement services, you need to:

- 1- Ensure that you have created the schema data for data category DTCC Central settlement
- 2- Import these following message workflows:
  - IncomingTIWPayment
    - IncomingTIWSettlement

#### **Process overview**

- Payment messages are real-time messages generated and transmitted when a trade has been confirmed and is certain in the Warehouse.

When trade is confirmed, trade attributes are updated with following information:

🖉 Trade Attributes Window						
Domain						
Name	Value					
CONFIRMED	Y					
DTCCTradeId	20150806.0004597807					
DTCCWarehouseCurrentStateNotional	2015-08-07:USD:12000000.00000					
DTCCWarehouseStatus	Certain					

In Calypso, Payment messages are imported as BOMessage, compared against corresponding BOTransfer, and update Transfer status accordingly.

- Settlement messages are point in time (batch-driven) generated starting at settlement minus five days for trades that are certain in the Warehouse

In Calypso, Settlement message are imported as BOMessage and used to reflect the current settlement status in the CLS system.

### 4.1 IncomingTIWPayment Message Workflow

IncomingTIWPayment Messages are recognized based on the <TradeMsg> and "Payment" <TransType>

<trac< th=""><th>deMsg&gt;</th></trac<>	deMsg>
-	<pre><activity>New</activity></pre>
-	<pre>Status&gt;Auto</pre>
	<pre><transtype>Payment</transtype></pre>
	<pre><producttype>CreditDefaultSwapShort</producttype></pre>
	<yourtradeid></yourtradeid>

Orig Status	Action	Resulting Status	Use STP	Subtype	Rules	Filter
NONE	NEW	PENDING	false	IncomingTIWPayment		
PENDING	INDEX	INDEXED	false	IncomingTIWPayment	DTCCUpdateTransfer	
PENDING	ManualIndex	TOBESENT	false	IncomingTIWPayment	DTCCUpdateTransfer	

Incoming Messages are:

- Indexed with the corresponding transfer if all criteria matched (trade ref number, value date, ccy, amount, payer, receiver)
- Indexation updates transfer status and update transfer attributes: DTCCNetPaymentId, DTCCPmtMsgStatus, DTCCCashflowId
- Manually matched otherwise

Attributes

Name	
Asset Class	Credit
DTCCParticipantId	00004T35
DTCCUserId	00004T33
DayCount	ACT/360
EndDate	09/21/2015
LegId	1
MatchingSystem	DTCC
Notional	12,000,000
RefEntity	Ford Motor Company
RefTradeId	921303
ResetRate	1.0000000
ScheduledMatDate	09/20/2020
SettleDate	08/07/2015
StartDate	08/07/2015
TradeCcy	USD
TradeDate	08/06/2015
TradeNotional	12,000,000
XferProfileType	DTCC
XferWorkflowType	DTCC
DTCCNetPaymentId	04T3304T35U15264
DTCCPmtMsgStatus	Auto
DTCCCashflowId	0000000032383401

# 4.2 IncomingTIWSettlement Message Workflow

IncomingTIWPayment Messages are recognized based on the <TradeMsg> and "Settlement" <TransType> This message is imported automatically

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<trademsg></trademsg>
<activity>New</activity>
<status>Locked</status>
<transtype>Settlement</transtype>
<producttype>CentralSettlement</producttype>
<yourtradeid></yourtradeid>
<pre><partytradeidentifier></partytradeidentifier></pre>
<pre><fpml:partyreference href="DTCC00004T33"></fpml:partyreference></pre>
<pre><fpml:tradeid tradeidscheme="DTCCNetPaymentId">04T3304T34U13079</fpml:tradeid></pre>

Orig Status	Action	Resulting Status	Use STP	Subtype	Rules	Filter
NONE	NEW	PENDING	false	IncomingTIWSettlement		
PENDING	CANCEL	CANCELED	false	IncomingTIWSettlement		
PENDING	IGNORE	IGNORED	false	IncomingTIWSettlement		
PENDING	INDEX	INDEXED	false	IncomingTIWSettlement		
PENDING	SPLIT	SPLIT	false	IncomingTIWSettlement	DTCCSplitGross	

The DTCCSplitGross rule splits a DTCC Gross Settlement message into separate messages (create "fake" IncomingTIWSettlement – recognized by SplitGross RecortType

Individual messages are then indexed with the corresponding transfer (indexed with DTCCCashflowId)

Transfer is updated to reflect CLS settlement status.

Index action process only "Net" messages. Keys for indexation are TradeRefNbr, DTCCNetPaymentId and currency.

# 4.3 Transfer Workflow

DTCC transfer workflow need to be enhanced with these following status/ action/ Filter:

Orig Status	Action	Resulting Status	Use STP	Subtype	Rules	Kick Off/ Cut Off	Filter
DTCC CANCELED	CANCEL	CANCELED	false	DTCC			
DTCC MATCHED	CANCEL	TOBECANCELED	false	DTCC			
DTCC MATCHED	DTCC CANCEL	DTCC CANCELED	false	DTCC			
DTCC MATCHED	Locked Final	Without CLS info	false	DTCC			
DTCC MATCHED	Locked IPIS	IPIS	false	DTCC			
DTCC MATCHED	МАТСН	DTCC MATCHED	false	DTCC			
DTCC MATCHED	NotCentralSettlt	ExcludedFromCLS	false	DTCC			Xfer NotCentralSettlement

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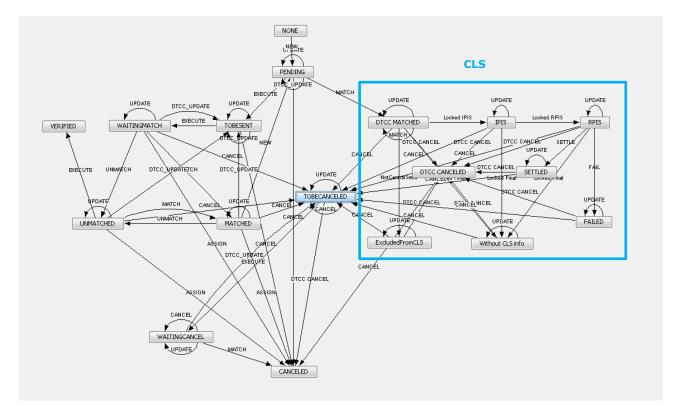
Orig Status	Action	Resulting Status	Use STP	Subtype	Rules	Kick Off/ Cut Off	Filter
DTCC MATCHED	UPDATE	DTCC MATCHED	false	DTCC			
ExcludedFromCLS	CANCEL	TOBECANCELED	false	DTCC			
ExcludedFromCLS	DTCC CANCEL	DTCC CANCELED	false	DTCC			
ExcludedFromCLS	UPDATE	ExcludedFromCLS	false	DTCC			
FAILED	CANCEL	TOBECANCELED	false	DTCC			
FAILED	DTCC CANCEL	DTCC CANCELED	false	DTCC			
FAILED	UPDATE	FAILED	false	DTCC			
IPIS	CANCEL	TOBECANCELED	false	DTCC			
IPIS	DTCC CANCEL	DTCC CANCELED	false	DTCC			
IPIS	Locked Final	Without CLS info	false	DTCC			
IPIS	Locked RPIS	RPIS	false	DTCC			
IPIS	UPDATE	IPIS	false	DTCC			
RPIS	CANCEL	TOBECANCELED	false	DTCC			
RPIS	DTCC CANCEL	DTCC CANCELED	false	DTCC			
RPIS	FAIL	FAILED	false	DTCC			
RPIS	Locked Final	Without CLS info	false	DTCC			
RPIS	SETTLE	SETTLED	false	DTCC			
RPIS	UPDATE	RPIS	false	DTCC			
SETTLED	CANCEL	TOBECANCELED	false	DTCC			
SETTLED	DTCC CANCEL	DTCC CANCELED	false	DTCC			
SETTLED	UPDATE	SETTLED	false	DTCC			
Without CLS info	CANCEL	TOBECANCELED	false	DTCC			
Without CLS info	DTCC CANCEL	DTCC CANCELED	false	DTCC			
Without CLS info	UPDATE	Without CLS info	false	DTCC			

RPIS : Revised Pay In Scheduled

IPIS: Initial Pay In Scheduled

Xfer NotCentralSettlement SD filter:

🔀 Static Data Filter Window [144003/BO_INT	ERFACES/calypso_bo]		
Name: Xfer NotCentralSettlement		Attributes	Simulate
Comment:			Pending Modifs
Groups: ANY			
Attribute	Criteria	Filter Value(s)	
XFER_ATTRIBUTE.Incoming Msg Product Type	- IN	Add NotCentralSettlement	t l



# **Section 5. DTCC Confirmation Matching**

### 5.1 Additional Settings

Run DTCCSchemaData.xml. See section 2.1 DTCC Data

Then import the workflow contained in the DTCCMsgWorkflows.wf file under the folder "resources".

### 5.1.1 Domain Values

Choose Navigator > Configuration > System > Domain Values to define domain values.

**Domain calcAgentCityCode** – This domain is used at trade level to choose the calculation agent city of a CreditDefaultSwap, which correspond in DTCC messages to the filed calculationAgentBusinessCenter.

For example: the city of Athens will use the code "GRAT" in DTCC messages

🟒 Domain Values	
🔗 Reload 📗 Save 🦷 Save All 🛛 🕷 Constraints Setup	0
Q- calcagent       Image: CollectionLockedStatus         Image: CAElectionStatus       Image: CAElectionStatus         Image: CAElectionStatus       Image: CAElectionStatus	Name:       calcAgentCityCode         Value:       Athens         Comment:       GRAT         << Add

#### Sample DTCC message:

\_\_\_\_\_\_

		^
	 <fpml:calculationagentbusinesscenter +grat3="" businesscenterscheme="http://www.fpml.org/spec/2000/business-center-1-0" fpml:calculationagentbusinesscenter=""></fpml:calculationagentbusinesscenter>	
	<documentation> <masterconfirmation> <masterconfirmationtype>ISDA2004CreditSovereignWesternEuropean</masterconfirmationtype> <masterconfirmationdate>2004-01-01</masterconfirmationdate> </masterconfirmation></documentation>	
<		
	Print Display In Browser Exit	

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#### **Domain messageType** – values:

- DTCC\_CONFIRM
- DKCONF
- INCOMINGCONF

#### **Domain DTCC.Templates** – values:

- DTCC.selector template selector for DTCC
- All CreditSwap\_\* templates apply to product type CreditDefaultSwap when using master confirmation.
- All CreditSwap\_Matrix\_\* templates apply to product type CreditDefaultSwap when using physical settlement matrix
- All CreditIndex\_\* templates apply to product type CDSIndex/CDSABSIndex when using master confirmation.
- All CreditIndex\_StandardTerms\_\* templates apply to product type CDSIndex/CDSABSIndex when using standard terms
- All CreditIndexTranche\_\* templates apply to product type CDSIndexTranche
- All InterestSwap\_\* templates apply to product type Swap
- All CreditSwaption\_\* templates apply to product type CreditDefaultSwaption
- All CreditIndexSwaption\_\* templates apply to product type CDSIndexOption
- All EquityShareSwap\_\* templates apply to product type EquityLinkedSwap
- WorkflowUpdate\_New\_A\_To\_DTCC.xml template apply to the Workflow Update transaction type.

Message keywords for DTCC templates are described in details under <u>DTCC Message Keywords</u>.

**Domain DTCCWorkflowUpdateFields** – used to list the trade audit values related to a WorkflowUpdate transaction in DTCC. Values:

- ADDKEY#DTCC\_PO\_SuperId
- MODKEY#DTCC\_PO\_SuperId
- DELKEY#DTCC\_PO\_SuperId
- ADDKEY#DTCC\_PO\_DeskId
- MODKEY#DTCC\_PO\_DeskId
- DELKEY#DTCC\_PO\_DeskId

- ADDKEY#DTCC\_CPTY\_SuperId
- MODKEY#DTCC\_CPTY\_SuperId
- DELKEY#DTCC\_CPTY\_SuperId
- ADDKEY#DTCC CPTY DeskId
- MODKEY#DTCC\_CPTY\_DeskId
- DELKEY#DTCC\_CPTY\_DeskId

**Domain allegedIndexingMsgStatus**: To indicate the Internal Message Types to be used for an Alleged Trade Processing – values

- PENDING
- SENT
- VERIFIED
- UNCONFIRMED

**Domain allegedIndexingMsgType** – value DTCC\_CONFIRM: To indicate the Internal Message Types to be used for an Alleged Trade Processing

**Domain allegedAcceptanceTolerance** – value 100: To Specify the tolerance limit (%) for accepting/indexing an alleged external message e.g, 100,80

Domain externalMessageTransactionType : To Define a Matching Config - values

- Trade
- Termination

Assignment

Exit

Increase

### 5.1.2 Issuer Attributes

[NOTE: in order to import issuer information directly from RED/Markit, please follow the step described in the MarkIt Integration User Guide]

The issuer attributes are used to determine the issuer's name, region, and sector.

Choose Navigator > Configuration > Legal Data > Legal Entities and load an issuer. Then click Attributes to specify the attributes.

#### **Issuer Name**

By default, Reference Entity name in DTCC messages corresponds to issuer's full name.

You can customize this behavior and use any LE attribute you want. For this, create a domain named "DTCCLinkRefEntityName" and add to it the name of the attribute you want to be used.

#### For example:

🔀 Domain Values				
🤣 Reload 📓 Save 🤖 Save All   🕷 Cons	traints Setup		0	
Reload Save Q Save All Construction Reconstruction PED_SHORT DTCCGTR.Templates DTCCGTR.collateral_Version DTCCGTR.collateral_Version DTCCGTR.collateral_Version DTCCCLinkName DTCCLinkRefEntityName DTCCLinkRefEntityName DTCCLinkRefEntityName DTCCUCTradeAction.Accept DTCCNCTradeAction.Complete DTCCNCTradeAction.Refuse DTCCNCTRADEAction.Alleged TTCTRADEACTIONACIONACIONACIONACIONACIONACIONACIONAC	e Value		DTCCLinkRefEntityName RED_SHORT_NAME Id Add & Save	
🔀 Legal Entity Attributes Window - Versio	n - 0			
Legal Entity BRANCHE2 Processing Org ALL		Role	ALL 👻	
Attribute Type RED_SHORT_NAME	•	Value	Branche 2 red short name	
Id Processing Org	Legal Entity	Role	Attribute Type 🗸	Attribute Value
1504 ALL	BRANCHE2	ALL	DTCC_LE_ID	00008445
4003 ALL	BRANCHE2	ALL	DTCC_PAYREC_PARTICIPANT	Y
169973 ALL Load Delete Save	BRANCHE2	ALL	RED_SHORT_NAME	Branche 2 red short name
Show Pending Authorizations				

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### **Region and Sector**

The following attributes are also required for the issuer: **RED\_REGION** and **RED\_SECTOR**.

The available values for the RED\_REGION attribute must be specified in the issuerRegion domain AND in the "leAttributeType.RED\_REGION" domain (AND they must be the same). The available values for the RED\_SECTOR attribute must be specified in the issuerSector domain AND in the "leAttributeType.RED\_SECTOR" domain. This double-entry requirement will soon be removed, but is currently required.

### **Sample Issuer Attributes**

🟒 Legal	Entity Attribu	utes Window - Vi	ersion - O			
l	Legal Entity	USGVT		Role	Issuer	•
Proce	essing Org	ALL	•			
Attr	ribute Type	RED_SECTOR	•	Value	Government	▼
Id	Proces	ssing Org	Legal Entity	Role	Attribute Type	Attribute Value
	2304 ALL		USGVT	Issuer	DTCC_FREEFORM_NAME	US_GVT
	2305 ALL		USGVT	Issuer	RED_JURISDICTION	Americas
	2306 ALL		USGVT	Issuer	RED_SECTOR	Government

In the example above, the issuer name will be provided by the attribute DTCC\_FREEFORM\_NAME

Legal Entity A	\ttribu	ites Window -	Version - 0				
Legal En	ntity SIEMENS AG			 Role	e ALL 🔻		
Processing Org ALL		•					
Attribute Ty	ре	RED_REGION	•	 Value	Eur	rope	◄
Id	Proce	ssing Org	Legal Entity	 Role		Attribute Type 2	Attribute Value
36372			SIEMENS AG	ALL		RED CUSIP	826197
36374			SIEMENS AG	 ALL		RED_JURISDICTION	Germany
36375	ALL		SIEMENS AG	ALL		RED_LIQUIDITY	High
36371	ALL		SIEMENS AG	ALL		RED_PAIR	8A87AG
53836	ALL		SIEMENS AG	ALL		RED_REGION	Europe
53837	ALL		SIEMENS AG	ALL		RED_SECTOR	Technology
36376	ALL		SIEMENS AG	ALL		RED_SHORT_NAME	Siemens AG
36370	ALL		SIEMENS AG	ALL		RED_TICKER	SIEM
36373	ALL		SIEMENS AG	ALL		RED_TYPE	Corp

### 5.1.3 Reference Obligation Attributes

The reference obligation of the issuer should have the following attributes:

- If the attribute **RED\_PAIR** is set on the issuer, then the reference obligation should also have the RED\_PAIR attribute specified, or the ISIN number.

- If the attribute RED\_PAIR is not set on the issuer, then the reference obligation should have the ISIN number.

Code Window BondUST/30Y/11/15/2028/5.25%							
Product Code Name	Value						
Common	009242708						
ISIN	US912810FF04						
Local	912810FF0						
CUSIP							
DebtSeniority	-						
GCFCusip							
RGA							

The reference obligation is set on the issuer by clicking the **Ref Ob** button. To specify attributes for the reference obligation, choose Navigator > Configuration > Fixed Income > Bond Product, and load the reference obligation. Then click **Codes** to set the attributes.

### 5.1.4 Processing Org and Counterparty Attributes

Choose Navigator > Configuration > Legal Data > Legal Entities and load a legal entity (processing org or counterparty). Then click Attributes to specify the attributes.

The **DTCC\_LE\_ID** has been created by the SQL scripts. It should be set to the DTCC member id for the processing organization, AND for the trade counterparty.

The **DTCC\_PAYREC\_PARTICIPANT** attribute should be added. The value should be set to Y for both the processing organization AND the trade counterparty.

[NOTE: A single processing organization or counterparty may have more than one DTCC ID. Therefore Calypso has provided the following logic to provide a simple setup whenever it's possible that can be customized for a particular message contact or trade when needed:

- when trade keyword DTCC\_PO\_ID (respectively DTCC\_LE\_ID) is present, it is used as the DTCC PO (respectively counterparty) ID
- otherwise, when DTCC code is present on sender (respectively receiver) contact, it is used as the DTCC PO (respectively counterparty) ID
- otherwise LE attribute DTCC\_LE\_ID taken as the DTCC PO / counterparty ID]

🟒 Legal Entity Attrib	utes Wind	dow - Version - (	)				×
Legal Entity	BRANC	HE2		Role	ALL	-	
Processing Org	ALL						
Attribute Type	DTCC_F	PAYREC_PARTICI	P ▼	Value	Y		
Id Process	ng Org	Legal Entity	Role	Attribute Type		Attribute Value	
4003 ALL		BRANCHE2	ALL	DTCC_PAYREC_F	PARTICIPANT	Y	
1504 ALL		BRANCHE2	ALL	DTCC_LE_ID		00008445	
169973 ALL		BRANCHE2	ALL	RED_SHORT_NA	ME	Branche 2 red short na	ame

### Sample Processing Org Attributes

### **Sample Counterparty Attributes**

🔀 Legal Er	ntity Attribut	es Wi	ndow - Versio	n - 0	
Leç	gal Entity	CHAS	E NY		Role ALL 🔻
Processi	ing Org	ALL			•
Attribu	ute Type	DTCC	LE_ID		▼ Value 00001234
Id	Processing	Drg	Legal Entity	Role	Attribute Type 🚈 Attribute Value
5405	ALL		CHASE NY	ALL	DTCC_LE_ID 00001234
169974	ALL		CHASE NY	ALL	DTCC_PAYREC_PARTICIPANT Y
53817	ALL		CHASE NY	ALL	RED_LEGAL_NAME Chase Manhattan Bank - New York
53818	ALL		CHASE NY	ALL	RED_PAIR 1234
53819	ALL		CHASE NY	ALL	RED_REGION N.Amer
53820	ALL		CHASE NY	ALL	RED_TYPE Corp

### Sample Contact Code

🟒 Contact Window -Version - 0 [144	4003/BO_INTERFACES/calypso	_bo]		
Utilities Help				
Legal Entity CHASE NY	Role	Product	Contact Typ	
CHASENY	Agent	▼ ALL	Default	▼
Processing Org	Effective Fr	om Effective To S	itatic Data Filter	Contact Id
ALL	•			411
Last Name Woods	First Name San	1	Title Head of US Operation	15
Address 99 xxx Avenue	G	ty NEW YORK		
	Sta	NY NY	Zip Code 10001	
	Count	INITED STATES	▼	
Phone +1 212 999 0000	Telex 909	090T	Fax +1 212 999 9999	
Swift CHASUS33XXX	E-Mail			
External Ref	Codes	•		
Comment Demonstration Data				
Id Legal Entity Role P	Product Type Name	Title Email	Phone Fax	Telex S
411 CHASE NY Agent Al		Head of US Operations	+1 212 999 0000 +1 212 999	
410 CHASE NY CounterParty Al	LL Default Sam Woods	Head of US Operations	+1 212 999 0000 +1 212 999	9999 909090T CI

## 5.1.5 Master Confirmations

You need to create a master confirmation (i.e. a master agreement) between the counterparty and the processing organization. When generating DTCC confirmations, the system will retrieve the master confirmation based on the counterparty, the processing organization, the issuer's region, the issuer's sector, the currency, the product type, and the holidays.

Domain values **masterConfirmationType**, **masterconfirmationTypeMatrix**, **masterConfirmationTypeAPS** have been created by the SQL scripts.

Choose Navigator > Configuration > Messages & Matching > Master Confirmations.

Anaster Confirmation Window - Version - 20 [144003/BO_INTERFA	ACES/calypso_bo]				
🖃 🗁 Master Confirmations	Edit Browse				
🖶 🫅 PO: AVOX_LE 🛛 🕴					
😥 🧰 PO: BNP PARIBAS					
🖶 🧁 PO: BRANCHE2	Counter Party	BNP PARIBAS			
🖨 🗁 CounterParty: BNP PARIBAS					
🗄 🛅 Product: CDSABSIndex	Processing Org	BRANCHE2 -	Id	87210	
🖨 🧁 Product: CDSIndex					
Confirmation: 2003CreditIndex	Region	ANY 👻	Product Type	CDSIndexTranche 👻	
😑 🦳 Confirmation: CDXEmergingMarkets	-				
CDXEmergingMarkets (Id:: 115522, Prod. Typ	Currency	ANY 👻	Date	12/20/2005	
CDXEmergingMarkets (Id:: 153640, Prod. Typ					
🖻 🗁 Product: CDSIndexTranche	Туре	ANY 👻	SD Filter		
🖃 🗁 Confirmation: iTraxxAsiaExJapanTranche					
TraxxAsiaExJapanTranche (Id:: 87210, Prod.	Effective From	01/01/2001	Effective To		
CounterParty: BRANCHE2					
CounterParty: CALYPSOSF	Master Confirm Type	iTraxxAsiaExJapanTranche	-	Set Product Definition	?
CounterParty: CHASE NY		-			
CounterParty: CITIBANK NY	Additional Info	Calculation Agent 👻			
CounterParty: CREDILIONPAR					
CounterParty: HVB	PO Children 📃 ALL				
	Cpty Children 🔲 ALL				····
⊕-      ☐ PO: CMTM_TEST1     ⊕-      ☐ PO: CMTM_TEST2					
	New	Delete Save S	Save As New	Documents	

Select a counterparty and a processing org, then enter the fields as applicable.

**Region (Optional)** — Regions (Markit RED Regions) are specified like in the CDSSettlementMatrix window:

- Either the list comes from the domain specified in the templateLinkRegion
- Or it comes from the RED\_REGION LE attribute domain

**Type (Optional)** – Types (Markit RED Types) are specified like in the CDSSettlementMatrix window:

- Either the list comes from the domain specified in the templateLinkType

- Or it comes from the RED\_TYPE LE attribute domain

Note: prior to Calypso V11.0, master confirmations were defined by RED Region and Sector. In order to comply with market standard (mainly settlement matrix), it's now defined by RED Region and Type.

Region and Type can both be either specific or both ANY.

**Date (Mandatory)** – Enter the effective date of the master confirmation.

**Master Confirm Type (Mandatory)** — Confirmation types are specified in the masterConfirmationType domain. Types related to Physical Settlement Matrix / Standard Terms must also be specified in masterConfirmationTypeMatrix domain (except for those related to index tranche, for which only standard terms exist).

Click Set Product Definition to save the details of the master confirmation to a product template.

The trade window will appear based on the selected product type.

Enter product details as applicable and close the window. The details will be saved as a product template.

This is optional. You can ignore the message indicating that a product definition is not set.

Click the second with button to set values for the additional information.

Additional Info	isDTCC	✓ … Y	· · · · ·
-----------------	--------	-------	-----------

Out-of-the-box, the following information is available:

**Calculation Agent (Optional)** — Used for populating data in the confirmations. Note that the calculation agent entered here must be a legal entity of type Calc\_Agent. It should be the same as the calculation agent set on the trade, if specified.

If you want a master confirmation to be valid with every calculation agent, then set its value to "ANY".

**Calculation Agent City (Optional)**— Used for populating data in the confirmations of type Corporate Asian or Sovereign or Matrix for CDS, and CDSIndex / tranches Standard Terms for example. Note that the city entered

here must be the same as the city set on the trade, if specified. Cities are defined in the calcAgentCityCode domain.

If you want a master confirmation to be valid with every calculation agent city, then set its value to "ANY".

Confirmation Details									
Calc Agent	BRANCHE2		City New York						

**ContractualDefinitions (Mandatory)** — Used for populating data in the confirmations. It was introduced by DTCC for 2014 ISDA Credit Definitions. Possible values are: ISDA2003Credit or ISDA2014Credit

Master Confirm Type	2003CreditIndex	•	Set Product Definition	?
Additional Info	ContractualDefinitions	▼ ISDA2003	3Credit	

**Holidays (Mandatory)** — the system will control that the holiday calendars in the master confirmation match with the payment holiday calendars on the trade. If you want a master confirmation to be valid with every holidays, then set its value to "ANY".

Z Sell Protection on GOOGLE SENIOR_UNSECURED/Receive: USD 1.12450 N	/laturing on 03/20/2020 -PO is BRANCHE33 (913840) - Version : 4 Mod Use
Trade Back Office CreditDefaultSwap Cashflows Analytics Pricing	g Env Market Data View Utilities Help
	Sell Protection on GOOGLE SENIOR_UNSECURED/Receive: USD 1.12450 Mat
Trade Details Fees Cashflows	
Cpty BRANCHE34 CounterParty BI	RANCHE34
Book TRADING33	ID • 913840
	Template NONE
Sell Credit Protection Standard Fixed Coupon Reference Entity Details Physical	
Notional USD V 10,000,000.00 Bullet	Premium PAY_ACCRUAL
Issuer Name V GOOGLE	Maturity Date Inclusive
Seniority SENIOR_UNSECURED	Fix - Rec - USD - 10,000,000.00
Market Standard	Bullet
Description GOOGLE	Funded
Industry	
Rating	Start 03/19/2015 End 03/20/2020
Ticker	1.12450 %
Obligation Add Remove Show	Cmp
Use Obligation	
	Pmt QTR    END_PER   NONE
Obligation Detail	ACT/360 VIC NEAREST
	LONG FIRST MAT_UNADJUSTED

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For CDS Index, matching will be done against the holiday calendars of the index.

Z CDSIndex Definition	n 🖃 🗆 🔀
Definition Reference Po	ortfolio CashFlows
Issuer	USGVT SecCode: Codes
Name	GVT Credit DebtSeniority SENIOR_SEC V
Description	Series Version
Reference Portfolio	Select New
Notional	25,000,000.00 Current Factor 1.00000 Quote Type Spread
Start Date	09/20/2006 Maturity Date 09/20/2011 5Y 🗸
	USD V Fixed bp
Pmt QTR	✓ FOLLOWING ✓ R Day ACT/360 ✓ NYC
Credit Event	
Settlement	
Settlement Lag	1 Bus Settle Fee Offset 3 Bus Maturity Date Inclusive

**isDTCC (Mandatory for DTCC confirmations)** – Must be set to Y for generating DTCC confirmations.

You can click the first 🛄 button to add user-defined information.

#### Then click Save.

Note that if the Authorization mode is enabled, another user will have to authorize your entry.

## 5.2 Message set-up and workflow

## 5.2.1 Business logic

Message setup and workflow described below are designed to follow this business logic:

Every time a confirm must be generated:

Calypso tries to send it through DTCC using Matrix/Standard Terms form of documentation

If not possible, it tries to send it through DTCC using master confirmation

Otherwise, it is sent by FAX (HTML confirm)

➡ Once a trade reaches VERIFIED status

If trade has already been confirmed in DTCC (keyword CONFIRMED set to "Y")

- If the only changes to the trade are
  - Not declared into the *TradeFieldsNotAmendment* domain (see usage of in the messaging documentation)
  - And are part of the DTCC workflow update fields (fields listed in the DTCCWorkflowUpdateFields domain). Note that <u>only</u> the addition / modification / deletion of keyword DTCC\_PO\_SuperId and DTCC\_PO\_DeskId are supported: <u>Please</u> refer to Domain DTCCWorkflowUpdateFields mentioned in page 28

Then a WorkflowUpdate message is created

 Else, it means some contractual trade details have been changed and an "Amendment" confirmation is created An "Assignment EE" confirm is produced if the PO is the transferee of a novated trade (new trade where the NovationTransferor keyword is given).

An "Amendment" confirmation if trade has already been confirmed in DTCC (keyword CONFIRMED set to "Y")

A "Trade" confirmation otherwise

Note : if trade is no more eligible to DTCC confirm process

- If trade has already been confirmed, an Exit message is produced
- Otherwise a Trade message with activity "Cancel" is produced
- In any case, a fax confirm is created
- Once a trade reaches TERMINATED status

Depending on termination type and termination reason, transaction type will be: **Termination**, **Assignment** or **Increase** 

Depending on message SubAction, activity will be "New" or "Cancel". Note: Termination messages with a "Cancel" SubAction are created when a termination is rejected. If this setup is required in your environment, refer to the Termination Window documentation for the corresponding setup using the "Reject" trade workflow rule.

- Once a trade reaches CANCEL status
- If trade has already been confirmed, and "Exit" message is produced

Otherwise a Trade message with activity "Cancel" is produced

Once a trade reaches EXERCISE status

An "Exercise" confirm is produced

## 5.2.2 Static Data Filters

#### isDTCC

差 Static Data Filter Window [144003/BO_INTERFACES/calypso_bo]								
Name:	isDTCC	Attributes	Si					
Comment:				Pen				
Groups:	ANY							
Attribute		Criteria		Filter Value(s)				
IN Static Da	ta Filter	- IN	Add 3	isDTCC_Credit				
IN Static Data Filter		▼ NOT_IN	Add	TransferedTrade_FirstVa	lidation			
KEYWORD.E	ExcludeFromDTCC							

This filter has to be customized according to your exact trades, products and static data setup.

Here the default setup is that for a Swap, any trade can be DTCC eligible whereas for a CreditDefaultSwap, CDSIndex, CDSIndexTranche, CDSABSIndex, CreditDefaultSwaption, CDSIndexOption, and an EquityLinkSwap there must trade must have a Master Confirmation with the *isDTCC* attribute set to Y.

差 Static Data Filter Window [144003/BO_INTERFACES/calypso_bo]									
Name: isDTCC_Credit	Attributes	Simulate							
Comment:					Pending Modifs				
Groups: ANY									
Attribute	Criteria		Filter Value(s)						
IN Static Data Filter	▼ NOT_IN	(Add)	TransferedTrade_1stTimeVERIFIED						
MASTER_CONFIRMATION.isDTCC	🕆 LIKE		▶ Y						
Product Type	⊤ IN	(Add)	CDSABSIndex,CDSIndex,CDSIndexOption,CDSIndexTranche,CreditDefaultSwa	ap,CreditDefaultSwapABS,	CreditDefaultSwaption				
•	()								

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<u>Special case:</u> Second condition, "NOT\_IN SD Filter TransferredTrade\_1stTimeVERIFIED" has been added to prevent from having two confirmations generated at the same time each time a termination creates a transferred trade: in this case we produce a confirmation triggered by TERMINATED\_TRADE event, so we have to prevent message engine from creating a confirmation on VERIFIED\_TRADE (event generated by the transferred trade). This explains the first condition "TransferFrom IS\_NOT\_NULL".

But then, a transferred trade can be amended, and that time an amendment confirmation has to be generated: this explains the need of the "Trade Action NOT\_IN AMEND" condition.

Z Static Data Filter Window [144003/BO_INTERFACES/calypso_bo]								
Name: TransferedTrade_1st	limeVERIFIED	Attributes	Simulate					
Comment: no msg generation 1st	Comment: no msg generation 1st time child trade is verified							
Groups: ANY								
Attribute	Criteria		Filter Value(s)					
KEYWORD.TransferFrom	VIS_NOT_NULL							
Trade Action	▼ NOT_IN	Add	AMEND					

Note: you will certainly need to modify this SD filter according to your actual Trade Workflow setup in order for this filter to match exactly the definition of: "trade is not a transferred trade and trade reaches the VERIFIED status for the first time" (i.e. trade is not coming back to VERIFIED after being amended).

### isDTCC\_TradeNew

isDTCC\_NovationEE

🔀 Static Data Filter Window [144003/BO_INTERFACES/calypso_bo]							
Name:	isDTCC_TradeNew	At	tributes	Sim	Simulate		
Comment:	Comment:				Pendir	ng Modifs	
Groups:	ANY						
Attribute		Criteria		Filter Value(s)			
IN Static Data Filter		▼ IN	Add	isDTCC			
KEYWORD.S	itepIn_Transferor	TS_NULL					

🔀 Static Data Filter Window [14			
Name: isDTCC_NovationEE		Attributes	Simulate
Comment:			Pending Modifs
Groups: ANY			
Attribute	Criteria	Filter Val	ue(s)
IN Static Data Filter	⊤ IN	Add isDTCC	
KEYWORD.StepIn_Transferor	✓ IS_NOT_NULL		

#### notIsDTCC

🟒 Static Data Filter Window [144003/BO_INTERFACES/calypso_bo]									
Name: notIsDTCC			Attributes	Simulate					
Comment:				Pending Modifs					
Groups: ANY									
Attribute	Criteria		Filter Value(s)						
IN Static Data Filter	V NOT IN	DbA	IsDTCC						

## isDTCC\_Terminate

🟒 Static Data Filter Window [144003/BO_INTERFACES/calypso_bo]								
Name:	isDTCC_Terminate		Attributes	Simulate				
Comment:				Pending Modifs				
Groups:	ANY							
Attribute		Criteria	Filter Value(s)					
KEYWORD.T	erminationReason	⊤ IN	Add BoughtBack, NotionalIncre	ase,Novation				
MASTER_CC	NFIRMATION.isDTCC	- LIKE	► Y					

# 5.2.3 Message Setup

Message configurations are used by the message engine to generate the relevant confirmation in response to a trade event.

Choose Navigator > Navigator > Messages & Matching > Message Set-up to define the message configurations for the different types of confirmations to be sent to DTCC.

Note: html template and setup below is only a sample to illustrate the way to switch from DTCC confirms to FAX. Real FAX setup should be more complex (more templates, filter more detailed ...), here it is just being added in order to have some message created when trade is not DTCC eligible.

Edit Browse											
Product Type	CreditDefaultSwap	•	Language	English		•					
Event Type	VERIFIED_TRADE	•	Address Type	DTCC		▼					
Message Type	DTCC_CONFIRM	-	Gateway	DTCC		•					
Processing Org	ALL	-	Format Type	DTCC		•					
PO Contact Type	Default	-	Template	DTCC.selector							
Receiver	Receiver ALL		SD Filter	isDTCC_TradeNew	DTCC_TradeNew						
Receiver Role	CounterParty	•	Audit Filter			•					
Rec Contact Type	Default	•				-					
Grouping		▼		Matching	📝 In	active					
				Do not Send Mes	sage						
Config Id	200	Delete	Save	Save As Ne	ew						
Id Product	Event	Message Type	ProcessingOrg	PO Contact Type	Receiver	Receiver Role	Rec Contact Type	Language	Addr Type	Gateway	Format Type
200 CreditDefaults	wap VERIFIED_TRADE	DTCC_CONFIRM	ALL	Default	ALL	CounterParty	Default	English	DTCC	DTCC	DTCC
248 CreditDefaults	wap VERIFIED_TRADE	DTCC_CONFIRM		Default		CounterParty	Default	English	DTCC	DTCC	DTCC
145836 CreditDefaults	iwap VERIFIED_TRADE	DTCC_CONFIRM	ALL	Default	ALL	CounterParty	Default	English	DTCC	DTCC	DTCC

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Product	Event	Message Type	Template Name	Static Data Filter
CreditDefa	ultSwap			
	CANCELED_TRADE	CONFIRM	cdsConfirm.html	notIsDTCC
	CANCELED_TRADE	DTCC_CONFIRM	DTCC.selector	isDTCC_TradeNew
	CANCELED_TRADE	DTCC_CONFIRM	DTCC.selector	isDTCC_NovationEE
	TERMINATED_TRADE	DTCC_CONFIRM	TerminationDTCC.selector	isDTCC_Terminate
	TERMINATED_TRADE	CONFIRM	cdsConfirm.html	notIsDTCC
	VERIFIED_TRADE	CONFIRM	cdsConfirm.html	notIsDTCC
	VERIFIED_TRADE	DTCC_CONFIRM	DTCC.selector	isDTCC_TradeNew
	VERIFIED_TRADE	DTCC_CONFIRM	DTCC.selector	isDTCC_NovationEE
CDSIndex <sup>-</sup>	Tranche			
	CANCELED_TRADE	CONFIRM	cdsIndexTrancheConfirm.html	notIsDTCC
	CANCELED_TRADE	DTCC_CONFIRM	DTCC.selector	isDTCC_TradeNew
	CANCELED_TRADE	DTCC_CONFIRM	DTCC.selector	isDTCC
	TERMINATED_TRADE	DTCC_CONFIRM	TerminationDTCC.selector	isDTCC_Terminate
	TERMINATED_TRADE	CONFIRM	cdsConfirm.html	notIsDTCC
	VERIFIED_TRADE	CONFIRM	cdsIndexTrancheConfirm.html	notIsDTCC
	VERIFIED_TRADE	DTCC_CONFIRM	DTCC.selector	isDTCC_TradeNew
	VERIFIED_TRADE	DTCC_CONFIRM	DTCC.selector	isDTCC_NovationEE
CDSIndex	/ CDSABSIndex			
	CANCELED_TRADE	CONFIRM	cdsIndexConfirm.html	notIsDTCC
	CANCELED_TRADE	DTCC_CONFIRM	DTCC.selector	isDTCC_TradeNew
	CANCELED_TRADE	DTCC_CONFIRM	DTCC.selector	isDTCC_NovationEE
	TERMINATED_TRADE	DTCC_CONFIRM	TerminationDTCC.selector	isDTCC_Terminate
	TERMINATED_TRADE	CONFIRM	cdsConfirm.html	notIsDTCC
	VERIFIED_TRADE	CONFIRM	cdsIndexConfirm.html	notIsDTCC
	VERIFIED_TRADE	DTCC_CONFIRM	DTCC.selector	isDTCC_TradeNew
	VERIFIED_TRADE	DTCC_CONFIRM	DTCC.selector	isDTCC_NovationEE
CreditDefa	ultSwaption			
	CANCELED_TRADE	CONFIRM	Confirm.html	notIsDTCC
	CANCELED_TRADE	DTCC_CONFIRM	DTCC.selector	isDTCC_TradeNew
	CANCELED_TRADE	DTCC_CONFIRM	DTCC.selector	isDTCC
	TERMINATED_TRADE	DTCC_CONFIRM	TerminationDTCC.selector	isDTCC_Terminate
	TERMINATED_TRADE	CONFIRM	Confirm.html	notIsDTCC
	VERIFIED_TRADE	CONFIRM	Confirm.html	notIsDTCC
	VERIFIED_TRADE	DTCC_CONFIRM	DTCC.selector	isDTCC_TradeNew
	VERIFIED_TRADE	DTCC_CONFIRM	DTCC.selector	isDTCC_NovationEE

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Product	Event	Message Type	Template Name	Static Data Filter
	EXERCISED_TRADE	CONFIRM	Confirm.html	notIsDTCC
	EXERCISED_TRADE	DTCC_CONFIRM	DTCC.selector	isDTCC
CDSIndex	Dption		•	•
	CANCELED_TRADE	CONFIRM	Confirm.html	notIsDTCC
	CANCELED_TRADE	DTCC_CONFIRM	DTCC.selector	isDTCC_TradeNew
	CANCELED_TRADE	DTCC_CONFIRM	DTCC.selector	isDTCC
	TERMINATED_TRADE	DTCC_CONFIRM	TerminationDTCC.selector	isDTCC_Terminate
	TERMINATED_TRADE	CONFIRM	Confirm.html	notIsDTCC
	VERIFIED_TRADE	CONFIRM	Confirm.html	notIsDTCC
	VERIFIED_TRADE	DTCC_CONFIRM	DTCC.selector	isDTCC_TradeNew
	VERIFIED_TRADE	DTCC_CONFIRM	DTCC.selector	isDTCC_NovationEE
	EXERCISED_TRADE	CONFIRM	Confirm.html	notIsDTCC
	EXERCISED_TRADE	DTCC_CONFIRM	DTCC.selector	isDTCC

# 5.2.4 Message Sender Configurations

Message sender configurations are used by the sender engine to actually send the DTCC confirmations through the DTCC gateway, once they are in SENT status. Choose Navigator >Configuration > Messages & Matching > Message Sender Configuration to define message sender configurations.

🔀 Message Sender	r Config								
Sender Config Cop	y Config								
	r		1		r				
Message Status			•	Product Type	ALL			•	
Advice Type	DTCC_CC	ONFIRM	•	Address Type				•	
Static Data Filter				Gateway	DTCC			•	
🔽 Save	Master	and Copies AdviceDo	ocuments will be save	d in DB					
🔽 Send	🔳 Ser	nder By Method	📝 Sender By Ga	iteway					
GatewayDTCCDo	ocumentSei	nder class will be calle	d						
Save		Remove	New	1					
	Product	Advice Type	Address Type	Gateway	SD Filter	Send	Save	By Gateway	By Method
900 VERIFIED	ALL	DTCC CONFIRM	DTCC	DTCC			V		

# 5.2.5 Message Workflow

Choose Navigator > Configuration > Workflow > Workflow Config, or Workflow Graph Config to define workflows.

You can import the default Workflows in the folder resources DTCCMsgWorkflows.wf, DTCCNovationsTradeWorkflow.wf, DTCCNovationsMsgWorkflows.wf.

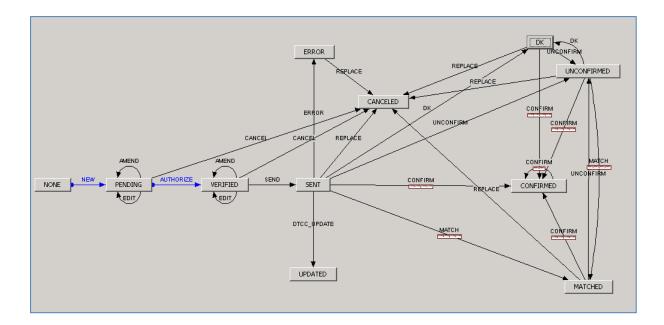
## Message type = DTCC\_CONFIRM

Orig Status	Action	<b>Resulting Status</b>	Use STP	Subtype	Rules
CONFIRMED	CONFIRM	CONFIRMED	FALSE	DTCC_CONFIRM	CleanupAlleged
DK	CONFIRM	CONFIRMED	FALSE	DTCC_CONFIRM	CleanupAlleged
DK	REPLACE	CANCELED	FALSE	DTCC_CONFIRM	
DK	UNCONFIRM	UNCONFIRMED	FALSE	DTCC_CONFIRM	
ERROR	REPLACE	CANCELED	FALSE	DTCC_CONFIRM	
MATCHED	CONFIRM	CONFIRMED	FALSE	DTCC_CONFIRM	CleanupAlleged
MATCHED	REPLACE	CANCELED	FALSE	DTCC_CONFIRM	
MATCHED	UNCONFIRM	UNCONFIRMED	FALSE	DTCC_CONFIRM	
NONE	NEW	PENDING	TRUE	DTCC_CONFIRM	
PENDING	AMEND	PENDING	FALSE	DTCC_CONFIRM	
PENDING	AUTHORIZE	VERIFIED	TRUE	DTCC_CONFIRM	
PENDING	CANCEL	CANCELED	FALSE	DTCC_CONFIRM	
PENDING	EDIT	PENDING	FALSE	DTCC_CONFIRM	
SENT	CONFIRM	CONFIRMED	FALSE	DTCC_CONFIRM	CleanupAlleged
SENT	DK	DK	FALSE	DTCC_CONFIRM	
SENT	DTCC_UPDATE	UPDATED	FALSE	DTCC_CONFIRM	
SENT	ERROR	ERROR	FALSE	DTCC_CONFIRM	
SENT	МАТСН	MATCHED	FALSE	DTCC_CONFIRM	CleanupAlleged
SENT	REPLACE	CANCELED	FALSE	DTCC_CONFIRM	
SENT	UNCONFIRM	UNCONFIRMED	FALSE	DTCC_CONFIRM	
UNCONFIRMED	CONFIRM	CONFIRMED	FALSE	DTCC_CONFIRM	CleanupAlleged
UNCONFIRMED	DK	DK	FALSE	DTCC_CONFIRM	
UNCONFIRMED	МАТСН	MATCHED	FALSE	DTCC_CONFIRM	CleanupAlleged
UNCONFIRMED	REPLACE	CANCELED	FALSE	DTCC_CONFIRM	
VERIFIED	AMEND	VERIFIED	FALSE	DTCC_CONFIRM	
VERIFIED	CANCEL	CANCELED	FALSE	DTCC_CONFIRM	
VERIFIED	EDIT	VERIFIED	FALSE	DTCC_CONFIRM	

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Orig Status	Action	Resulting Status	Use STP	Subtype	Rules
VERIFIED	SEND	SENT	FALSE	DTCC_CONFIRM	

**DTCC\_UPDATE** action is hardcoded. It is used in case of Workflow Update. The message will apply DTCC\_UPDATE when the acknowledgment message corresponding to a Workflow Update (sent from PO): the corresponding incoming message is indexed. IncomingReply Message WorkflowRule applies DTCC\_UPDATE action on the outgoing message.

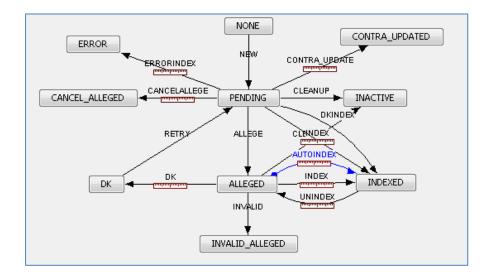


## Message type = INCOMINGCONF

Orig Status	Action	Resulting Status	Use STP	Subtype	Rules
ALLEGED	AUTOINDEX	INDEXED	true	INCOMINGCONF	IndexAlleged
ALLEGED	CLEANUP	INACTIVE	false	INCOMINGCONF	
ALLEGED	DK	DK	false	INCOMINGCONF	DKAlleged
ALLEGED	INDEX	INDEXED	false	INCOMINGCONF	IndexAlleged
ALLEGED	INVALID	INVALID_ALLEGED	false	INCOMINGCONF	
DK	RETRY	PENDING	false	INCOMINGCONF	
INDEXED	UNINDEX	ALLEGED	false	INCOMINGCONF	UnIndexDTCC
NONE	NEW	PENDING	false	INCOMINGCONF	
PENDING	ALLEGE	ALLEGED	false	INCOMINGCONF	
PENDING	CANCELALLEGE	CANCEL_ALLEGED	false	INCOMINGCONF	CancelAlleged

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Orig Status	Action	Resulting Status	Use STP	Subtype	Rules
PENDING	CLEANUP	INACTIVE	false	INCOMINGCONF	
PENDING	DKINDEX	INDEXED	false	INCOMINGCONF	
PENDING	ERRORINDEX	ERROR	false	INCOMINGCONF	SendError
PENDING	CONTRA_UPDATE	CONTRA_UPDATED	false	INCOMINGCONF	IncomingReply
PENDING	INDEX	INDEXED	false	INCOMINGCONF	IncomingReply



After the incoming message is imported, it follows the workflow for the message type INCOMINGCONF:

- If the message does not have a trade/message reference and the DTCC status is alleged, the ALLEGE action is applied.
- If the message does not have a trade/message reference and the DTCC status is cancel alleged, the CANCELALLEGE action is applied.
- If the message has a trade/message reference and the DTCC status is DK acknowledged, the DKINDEX action is applied.
- If the message has a trade/message reference and the DTCC status is different from DK acknowledged, the INDEX action is applied.
- If the message has a trade/message reference and the DTCC status is Contra Updated, the CONTRA\_UPDATE action is applied.

It is an acknowledgement message corresponding to a WorkFlow Update from the counterparty side, the incoming message does not need to be indexed to any outgoing message, but the corresponding trade can be updated with some new information (ex :counterparty SuperId field)

### Message type = INCOMING\_UNKNOWN

Orig Status	Action	Resulting Status	Use STP	Subtype	Rules
NONE	NEW	PENDING	false	INCOMING_UNKNOWN	

This message type only exists to store incoming messages received from DTCC that are not well formatted and cannot be parsed using FPML/DTCC schemas.

For example you can receive INCOMING\_UNKNOWN messages when there is a schema version mismatch between messages you send and messages you receive. In this case this message type allows keeping a track of received messages even if they cannot be processed.

#### Message type = DKCONF

A DKCONF message is automatically created by the system when the DK action is applied on a message in ALLEGED status.

The DKCONF message does not need a message configuration.

Orig Status	Action	Resulting Status	Use STP	Log	Subtype	Rules
NONE	NEW	PENDING	True	false	DKCONF	
PENDING	SEND	SENT	True	false	DKCONF	
SENT	DKERROR	DK_ERROR	False	false	DKCONF	
SENT	DKACKNOWLEDGE	DK_ACKNOWLEDGED	False	false	DKCONF	

### **Workflow Rules Description**

Rule name	Description
CheckMasterConfirmationTradeRule	This rule returns : - False if there is no Master Confirmation signed for a given issuer seniority and region.
DTCCCleanupGTRUSI	This rule performs the following: clean the USI information keywords for a trade submitted to a Novation Consent
CancelAllegedMessageRule	This rule performs the following: Looks for corresponding Alleged messages from DTCC (same Contra trade id and same contra trade party reference) in the system and applies the action INVALID on it.
CleanUpAllegedMessageRule	This rule performs the following: If the CONFIRM action is applied to a message then it looks for messages in the system with an ALLEGED or INDEXED_ALLEGED status for the same trade (same contra trade id, same contra trade party

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Rule name	Description
	reference, same contra trade reference number supplement and same activity), and moves them to INACTIVE status using the action CLEANUP.
CleanupIncomingNovationRequest	This rule performs the following:
	If the message is an IncomingNovationRequest, it applies the CLEANUP action on all existing DTCCNovationRequest messages for the same novationconsent id, same sender and receiver.
CleanupOutgoingNovationRequest	This rule performs the following:
	If the message is an DTCCNovationRequest, it applies the CLEANUP action on all existing DTCCNovationRequest messages for the same novationconsent id, same sender and receiver.
DKAllegedMessageRule	This rule performs the following:
	If the DK action is applied on a message in ALLEGED status it creates a new message with type DKCONF which is sent out to DTCC.
IncomingReplyMessageRule	This rule locates a matching outgoing message in the system and applies the appropriate action depending on the status sent by DTCC. It updates the outgoing message.
	It also updates the trade keyword CONFIRMED to Y, once you get a confirmed message from DTCC and sets counterparty trade id on the trade with contra trade id when available in the incoming message.
IndexAllegedMessageRule	This rule performs the following:
	When manual indexing is performed on an Alleged message, it updates the trade's external reference Id with the cpty DTCC id.
UnIndexDTCCMessageRule	This rule performs the following:
	If the UNINDEX action is applied on an Indexed message (Alleged from Cpty), it locates the indexed trade and un-indexes it.

# 5.2.6 Indexing Setup

The IncomingReply message rule indexes all INCOMINGCONF message based on:

- Outgoing Calypso message id when provided in the incoming message

- Trade Reference Number and trade Reference Number supplement, which are stored on any outgoing message as message attributes.

# 5.2.7 DTCC Transaction Types

All DTCC transaction types are not supported by all counterparties.

If a transaction type is not supported by a particular counterparty, then the confirmation has to be sent by fax instead of DTCC.

This information may be stored on legal entity attributes on the counterparty (one for each transaction type: Trade, Termination, Increase, Exit, and Assignment).

Legal Entit Processing Or				Role ALL	•
Attribute Type		•		Value	
ld	Processing Org	Legal Entity	Role	Attribute Type	Attribute Value
65593	ALL	GOLDNY	ALL	DTCC_ASSIGN	Yes
65594	ALL	GOLDNY	ALL	DTCC_INCREASE	Yes
65595	ALL	GOLDNY	ALL	DTCC_PTERM	No
65596	ALL	GOLDNY	ALL	DTCC_TERM	Yes
Load	Delete	Save		Authorizat	ion Close

These attributes can be used by the static data filters on message configurations.

# 5.3 Processing DTCC Confirmations

DTCC communicates with its members via dedicated lines and the message transfer protocol is MQSeries.

The file modules/dtcc/resources/calypso\_dtcc\_config.properties contains MQSeries and JMS messaging properties.

# 5.3.1 Generating DTCC Confirmations

DTCC confirmations are generated by the message engine based on master confirmations and message configurations. They are then sent to DTCC using the sender engine through the DTCC gateway.

The message engine can be started using com.calypso.apps.startup.StartMessageEngine.

The message engine publishes message events (PSEventMessage) and saves the messages to the database (BOMessage objects). It also publishes task events. All exceptions are created with the source "MessageEngine" and the exception type "MESSAGE\_SETUP".

Whenever the message engine is started, it processes all outstanding events to which it subscribes that were published while it was inactive.

The sender engine can be started using com.calypso.apps.startup.StartSenderEngine.

#### **Reviewing DTCC Confirmations**

You can review the generated DTCC confirmations from the Back Office Window (on a trade), or using the Message report.

Double-click a message to view its details.

DTC	E Message Window for I	Message 13839	7						
Sender	00004T33	Receiver DTC	С Тур	DTCCConfirm					
$\mathbf{k}$	Field Name	,		Field Value					
Executio	nVenue		OffFacilit	У					
Routed R	From		00004T33	3					
-loating	Rate Payer Calculation Am	ount	1450000	D					
Message	e Id		138397						
=loating	Rate Payer Calculation Cur	rency Code	USD						
Fixed Ra	te Payer (Buyer) Id		00004T34	4					
Master A	Agreement Date		2001-11-	11					
PO Supe	r Id								
First Fixe	ed Rate Payer Payment Dai	e	2012-12-	20					
	idardFlag		false						
	ce Obligation ISIN		XSNOREF	OBLOO					
	Party-ReportingParty		DTCC 00						
	Agreement Type		ISDA	· · · ·					
<pre>xmlns:env = "http://schemas.xmlsoap.org/soap/envelope/" xmlns:fpml = "http://www.fpml.org/2010/FpML-4-9" xmlns:xsi = "http://www.ido.org/2001/XMLSchema-instance" xsi:schemaLocation = "OTC_RM_10-0/xmls/OTC/OTC_RM_10-0.xsd OTC_Matching_10-0/xmls/OTC/OTC_Matching_10-0.xsd http://schemas.xmlsoap.org/soap/envelope/ /xmls/OTC/soap-envelope.xsd http://schemas.xmlsoap.org/soap/envelope/ /xmls/OTC/soap-envelope.xsd http://www.fpml.org/2010/FpML-4-9/xmls/OTC/fpml-main-4-9.xsd"&gt; </pre> can be the stable of the state of the stat									
	<fpml:partyreference hre<br=""><fpml:tradeid td="" tradeidsche<=""><th></th><th></th><td>nl:tradeId&gt;</td><td></td></fpml:tradeid></fpml:partyreference>			nl:tradeId>					
。 </td <td><pre><fpml:partyreference hre<="" pre=""></fpml:partyreference></pre></td> <th></th> <th></th> <td>nl:tradeId&gt;</td> <td>Y</td>	<pre><fpml:partyreference hre<="" pre=""></fpml:partyreference></pre>			nl:tradeId>	Y				
。 </td <td><pre><fpml:partyreference <="" <fpml:tradeid="" hre="" partytradeidentifier="" tradeidsche=""> /Submitter&gt;</fpml:partyreference></pre></td> <th></th> <th></th> <td>nl:tradeId&gt;</td> <td>¥ </td>	<pre><fpml:partyreference <="" <fpml:tradeid="" hre="" partytradeidentifier="" tradeidsche=""> /Submitter&gt;</fpml:partyreference></pre>			nl:tradeId>	¥ 				

You can click **Display in Browser** for a full view of the XML file.

Note: Depending on the default XML editor of your computer, the file may open in Internet Explorer or another application.



# 5.3.2 Importing Confirmations from DTCC

DTCC confirmations are dynamically imported using the import message engine listening to an IEAdapter.

The file modules/dtcc/resources/calypso\_dtcc\_config.properties contains MQSeries and JMS messaging properties.

You can set CalypsoToDTCC.queue.setContext=false to turn off MQOO\_SET\_ALL\_CONTEXT and MQPMO\_SET\_IDENTITY\_CONTEXT. It is true by default.

You can start the import message engine using com.calypso.apps.startup.StartImportMessageEngine with the argument -config DTCC.

Based on the status of the incoming confirmations, Calypso confirmations will be confirmed or not. The various cases are described below.

## **Transaction Type = Trade**

Enter a new trade, a CONFIRM will be sent to DTCC. The outgoing message will follow the workflow for the CONFIRM message type.

The incoming message will follow the workflow for the INCOMINGCONF message type.

➡ Error Message — The incoming message indicates that the outgoing message is invalid.

DTCC INCOMMING User: caly	🗾 DTCC INCOMMING User: calypso_user[DTCC INCOMMING]									
	rket Data Process Utilities									
	interbala Process Junities									
Template Description			✓Internal ✓External							
Start )6/14/2006 - 🔻	0D 🔻 CreationDate 💌 T	ppe INCOMINGCONF		Attributes						
End + 💌	▼ Rece	iver	Filter S	et						
Trade Id 20801	Met	hod DTCC	Product Fam	ily						
Transfer Id	Contac	t Id	Product Ty	pe						
Statement Id	Internal	Ref.	Stat	us						
Message Id	Processing	Org ALL	▼ Groupi	ng						
Template	Message	LE	Acti	on						
Trade Id Product Type EVEN	IT_TYPE MESSAGE_ID TIPO I	DE MENSAJE Msg Status	Msg_Attr.Incoming M	1sg Status Msg_Attr.Error Code/s Msg						
20801 CreditDefaultSwap	11213 INCON	IINGCONF ERROR	Error	E104						

The incoming rule SendError applies the action ERRORINDEX on the incoming message, and it moves to status ERROR. The DTCC error code is stored in the message attribute "Error Code/s".

The incoming rule SendError applies the action ERROR on the outgoing message, and it moves to status ERROR. You can modify the trade, so that the outgoing message is amended and regenerated.

Confirmed Message — The incoming message indicates that the outgoing message is valid and matched 100%.

Z DTCC INCOMMING User: calypso_user[DTCC INCOMMING]									
Report Data View Export Market Data Process Utilities Help									
+ Criteria									
Trade Id Product Type	MESSAGE_ID	TIPO DE MENSAJE	Msg Status	Msg_Attr.Incoming Ms	Msg_Attr.Error	Msg_Attr.Contra Tr	Msg_Attr.Contra Tradeld-PartyReference		
20803 CreditDefaultSwap 11218 INCOMINGCONF INDEXED Confirmed GLDM3452-DTCC00006440									

The incoming rule IncomingReply applies the INDEX action to the incoming message, and it moves to status INDEXED.

The incoming rule IncomingReply applies the CONFIRM action to the outgoing message, and it moves to status CONFIRMED.

	🗾 DTCC OUTGOING User: calypso_user[DTCC OUTGOING]									
Repo	Report Data View Export MarketData Process Utilities Help									
+ Cr	teria									
Trade	Id Product Type	EVENT_TYPE	MESSAGE_ID	TIPO DE MENSAJE	Msg Status	TEMPLATE	_NAME	Msg.	Msg_Attr.Contra Tradeld-PartyReference	
20	803 CreditDefaultSwap	VERIFIED_TRADE	11216	CONFIRM	CONFIRMED	CreditSwap_TRADE_New_A	_To_DTCC_Submity	ml	GLDM3452-DTCC00006440	

The trade keyword CONFIRMED is set to Y.

 Unconfirmed Message — The incoming message indicates that the outgoing message is valid but matched less than 100%. The outgoing message will move to UNCONFIRMED.

The incoming rule IncomingReply applies the INDEX action to the incoming message, and it moves to status INDEXED.

The incoming rule IncomingReply applies the UNCONFIRM action to the outgoing message, and it moves to status UNCONFIRMED.

#### **Transaction Type = Amendment**

Note that the transaction type Amendment only applies to trades that have been confirmed by DTCC (CONFIRMED trade keyword = Y).

Any modification will generate an DTCC message of type AMENDMENT that will be sent to DTCC.

For a notional decrease/increase, see the transaction types Partial Termination and Increase.

The incoming message will follow the workflow for the INCOMINGCONF message type.

The incoming message may return an error, a confirmed message, or an unconfirmed message as for the transaction type Trade.

## Transaction Type = Termination (full and partial termination)

To terminate a trade, bring up the Termination window from the trade.

CreditDefaultSwap Termination Window						×
E						🕜 Help
Termination Trade Date Time		7/12/2012 12:36:34 AM				
Effective Date		07/13/2012				
Termination Reason		BoughtBack				
🔳 Partial		_				
Termination Action		TERMINATE				
Include Fee			<b>V</b>			
Pay Intervening Flows			<b>v</b>			
FFCP Option			✓			
Pricer Measure		NPV				
Use flat spread  Termination Fee				alculate 🔇 Add		
		ee Amount Fee Description	Fee Payer/Receiver	Role	Pay/Rec	Trade Id
TERMINATION_FEE 07/12/2012 07/12/2012 07/12	2/2012 🔻 USD	6,575.00	BRANCHE33	<ul> <li>CounterParty</li> </ul>	▼ REC	803402
Trade Output			💬 Preview	🖉 Apply	💢 Cancel	🐖 🔹

Select BoughtBack from the Term Reason field, check the "Partial Termination" checkbox in case of a partial termination and populate the termination trade date, termination effective date and fee details.

A new DTCC message of type TERMINATION will be created once the trade reaches the TERMINATED status.

The incoming message will follow the workflow for the INCOMINGCONF message type.

The incoming message may return an error, a confirmed message, or an unconfirmed message as for the transaction type Trade.

#### **Transaction Type = Notional Increase**

To partially increase the amount of a trade, bring up the Termination window from the trade.

#### DTCC Integration Guide

CreditDefaultSwap Termination Window							×
<b></b>							🕜 Help
Termination Trade Date Time	7/12/2012	12:36:34 AM					
Effective Date	07/13/2012						
Termination Reason	NotionalInd	rease					
Notional Increase			$\checkmark$				
Increase (%)	55						
Notional (USD)	9,350,000						
Termination Action	TERMINAT	-					
Include Fee			•				
Pay Intervening Flows			<b>V</b>				
FFCP Option			<b>V</b>				
Pricer Measure	NPV						
Use flat spread					<b>a</b> l		
Termination Fee							
Fee Type Fee Date Fee Start Date Fee End Date Fee Currence		Fee Description	Fee Payer/Receiver	Ro		Pay/Rec	Trade Id
▼ TERMINATION_FEE 07/12/2012 07/12/2012 07/12/2012 ▼ USD	6,575.00		BRANCHE33	<ul> <li>Counte</li> </ul>	rParty	→ REC	803402
Trade Output			💬 Previev	v 🥖	Apply	💢 Cancel	- 💀

Select NotionalIncrease from the Term Reason field, and click the Notional Increase checkbox.

Enter a percentage of increase in the % field.

The incoming message will follow the workflow for the INCOMINGCONF message type.

The incoming message may return an error, a confirmed message, or an unconfirmed message as for the transaction type Trade.

## Transaction Type = Assignment (Novation)

- PO is either remaining party or transferor

To novate a trade, bring up the Termination window from the trade.

CreditDefaultSwap	Termination	Window								X
										🕜 Help
Termination Trade Dat	e Time				7/12/2012	12:36:34 AM				
Effective Date					07/13/2012					
Termination Reason					Novation					
🔳 Partial										
Transfer Role					CounterPa	ty				
Transferor					BRANCHE3	5				
Transferee					CREDILION	PAR				-
Remaining					BRANCHE3	3				
Termination Action					TERMINAT	E				
Include Fee										
Pay Intervening Flows	;						•			
FFCP Option										
Pricer Measure					NPV					
CreditDefaultSwap Speci	ific Panel									
Termination Fee								Calculate 🔾 Add		
Fee Type	Fee Date	Fee Start Date	Fee End Date	Fee Currency	Fee Amount	Fee Description	Fee Payer/Receiver	Role	Pay/Rec	Trade Id
TERMINATION_FEE	07/12/2012	07/12/2012	07/12/2012	▼ USD	0.00		BRANCHE33	<ul> <li>CounterParty</li> </ul>	▼ REC	803402
E Trade Output									Sec	1 .
							💬 Previev	v 🥖 Apply	X Cancel	<b>*</b> •

Select Novation from the Term Reason field, and select the transfer role and the transferee. PO is transferee

This case is similar to a new trade, with additional information specific to a step-in novation:

enter the name of transferor in the "Transfer From" field (Detail Tab of trade window)

🧳 Trade CreditDef	aultSwap Window [1430	006/BIAB]						
Trade Back Offic	ce CreditDefaultSwap	Cashflows	Analytics	Pricing Env	Market Data	View	Utilities	Help
	Sell Prot	ection/Receive	: USD 1.0000	0 Maturing on 3	12/20/2020			
Trade Details Fe	es Cashflows							
Trader	Trader 1 🗸	·	Trade Da	te 05/28/201	15	2:21:09 P	M	
Sales	NONE	·		Curren	t Trade DateTim	e		
Action	NEW	•		Bun	dles			
Status	NONE			Ren	nove From Bund	le	Show .	
Market Type	NONE	-		Mirror				
Subsidiary								
StepIn Transferor	JPMORGAN CHASE & CO							
Calc Agent								

if necessary, enter novation fee. In order to see it in DTCC messagen fee type has to be "FEE"

Trade CreditDefaultSwap Window [143006/B	IAB]		
Trade Back Office CreditDefaultSwap Cas	hflows Analytics Pricin	g Env Market Data	View Utilities Help
Sell Protection	on/Receive: USD 1.00000 Mat	uring on 12/20/2020	
Trade Details Fees Cashflows			
Type FEE	▼ Fee Date	05/29/2015	Billing Ccy
Amount 15,000 USD	▼ Start Date	05/29/2015	Fx Rate 0
	End Date	05/29/2015	
Fee Calculation	Legal Entity	JPMORGAN CHASE & C	
Method NONE	Known Date		
Input 0 Calc	Description		
Role CounterParty -			
Generate Add Modify	Remove		
Type Date Start Date End Date C	Currency Amount Lega	l Entity Pay,	Rec Known Date Method
FEE 05/29/2015 05/29/2015 05/29/2015 U	SD 15,000.00 JPMor	rgan Chase & Co. PAY	NONE

The incoming message will follow the workflow for the INCOMINGCONF message type.

The incoming message may return an error, a confirmed message, or an unconfirmed message as for the transaction type Trade.

#### **Alleged Messages**

These are messages from DTCC notifying a counterparty's intention to match a specific activity on a specific transaction type.

For alleged messages, there will be a reference to a Calypso trade\_id when the transaction type of the alleged message is a post-trade transaction (trade is confirmed already in DTCC) but there won't be any reference to a Calypso trade\_id in case of a new trade.

- Alleged message is a New Trade transaction

In this case, the user will use DTCC website and reporting tool to find the possible matching trades that best correspond to the alleged message.

- Alleged Message is a post trade transaction

In this case, the alleged message is indexed to its corresponding Calypso trade so that the user can easily act on the corresponding Calypso trade in order to process the counterparty request.

If you cannot find a matching outgoing message, and think the message you received should have been sent to somebody else, apply the DK action to the incoming message. The rule DKAlleged will create a message of type DKCONF and send it to DTCC. When the incoming message for the DKCONF is imported, it will have the DTCC status DK acknowledged or error. The outgoing DKCONF message can then be moved to status DK\_ACKNOWLEDGED or DK\_ERROR (currently, the action has to be manually applied).

If the DTCC status is cancel alleged, the CANCELALLEGE action is applied to the incoming message, and it moves to CANCEL\_ALLEGED status. The incoming rule CancelAlleged looks for the corresponding alleged message already in the system and applies the INVALID action.

# 5.4 TriParty Model

The DTCC V10.0 Credit Derivative release incorporates support for Triparty ticket model.

DTCC's triparty model provides a new set of messages dedicated to the process of clearing for CreditDefaultSwapShort and CreditDefaultSwapIndex

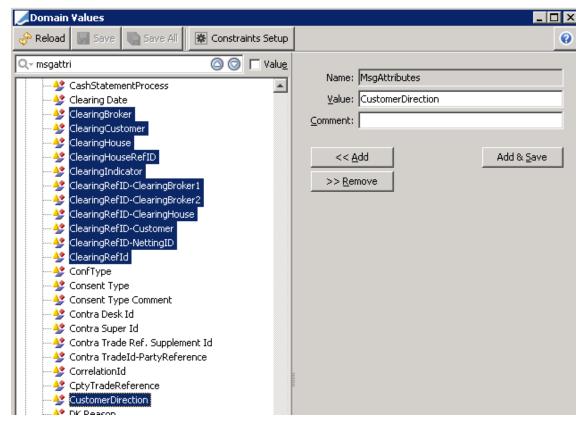
The table below explains the steps of the workflow: Light green lines are not supported, and not covered in this module.

Trade	St	ер	Event	Transaction type	Initiator (Direction)
Request	1	1-1	New trade & Request to clear	New	Members → DTCC
					Affiliates $\rightarrow$ DTCC
		1-2	Request to clear	CCP report (FTP)	DTCC → CCP
Terminate (VIT)	2	2-1	Terminate original bilateral trades	VIT Termination	CCP → DTCC
(vendor initiated		2-2	Termination confirmed	VIT Termination	DTCC → CCP
termination)					DTCC $\rightarrow$ Members or Affiliates
Register	3	3-1	Registration CCP-facing trade	PreConfirmed	CCP → DTCC
		3-2	Registration confirmed	PreConfirmed	DTCC → CCP
					DTCC $\rightarrow$ Members
Post Clearing	4	4-1	TRI change – incoming	TRI change	Members $\rightarrow$ DTCC $\rightarrow$ CCP?
		4-2	TRI change - outgoing	TRI change	CCP → DTCC
	5	5-1	Early termination	VIT Termination	CCP → DTCC
		5-2	Termination confirmed	VIT Termination	DTCC → CCP
					DTCC $\rightarrow$ Members or Affiliates
	6		Novation	Novation	Members -> DTCC -> CCP?
	7		Amendment (VIA)	VIA Amendment	Members -> DTCC -> CCP?
	8		Workflow field change	WorkflowUpdate	Members -> DTCC -> CCP?
	9	9-1	Credit event of restructuring	PreConfirmed	CCP → DTCC -> Members
			split-off single name trade input - outgoing		
		9-2	Credit event of restructuring split-off single name trade input - incoming	PreConfirmed	DTCC → CCP

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## 5.4.1 Triparty messages / ClearingDetails

These TRIParty messages are comparable to regular messages of same transaction type, with the addition of the <ClearingDetails> tag. When such messages are imported in Calypso as a BO message, these fields are saved as message attributes, and then have to be declared in domain values MsgAttributes, as following:



For ClearingRefID which has multiple occurrences, we will name them as ClearingRefID-ClearingBroker1, ClearingRefID-ClearingBroker2, ClearingRefID-Customer, ClearingRefID-ClearingHouse

DTCC Message Window for Message 30583 (Us			
5ender DTCC Receiver Type	DTCCConfirm		
Field Name 🔺		Field Value	
alypso Trade Id	100304		
ilearingBroker	DTCC00004	тзз	
learingCustomer	DTCC00004	T35	
learingHouse	DTCC00004	T34	
learingIndicator	Cleared		
ilearingRefID-ClearingBroker1	CBREF0000	1	
learingRefID-ClearingBroker2	CBREF0000	2	
learingTransactionType	Client		
ontra Party Reference Id	00004T34		
iontra Trade Id	100304-CTF	34	
ontractual Terms Supplement Publication Date	2010-01-01		
ontractual Terms Supplement Type	CDXTranche	,	
ustomerDirection	Sell		
<pre></pre>	omer> :tionType> ker1">CBREF0000 ker2">CBREF0000	2	
			Þ

# 5.4.2 TRIChange

## **INCOMING TRICHANGE**

TRI changes will become very common with the clearing process, because when a cleared trade is first booked as a Preconfirmed trade by a CCP, DTCC will assign it a reference for the clearing member. But because the clearing member didn't choose this reference, he may be very likely to change it for a more convenient one.

When a TRI change message is received, IncomingReply message rule should update DTCC\_CPTY\_ID trade keyword if Counterparty TRI has changed: it will take in account 2 new dtcc message statuses: "YourTRIChanged" and "ContraTRIChanged".

## **OUTGOING TRICHANGE**

Trade Attribute (keyword) 'TransferTo' (on trade in status Terminated) will trigger the TRI change message. The TRIChange will be triggered by a trade termination with the termination type **BookTransfer**. This is only a request from one client, so Calypso does not change the termination template selector (**TerminationDTCCTemplateSelector**). Client will have to add a new line in its message setup referring to the template **TRIChange\_Rename\_New\_A\_To\_DTCC.xml** combined with an appropriated Static Data Filter filtering **BookTransfer** termination type.

Sample Message set up:

Edit Browse			
Product Type	CDSIndexTranche	Language	English
Event Type	TERMINATED_TRADE	Address Type	DTCC
Message Type	DTCC_CONFIRM	Gateway	ртсс
Processing Org	ALL	Format Type	ртсс
PO Contact Type	Default 🗾	Template	.ename_New_A_To_DTCC.xml
Receiver	ALL	SD Filter	isDTCC_TRIChange
Receiver Role	CounterParty		Matching
Rec Contact Type	Default 💌		Do not Send Message
Grouping	<b>•</b>		Inactive

#### With SD Filter:

Static Data Filter Window [1200005P6/REL12005P3-T5E/] (User: )									
Name: isDTCC_TRIChange						Attributes	s	imulate	
Comment:	Comment: Pending Modifs							ding Modifs	
Groups: AN	Groups: ANY								
	Attribute		Criteria				Filter Va	lue(s)	
KEYWORD.Term	inationType		⊤ IN		Add		BookTransfer		
MASTER_CONFI	MASTER_CONFIRMATION.isDTCC						► Y		
Load	New	Delete	Save	Si	ave as			Usage	Close

Sender 00004T34	Receiver	Type DTCCConfirm				
Field Name		Field Value				
lessage Status		Submit				
rade Previous Id		100307				
lessage Activity		New				
roduct Type		CreditDefaultSwapIndexTranche				
lessage Transaction		TRIChange				
outed From		00004T34				
outed To		DTCC				
lessage Id		30595				
O Trade Party Reference		00004T34				
alypso Trade Id		100310				
 <env:body> <otc_matching xmlns="OTC_Matching_1&lt;br&gt;&lt;Activity&gt;New&lt;/Activity&gt;&lt;/th&gt;&lt;th&gt;0-0"></otc_matching></env:body>						
<status>Submit</status>						
<trichange> <tradereferenceinfo></tradereferenceinfo></trichange>						
<submitter></submitter>						
<pre><pre>&gt; <pre>&gt; <pre>&gt; <pre>&gt; </pre></pre></pre></pre></pre>						
<pre><fpml:partyreference href="DTCCl&lt;/pre&gt;&lt;/td&gt;&lt;th&gt;00004T34"></fpml:partyreference><td></td><td></td></pre>						
<fpml:tradeid tradeidscheme="Tra&lt;/td&gt;&lt;th&gt;&lt;/th&gt;&lt;td&gt;&lt;/fpml:tradeId&gt;&lt;/td&gt;&lt;td&gt;&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;/partyTradeIdentifier&gt;&lt;/td&gt;&lt;th&gt;&lt;/th&gt;&lt;td&gt;&lt;/td&gt;&lt;td&gt;&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;/Submitter&gt;&lt;/td&gt;&lt;th&gt;&lt;/th&gt;&lt;td&gt;&lt;/td&gt;&lt;td&gt;&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;OldTradeId&gt;&lt;/td&gt;&lt;th&gt;&lt;/th&gt;&lt;td&gt;&lt;/td&gt;&lt;td&gt;&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;pre&gt;&lt;pre&gt;&lt;pre&gt;&lt;pre&gt;&lt;pre&gt;&lt;pre&gt;&lt;pre&gt;&lt;pre&gt;&lt;/td&gt;&lt;th&gt;00004704"></fpml:tradeid> <td></td> <td></td>						
<fpml:partyreference href="DTCC &lt;br&gt;&lt;fpml:tradeId tradeIdScheme=" td="" tra<=""><th></th><td></td><td></td></fpml:partyreference>						
<pre><party id="DTCC00004T34"></party></pre>						
<fpml:partyid>DTCC00004T34</fpml:partyid>						
<trichangetype>Rename</trichangetype>						

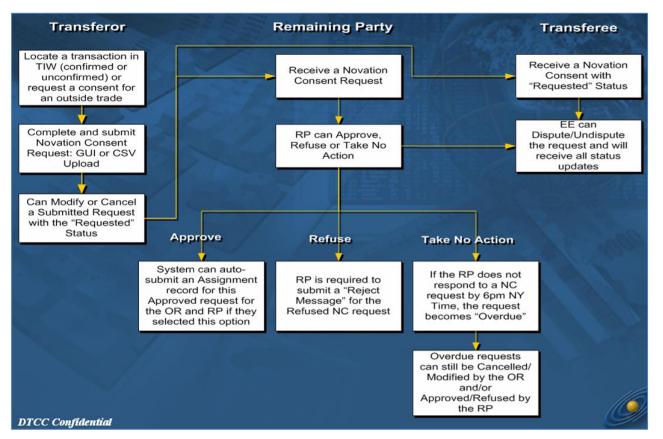
# Section 6. DTCC Novation Consent

This section describes Calypso interface to DTCC Novation Consent service, an electronic novation consent service based on 2005 ISDA Novation Protocol.

Calypso module supports most of DTCC features, with some limitations:

- When the Processing Org is Transferor, and the novation request is created from Calypso, then Calypso only supports "inside" novation request (novation of trades confirmed in DTCC Trade Information Warehouse). Outside novation are supported in other cases (outside novation requests created from DTCC GUI when PO is Transferor, and all kind of request when PO is Remaining Party or Transferee.
- ➡ When the Processing Org is transferee, once the novation request is accepted, Calypso doesn't create the stepin trade automatically. Trade needs to be captured manually.

## 6.1 Presentation



## 6.1.1 DTCC general flowchart

Calypso replicates this flowchart, with the Processing Org being Transferor, Remaining Party or Transferee.

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# 6.1.2 Procedure when the Processing Org is Transferor

### **Starting from Calypso**

- 1. Trade is terminated through the termination window. At this stage, trade is NC\_PENDING and not yet TERMINATED because of the pending novation request
- 2. NC\_PENDING trade event triggers generation of a DTCCNovationRequest message, which is sent to DTCC
- 3. Remaining Party and Transferee receive the novation request and reply
- Any status change of the novation request in DTCC is received in Calypso as an IncomingNovationRequest message. Original DTCCNovationRequest message status changes accordingly (REQUESTED, APPROVED, REFUSED, DISPUTED, OVERDUE)
- 5. Once the request is approved, trade is moved to NC\_ACCEPTED, where a manual (or STP) approval can move it to the TERMINATED status.
- 6. TERMINATED trade event will trigger a Novation DTCC Confirmation message.
  - a. Message is sent to DTCC as usual if novation request has been approved with AutoAssignement = false
  - b. Message is never sent to DTCC is novation request has been approved with AutoAssignement = true (in this case, message setup can be designed in order not create any message at all).

## Starting from DTCC Novation Consent GUI

- 1. Novation request is created from DTCC Novation Consent GUI. At this stage trade is VERIFIED in Calypso.
- 2. Remaining Party and Transferee receive the novation request and reply
- 3. Any status change of the novation request in DTCC is received in Calypso as an IncomingNovationRequest message.
- 4. Once the request is approved, a manual (or STP) approval on the IncomingNovationRequest terminates the trade.
- 5. TERMINATED trade event will trigger a Novation DTCC Confirmation message.
  - a. Message is sent to DTCC as usual if novation request has been approved with AutoAssignement = false
  - b. Message is never sent to DTCC is novation request has been approved with AutoAssignement = true (in this case, message setup can be designed in order not create any message at all).

# 6.1.3 Procedure when the Processing Org is Remaining Party

- 1. Remaining Party receives novation request from Transferor (Calypso IncomingNovationRequest with status RP\_ALLEGED)
- 2. Remaining Party accepts, disputes or refuses the request, or takes no action.
- 3. REFUSE, DISPUTE and ACCEPT actions on the RP\_ALLEGED message trigger the creation of a DTCCNovationReply message (with corresponding consent type)
- 4. Once the request is approved, a manual (or STP) approval on the IncomingNovationRequest terminates the trade.
- 5. Any status change of the novation request in DTCC is received in Calypso as an IncomingNovationRequest message. DTCCNovationReply message (if any) status changes accordingly.
- 6. Once the request is approved, a manual (or STP) approval on the IncomingNovationRequest terminates the trade.
- 7. TERMINATED trade event will trigger a Novation DTCC Confirmation message.
  - c. Message is sent to DTCC as usual if novation request has been approved with AutoAssignement = false
  - d. Message is never sent to DTCC is novation request has been approved with AutoAssignement = true (in this case, message setup can be designed in order not create any message at all).

- 1. Transferee receives novation request from Transferor (Calypso IncomingNovationRequest with status EE\_ALLEGED)
- 2. Transferee can dispute the request from DTCC GUI, otherwise wait until it's accepted / refused.
- 3. Once the request is approved, step-in trade can be captured manually in Calypso.

## 6.2 Calypso Setup

# 6.2.1 Additional settings

In order to use DTCC novation consent, run DTCCSchemaData.xml with the "DTCC novations" option checked.

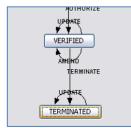
In order to create the DTCC transfer workflow, choose Navigator > Configuration > Workflow > Workflow Configuration. Then import the workflow contained in the DTCCNovationsMsgWorkflow.wf file.

# 6.2.2 Trade workflow

Note: this setup can be imported automatically in Calypso using the DTCCNovationsTradeWorkflow.wf file. This file doesn't create a full Trade workflow, but only create some additional statuses and actions in order to handle novation consent. Please note that this file will modify Trade workflow defined for PO=ALL, Product Type=ALL, Product SubType=ALL: if this is not the workflow used in your implementation, then modify the file accordingly before using it.

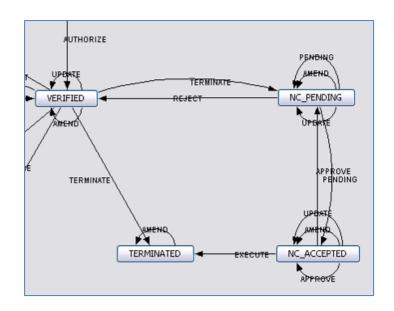
Trade workflow needs to be modified in order to handle DTCC novation request.

From original workflow like this one:



, add some statuses related to the novation consent lifecycle:

- NC\_PENDING: novation consent in any status but accepted.
- ➡ NC\_ACCEPTED: novation request is accepted



From VERIFIED, trade is terminated using the TERMINATE action. Resulting status is NC\_PENDING when there is a novation consent to be processed, and TERMINATED otherwise.

The choice of one of these 2 options is driver by the CheckDTCCNovation and CheckNotDTCCNovation rules:

- CheckDTCCNovation is set on the VERIFIED TERMINATE NC\_PENDING transition. This rule returns true if: Trade is confirmed in DTCC, has been novated, no novation request already exist and the PO is the transferor
- CheckNotDTCCNovation is set on the VERIFIED TERMINATE TERMINATED transition. This rule is the opposite rule of CheckDTCCNovation

With the implementation of reporting data, the DTCCCleanupGTRUSITradeRule has to be added in case of Novation RP, full or partial (Termination Reason= Novation and Transfer Role=Counterparty) that will remove USI/USIIssuer and USI/USITradeId on the new trade created between RP and EE.

Note about customizing the trade workflow: Actions resulting from incoming messages are applied by the DTCCApplyNovation Message Rule.

In the default setup, we kept the trade workflow as simple as possible with only 2 statuses: NC\_PENDING and NC\_ACCEPTED. Using domains **DTCCNCTradeAction.<consent type>.<consent status> or DTCCNCTradeAction.<consent type>** you can change this workflow to make it more accurate (but also more complex).

## 6.2.3 DTCCNovationRequest message setup and workflow

### **Message Setup**

DTCCNovationRequest messages are triggered by NC\_PENDING trade event:

Product	Event	Template Name	Static Filter
CreditDefaultSwap	NC_PENDING_TRADE	NovationConsent_New_Request_OR_To_DTCC.xml	DTCC_NCActionsTriggeringMessages
CDSIndex	NC_PENDING_TRADE	NovationConsent_New_Request_OR_To_DTCC.xml	DTCC_NCActionsTriggeringMessages
CDSIndexTranche	NC_PENDING_TRADE	NovationConsent_New_Request_OR_To_DTCC.xml	DTCC_NCActionsTriggeringMessages

Name:	DTCC_NCActionsTrigger	- ingMessages	Attributes		Simulate
Comment:					Pending Modifs
Groups:	ANY				
Attribute	Criteria		Filter Value(s)		
Trade Action	n 🔽 IN	[ Add	I I TERMINATE, AMI	END	
Load	New	Delete	Save Save as	Usa	ge Close

### **Message Workflow**

Message created and validated reach the VERIFIED status.

Then the sender engine processes them to DTCC.

All statuses after SENT reflect the status of the last received incoming message (REQUESTED, APPROVED, REFUSED, DISPUTED, OVERDUE, or ERROR).

(the workflow definition is given in DTCCNovationMsgWorkflow.wf)

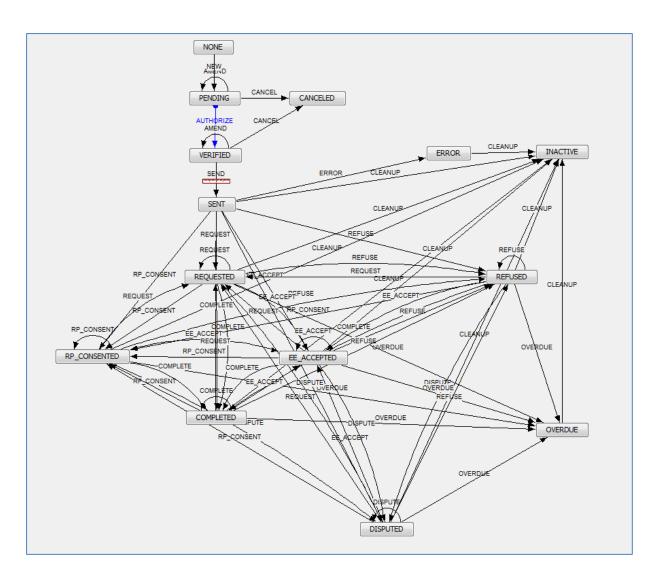
Orig Status	Action	Resulting Status	Use STP	Subtype	Rules
COMPLETED	CLEANUP	INACTIVE	FALSE	DTCCNovationRequest	
COMPLETED	COMPLETE	COMPLETED	FALSE	DTCCNovationRequest	
COMPLETED	EE_ACCEPT	EE_ACCEPTED	FALSE	DTCCNovationRequest	
COMPLETED	OVERDUE	OVERDUE	FALSE	DTCCNovationRequest	
COMPLETED	REFUSE	REFUSED	FALSE	DTCCNovationRequest	
COMPLETED	REQUEST	REQUESTED	FALSE	DTCCNovationRequest	
COMPLETED	RP_CONSENT	RP_CONSENTED	FALSE	DTCCNovationRequest	
DISPUTED	CLEANUP	INACTIVE	FALSE	DTCCNovationRequest	
DISPUTED	DISPUTE	DISPUTED	FALSE	DTCCNovationRequest	
DISPUTED	EE_ACCEPT	EE_ACCEPTED	FALSE	DTCCNovationRequest	
DISPUTED	OVERDUE	OVERDUE	FALSE	DTCCNovationRequest	
DISPUTED	REFUSE	REFUSED	FALSE	DTCCNovationRequest	
DISPUTED	REQUEST	REQUESTED	FALSE	DTCCNovationRequest	
DISPUTED	RP_CONSENT	RP_CONSENTED	FALSE	DTCCNovationRequest	

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Orig Status	Action	Resulting	Use	Subtype	Rules
		Status	STP		
EE_ACCEPTED	CLEANUP	INACTIVE	FALSE	DTCCNovationRequest	
EE_ACCEPTED	COMPLETE	COMPLETED	FALSE	DTCCNovationRequest	
EE_ACCEPTED	DISPUTE	DISPUTED	FALSE	DTCCNovationRequest	
EE_ACCEPTED	EE_ACCEPT	EE_ACCEPTED	FALSE	DTCCNovationRequest	
EE_ACCEPTED	OVERDUE	OVERDUE	FALSE	DTCCNovationRequest	
EE_ACCEPTED	REFUSE	REFUSED	FALSE	DTCCNovationRequest	
EE_ACCEPTED	REQUEST	REQUESTED	FALSE	DTCCNovationRequest	
EE_ACCEPTED	RP_CONSENT	RP_CONSENTED	FALSE	DTCCNovationRequest	
ERROR	CLEANUP	INACTIVE	FALSE	DTCCNovationRequest	
NONE	NEW	PENDING	FALSE	DTCCNovationRequest	
OVERDUE	CLEANUP	INACTIVE	FALSE	DTCCNovationRequest	
PENDING	AMEND	PENDING	FALSE	DTCCNovationRequest	
PENDING	AUTHORIZE	VERIFIED	TRUE	DTCCNovationRequest	
PENDING	CANCEL	CANCELED	FALSE	DTCCNovationRequest	
REFUSED	CLEANUP	INACTIVE	FALSE	DTCCNovationRequest	
REFUSED	COMPLETE	COMPLETED	FALSE	DTCCNovationRequest	
REFUSED	DISPUTE	DISPUTED	FALSE	DTCCNovationRequest	
REFUSED	EE_ACCEPT	EE_ACCEPTED	FALSE	DTCCNovationRequest	
REFUSED	OVERDUE	OVERDUE	FALSE	DTCCNovationRequest	
REFUSED	REFUSE	REFUSED	FALSE	DTCCNovationRequest	
REFUSED	REQUEST	REQUESTED	FALSE	DTCCNovationRequest	
REFUSED	RP_CONSENT	RP_CONSENTED	FALSE	DTCCNovationRequest	
REQUESTED	CLEANUP	INACTIVE	FALSE	DTCCNovationRequest	
REQUESTED	COMPLETE	COMPLETED	FALSE	DTCCNovationRequest	
REQUESTED	DISPUTE	DISPUTED	FALSE	DTCCNovationRequest	
REQUESTED	EE_ACCEPT	EE_ACCEPTED	FALSE	DTCCNovationRequest	
REQUESTED	OVERDUE	OVERDUE	FALSE	DTCCNovationRequest	

Orig Status	Action	Resulting Status	Use STP	Subtype	Rules
REQUESTED	REFUSE	REFUSED	FALSE	DTCCNovationRequest	
REQUESTED	REQUEST	REQUESTED	FALSE	DTCCNovationRequest	
REQUESTED	RP_CONSENT	RP_CONSENTED	FALSE	DTCCNovationRequest	
RP_CONSENTED	CLEANUP	INACTIVE	FALSE	DTCCNovationRequest	
RP_CONSENTED	COMPLETE	COMPLETED	FALSE	DTCCNovationRequest	
RP_CONSENTED	DISPUTE	DISPUTED	FALSE	DTCCNovationRequest	
RP_CONSENTED	EE_ACCEPT	EE_ACCEPTED	FALSE	DTCCNovationRequest	
RP_CONSENTED	OVERDUE	OVERDUE	FALSE	DTCCNovationRequest	
RP_CONSENTED	REFUSE	REFUSED	FALSE	DTCCNovationRequest	
RP_CONSENTED	REQUEST	REQUESTED	FALSE	DTCCNovationRequest	
RP_CONSENTED	RP_CONSENT	RP_CONSENTED	FALSE	DTCCNovationRequest	
SENT	CLEANUP	INACTIVE	FALSE	DTCCNovationRequest	
SENT	COMPLETE	COMPLETED	FALSE	DTCCNovationRequest	
SENT	DISPUTE	DISPUTED	FALSE	DTCCNovationRequest	
SENT	EE_ACCEPT	EE_ACCEPTED	FALSE	DTCCNovationRequest	
SENT	ERROR	ERROR	FALSE	DTCCNovationRequest	
SENT	REFUSE	REFUSED	FALSE	DTCCNovationRequest	
SENT	REQUEST	REQUESTED	FALSE	DTCCNovationRequest	
SENT	RP_CONSENT	RP_CONSENTED	FALSE	DTCCNovationRequest	
VERIFIED	AMEND	VERIFIED	FALSE	DTCCNovationRequest	
VERIFIED	CANCEL	CANCELED	FALSE	DTCCNovationRequest	
VERIFIED	SEND	SENT	FALSE	DTCCNovationRequest	CleanupOutgoingNovationRequest

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# 6.2.4 IncomingNovationRequest workflow

IncomingNovation message are created by the ImportMessage engine when messages are received from DTCC. Based on its content, indexed message and/or trade, when exists, is modified.

For alleged message, user can act on the incoming message in order to create a DTCCNovationReply message.

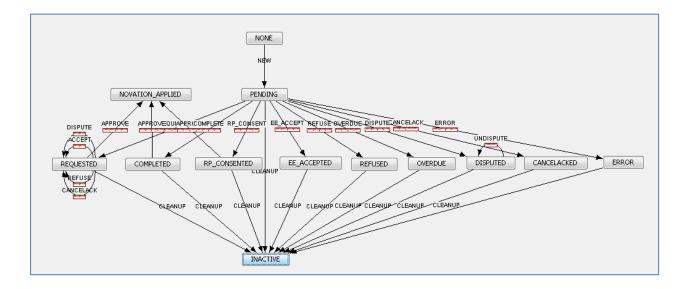
Orig Status	Action	Resulting Status	Use STP	Subtype	Rules
CANCELACKED	CLEANUP	INACTIVE	FALSE	IncomingNovationRequest	
COMPLETED	APPROVE	NOVATION_APPLIED	FALSE	IncomingNovationRequest	DTCCApplyNovation
COMPLETED	CLEANUP	INACTIVE	FALSE	IncomingNovationRequest	
DISPUTED	CLEANUP	INACTIVE	FALSE	IncomingNovationRequest	

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Orig Status	Action	Resulting Status	Use STP	Subtype	Rules
DISPUTED	UNDISPUTE	DISPUTED	FALSE	IncomingNovationRequest	DTCCNovationReply
EE_ACCEPTED	CLEANUP	INACTIVE	FALSE	IncomingNovationRequest	
ERROR	CLEANUP	INACTIVE	FALSE	IncomingNovationRequest	
NONE	NEW	PENDING	FALSE	IncomingNovationRequest	
OVERDUE	CLEANUP	INACTIVE	FALSE	IncomingNovationRequest	
PENDING	CANCELACK	CANCELACKED	FALSE	IncomingNovationRequest	CleanupIncomingNovationRequest IncomingNovationRequest
PENDING	CLEANUP	INACTIVE	FALSE	IncomingNovationRequest	
PENDING	COMPLETE	COMPLETED	FALSE	IncomingNovationRequest	CleanupIncomingNovationRequest IncomingNovationRequest
PENDING	DISPUTE	DISPUTED	FALSE	IncomingNovationRequest	CleanupIncomingNovationRequest IncomingNovationRequest
PENDING	EE_ACCEPT	EE_ACCEPTED	FALSE	IncomingNovationRequest	CleanupIncomingNovationRequest IncomingNovationRequest
PENDING	ERROR	ERROR	FALSE	IncomingNovationRequest	IncomingNovationRequest
PENDING	OVERDUE	OVERDUE	FALSE	IncomingNovationRequest	CleanupIncomingNovationRequest IncomingNovationRequest
PENDING	REFUSE	REFUSED	FALSE	IncomingNovationRequest	CleanupIncomingNovationRequest IncomingNovationRequest
PENDING	REQUEST	REQUESTED	FALSE	IncomingNovationRequest	CleanupIncomingNovationRequest IncomingNovationRequest
PENDING	RP_CONSENT	RP_CONSENTED	FALSE	IncomingNovationRequest	CleanupIncomingNovationRequest IncomingNovationRequest
REFUSED	CLEANUP	INACTIVE	FALSE	IncomingNovationRequest	
REQUESTED	ACCEPT	REQUESTED	FALSE	IncomingNovationRequest	DTCCNovationReply
REQUESTED	APPROVE	NOVATION_APPLIED	FALSE	IncomingNovationRequest	DTCCApplyNovation
REQUESTED	CANCELACK	REQUESTED	FALSE	IncomingNovationRequest	DTCCNovationReply
REQUESTED	CLEANUP	INACTIVE	FALSE	IncomingNovationRequest	

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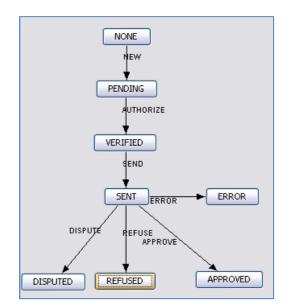
Orig Status	Action	Resulting Status	Use STP	Subtype	Rules
REQUESTED	DISPUTE	REQUESTED	FALSE	IncomingNovationRequest	DTCCNovationReply
REQUESTED	REFUSE	REQUESTED	FALSE	IncomingNovationRequest	DTCCNovationReply
RP_CONSENTE D	APPROVE	NOVATION_APPLIED	FALSE	IncomingNovationRequest	DTCCApplyNovation
RP_CONSENTE D	CLEANUP	INACTIVE	FALSE	IncomingNovationRequest	



Workflow rules used:

- IncomingNovationRequest: This rule sets attributes on the corresponding indexed message (if any), and changes the
  index message status according to incoming consent type and consent status.
- DTCCApplyNovation: This rule acts on the corresponding trade (if any). This rule uses the domains DTCCNCTradeAction.<consent type>.<consent status> and DTCCNCTradeAction.<consent type> in order to decide which action should be applied on the corresponding trade. This rule
  - Adds DTCCNovationConsentId as a keyword
  - If the consent type is Accept:
    - DTCCAutoGenerateAssignment is added as a trade keyword, based on corresponding message attribute value.
    - If trade is terminated, trade is just saved. If not terminated, then trade is terminated (novated) using message details (fee amount, notional, new counterparty, ...)
- DTCCNovationReply: this rule creates the DTCCNovationReply message with consent type based on the action
  performed (Approve, Refuse or Dispute)
- CleanupIncominNovationRequest: applies the CLEANUP action on all existing DTCCIncomingNovationRequest
  messages for the same novation consent id, same sender and receiver. The goal here is to have only the last
  incoming message not being INACTIVE for ease of reporting and monitoring.

### 6.2.5 DTCCNovationReply workflow



### 6.2.6 AutoGenerateAssignment option

When sending a novation consent message to DTCC (DTCCNovationRequest or DTCCNovationReply), AutoGenerateAssignment option is mandatory.

When a novation consent is confirmed with AutoGenerateAssignment = true, then no confirmation message is required for this novation transaction, whereas AutoGenerateAssignment = false means that a novation confirmation message has to be send as usual.

#### Setting AutoGenerateAssignment option during the novation consent lifecycle

Default value of AutoGenerateAssignment in Calypso is *false*. You can set this value to *true* using message rule SetAttributes: (note that the transition comment is important, it is used by the rule SetAttributes in order to know which attribute and value to set).

For this, you can replace this workflow transition (in both DTCCNovationRequest and DTCCNovationReply workflows):

Orig Status	Action	<b>Resulting Status</b>	Rules	Comment
PENDING	AUTHORIZE	VERIFIED		
By:				
Orig Status	Action	Resulting Status	Rules	Comment

PENDING	AUTHORIZE	VERIFIED	SetAttributes	{AutoGenerateAssignment = true}

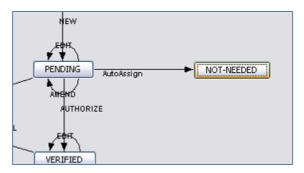
#### Using AutoGenerateAssignment option to manage confirmation messages

The DTCCApplyNovation message rule, when it updates the trade once the novation request is approved, will set the DTCCAutoGenerateAssignment keyword with the corresponding value.

In the DTCC\_CONFIRM workflow, this keyword can be used to manage the lifecycle of the novation DTCC\_CONFIRM. Example:

Static Data Filter Window [101	000/dtcc	:_uat/calypso_user] 📃 🗖 🗙							
Name: DTCCNovation-WithAutoAssign Attributes Simulate									
Comment:		Pending Modifs							
Groups: ANY									
Attribute	Criteria	Filter Value(s)							
KEYWORD.DTCCAutoGenerateAssignment	I≂ IN	[Add] true							
IN Static Data Filter	⊤ IN	[Add] isDTCC_NovationEE, isDTCC_NovationOR, isDTCC_NovationRP							

🛃 Static Data Filter Window [101000/dtcc_uat/calypso_user] 🛛 🖃 🖾 🔀									
Name: NotDTCCNoval	ion-WithAutoAssign	Attributes	Simulate						
Comment:			Pending Modifs						
Groups: ANY									
Attribute	Criteria	Filter Value(s)							
IN Static Data Filter	▼ NOT_IN	[Add] DTCCNovation-WithAutoAssign							



Orig Status	Action	<b>Resulting Status</b>	Rules	Filter
PENDING	AutoAssign	NOT-NEEDED		DTCCNovation-WithAutoAssign
PENDING	AUTHORIZE	VERIFIED		NotDTCCNovation-WithAutoAssign

### 6.2.7 Sender config

DTCCNovationRequest and DTCCNovationReply message are sent by sender engine when message is VERIFIED:

📕 Message Seno	ler Config						_	
Sender Config Cor	oy Config							
Message Status	VERIFIED		₩ F	roduct Type	ALL			~
Advice Type	DTCCNova	tionReply	✓ A	ddress Type	DTCC			~
Static Data Filter				Gateway	DTCC			~
√5ave √5end								
GatewayDTCCDocumentSender class will be called           Save         Remove         New								
Id Status	Product	Advice Type 7	Address Type	Gateway	SD Filter	Send	Save	Ву
118725 VERIFIED	ALL	DTCCNovationReply	DTCC	DTCC				
	ALL	DTCCNovationRequest	DTCC	DTCC				
	ALL	DTCC_CONFIRM	DTCC	DTCC				†
851 SENT	ALL	PAYMENTMSG	SWIFT	SWIFT				-
	AU	DAVMENT ADUTCE	NA A TI		1			<u> </u>
<								7
				Config Id	118725	Help		Close

## 6.2.8 Reporting and monitoring

Many message statuses should be monitored in the message report or the Task station.

Among them, some of the most meaningful ones are:

Msg Type	Status	Meaning and action to take
		Message has been rejected by DTCC because of bad content. See error
All	ERROR	explanation in the message itself
		A pending novation request has been refused or disputed by remaining
	REFUSED or	party or transferee.
All	DISPUTED	See consent comment in the message.
All	OVERDUE	A pending novation request is overdue
		PO is remaining party and is alleged a novation request. User should
IncomingNovationrequest	RP_ALLEGED	reply back with the APPROVE or REFUSE action, or take no action.
		PO is transferee and is alleged a novation request. User should reply
IncomingNovationrequest	EE_ALLEGED	back with the DISPUTE action, or take no action.
		On an APPROVED incoming novation request, user should accept
IncomingNovationrequest	APPROVED	manually (action APPROVE) in order to update the corresponding trade

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# Section 7. DTCC Message Keywords

A number of DTCC message templates are provided out-of-the-box under

resources/com/calypso/templates/dtcc. They can be customized or you can create your own templates. DTCC Message templates should be registered in the "DTCC.Templates" domain.

Templates contain XML tags as well as template keywords to retrieve information from trades, messages and transfers. All available message keywords are described below. Keywords have the format |keyword name|, they are bracketed using the "|" symbol.

Keyword Names	CDS Master Conf	CDS Matrix Names	CDS Index CDS ABS Index	CDS Index CDS ABS Index Standard Terms	CDS Index Tranche	CDS option	CDX option	Paymt
ACTIVITY	x	x	x	х	х	x	х	
If message sub-action is "amend", then ACTIVITY is "Modify", otherwise it's "New".								
AMEND_EFFECTIVE_DATE	x	x	x	x	х	x	x	
Effective date.								
AMEND_FEE_ELEMENT	x	x	x	x	х	x	х	
Adds the element with the information based on the "AMENDMENT_FEE" if present.								
AMEND_TRADE_DATE	x	x	x	x	х	x	x	
Trade date.								
ATTACHMENT_POINT					х			
ATTACHMENT_POINT#ASSIGNED (assigned trade)								
CDSIndexTranche attachment point.								
CALC_AGENT_BUSINESS_CENTER	х	х	x	х	x	х	х	
CALC_AGENT_BUSINESS_CENTER#ASSIGNED (assigned trade)								
Only for CreditDefaultSwap, when transaction type is Matrix or is part of the AsiaPacific&Sovereign list, adds the tag with code of the calculation agent city of the trade which is stored in the comment of the related domain value.								
CALCULATION_AGENT				x	х	x	x	
CALCULATION_AGENT#ASSIGNED (assigned trade)								
DTCC ID of the SELLER.								
CDSINDEX_ADDITIONAL_TERM_ELEMENT					х			
CDSINDEX_ADDITIONAL_TERM_ELEMENT#ASSIGNED (assigned trade)								
Always empty. For Tranches, <additionnalterms> is always omitted.</additionnalterms>								

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Keyword Names	CDS Master Conf	CDS Matrix Names	CDS Index CDS ABS Index	CDS Index CDS ABS Index Standard Terms	CDS Index Tranche	CDS option	CDX option	Paymt
CDSINDEX_ADDITIONAL_TERM CDSINDEX_ADDITIONAL_TERM#ASSIGNED (assigned trade) Always "N"			х	х				
CDSINDEX_REF_ENTITY_ID_ELEMENT CDSINDEX_REF_ENTITY_ID_ELEMENT_N (assigned trade) RED sec code of the index definition.			х	x	x			
CDSINDEX_REF_ENTITY_RED_NAME_ELEMENT CDSINDEX_REF_ENTITY_RED_NAME_ELEMENT#ASSIGNED (assigned trade) Basket name of the index definition. Note that for CDS indices, index version is removed from the name. Ex: basket named CDX.NA.HY.4-V1 will become CDX.NA.HY.4			x	x	x			
COLLATERAL COLLATERAL#ASSIGNED (assigned trade) Tag populated with the information of the COLLATERAL fee: Calypso supports only_PaymentPercent.	x	x	x	x	x			
CONTRA_PARTY_ID DTCC ID of message receiver	x		х					
CONTRA_TRADE_ID Counterparty trade id (DTCC's Contra Trade Id)	x		x					
CREDIT_EVENTS_RESTRUCTURING CREDIT_EVENTS_RESTRUCTURING#ASSIGNED (assigned trade) Credit Event Restructuring.	x	x						
CURRENCY CURRENCY#ASSIGNED (assigned trade) Trade currency.	×	x	x	x	x			x
DESTINATION_SSI_ELEMENT Adds the tag with information of sender contact attribute "DESTINATION_SSI"								x
DK_REASON Value of message attribute "DK Reason".	x		х					
EFFECTIVE_DATE	x	x	x	x	х			x

Keyword Names	CDS Master Conf	CDS Matrix Names	CDS Index CDS ABS Index	CDS Index CDS ABS Index Standard Terms	CDS Index Tranche	CDS option	CDX option	Paymt
EFFECTIVE_DATE#ASSIGNED (assigned trade)								
For CreditDafeultSwap, trade start date For CDSIndex and CDSIndexTranche, start date of the underlying Index.								
EFFECTIVE_RATE								х
Attribute "Reset Rate" of related BOTransfer, rounded to 5 decimal digits.								
EXHAUSTION_POINT					x			
EXHAUSTION_POINT#ASSIGNED (assigned trade)								
CDSIndexTranche exhaustion point.								
FIRST_PAYMENT_DATE					х			
FIRST_PAYMENT_DATE#ASSIGNED (assigned trade)								
Date of first cashflow.								
FIXED_RATE_PAYER#ASSIGNED (assigned trade)	х	x	x	x	x			
See FIXED_RATE_PAYER applied to assigned trade.								
FIXED_RATE_PAYER	x	x	x	x	x			
DTCC ID of trade buyer.								
FIXED_RATE			x	x	x			
FIXED_RATE#ASSIGNED (assigned trade)								
For CDSIndex, fixed rate of the underlying Index. For CreditDefaultSwap and CDSIndexTranche, fixed rate of the trade.								
FLOATING_RATE_PAYER	x	x	x	x	x			
FLOATING_RATE_PAYER#ASSIGNED (assigned trade)								
DTCC ID of trade seller.								
FULL_FIRST_CALCULATION_PERIOD	х	x	x	x	х			
If trade keyword TerminationFullFirstCalculationPeriod = "false", then "NotApplicable". Otherwise "Applicable".								
INCREASE_EFFECTIVE_DATE	x	x	x	x	х			
See INCREASE_TRADE_DATE.								
INCREASE_FEE_AMOUNT	x	x	x	x	x			
Amount of the termination fee.								
INCREASE_FEE_CURRENCY	x	x	x	x	x			
Currency of the termination fee.								

Keyword Names	CDS Master Conf	CDS Matrix Names	CDS Index CDS ABS Index	CDS Index CDS ABS Index Standard Terms	CDS Index Tranche	CDS option	CDX option	Paymt
INCREASE_FEE_DATE Payment date of the termination fee.	x	x	x	x	х			
INCREASE_FEE_PAYER DTCC ID of termination fee payer.	x	x	x	х	х			
INCREASE_FEE_RECEIVER DTCC ID of termination fee receiver.	x	х	x	x	х			
INCREASE_NOTIONAL_AMT Amount of notional increased (Current notional - old notional).	x	x	х	x	x			
INCREASE_TRADE_DATE Termination trade date.	x	х	х	x	х	х	х	
INDEX_ANNEX_DATE_ELEMENT INDEX_ANNEX_DATE_ELEMENT#ASSIGNED (assigned trade) Tag populated with index annex date.					x			
<pre>INDEX_PUBLICATION_DATE_ELEMENT INDEX_PUBLICATION_DATE#ASSIGNED (assigned trade)      "<publicationdate>yyyy-mm-dd</publicationdate>"     When trade is a CDSIndexTranche on a CDX index and trade     date &gt;= 2008-07-14     "yyyy-mm-dd" is the date defined as the greatest date listed     in the "DTCCSettledEntityMatrixDates" domain that is on or     before trade date.     (This domain has to be maintained by users with the     relevant publication dates.)     ex:         - if the domain is populated with: "2008-02-09", "2008-12- 12", "2009-05-08"         - then a trade with trade date         - "2008-06-10" has no publication date = "2008-02-09"         - "2008-12-12" has a publication date = "2008-12-12"     element is empty otherwise </pre>					×			
INITIAL_PAYMENT INITIAL_PAYMENT#ASSIGNED (assigned trade) Tag populated with the information of the UPFRONT fee.			x	x	x			
IS_FULL_TERMINATION Adds the tag is termination type is "FullTermination".	x	x	x	×	Х			
MASTER_AGREEMENT_DATE		x		x	х			

Keyword Names	CDS Master Conf	CDS Matrix Names	CDS Index CDS ABS Index	CDS Index CDS ABS Index Standard Terms	CDS Index Tranche	CDS option	CDX option	Paymt
MASTER_AGREEMENT_DATE#ASSIGNED (assigned trade)								
Date of legal agreement applying to this trade.								
MASTER_AGREEMENT_TYPE		x		x	x			
MASTER_AGREEMENT_TYPE#ASSIGNED (assigned trade)								
Type of legal agreement applying to this trade.								
MASTER_CONFIRMATION_ANNEX_DATE_ELEMENT			x					
MASTER_CONFIRMATION_ANNEX_DATE_ELEMENT#ASSIGNED (assigned trade)								
Tag populated with index annex date Business convention: this tag is populated for CDX 1 index only.								
MASTER_CONFIRMATION_DATE	x		x	х	x			
MASTER_CONFIRMATION_DATE#ASSIGNED (assigned trade)								
Date of the master confirmation applying to this trade.								
MASTER_CONFIRMATION_TYPE	х		x	x	x	x	х	
MASTER_CONFIRMATION_TYPE#ASSIGNED (assigned trade)								
Type of the master confirmation applying to this trade.								
MATRIX_CONTRACTUAL_SUPPLEMENT_ELEMENT		x						
MATRIX_CONTRACTUAL_SUPPLEMENT_ELEMENT#ASSIGNED (assigned trade)								
Adds the tag filled with "ISDA2003CreditMonolineInsurers2005" when Master confirmation type is NorthAmericanCorporate.								
MATRIX_PUBLICATION_DATE_ELEMENT		x						
MATRIX_PUBLICATION_DATE_ELEMENT#ASSIGNED (assigned trade)								
Not yet defined.								
MATRIX_SOURCE					х			
MATRIX_SOURCE#ASSIGNED (assigned trade)								
<ul> <li>"Publisher" for CDSIndexTranche on a CDX1 index when trade date &gt;= 2008-07-14</li> </ul>								
"NotApplicable" otherwise								
MATRIX_TERM		x						

<sup>&</sup>lt;sup>1</sup> In order to distinguish Index families (CDX, ITRAXX, ...), the DTCC uses the sec code « IndexType » with value

<sup>«</sup> CDX » (to be added on each relevant index definition).

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Keyword Names	CDS Master Conf	CDS Matrix Names	CDS Index CDS ABS Index	CDS Index CDS ABS Index Standard Terms	CDS Index Tranche	CDS option	CDX option	Paymt
MATRIX_TERM#ASSIGNED (assigned trade) See master confirmation type.								
MATRIX_TYPE MATRIX_TYPE#ASSIGNED (assigned trade) Always "CreditDerivativesPhysicalSettlementMatrix".		x						
MATURITY_DATE Attribute "ScheduledMatDate" of the transfer.								х
MESSAGE_ID Message id.	x	x	x	x	x	х	х	х
MESSAGE_TRANSFERID Transfer id.								х
MODIFIED_EQUITY_DELIVERY_ELEMENT MODIFIED_EQUITY_DELIVERY_ELEMENT#ASSIGNED (assigned trade) Adds the tag with value "Applicable". Business convention: this tag is added only for CDSIndextranches on CDX1 indexes.					x			
NOTIONAL NOTIONAL#ASSIGNED (assigned trade) Trade notional.	x	x	x	x	x	x	x	x
NOVATED_AMOUNT See NOTIONAL.	x	x	x	x	x	х	х	
NOVATION_DATE Novation effective date, see TERMINATION_EFFECTIVE_DATE.	x	x	x	x	x	х	х	
NOVATION_EE_PAYMENT_ELEMENT Tag populated with the information of the "FEE" fee.	x	x	x	x	x	х	х	
NOVATION_OR_PAYMENT_ELEMENT Tag populated with the information of the termination fee.	x	x	x	x	x	х	x	
NOVATION_RP_PAYMENT_ELEMENT Tag populated with the information of the termination fee.	x	x	x	x	x	х	x	
OBLIGATIONS Not yet defined.	x	x						

Keyword Names	CDS Master Conf	CDS Matrix Names	CDS Index CDS ABS Index	CDS Index CDS ABS Index Standard Terms	CDS Index Tranche	CDS option	CDX option	Paymt
OUTSTANDING_NOTIONAL_AMT In case of a notional increase / decrease, new notional.	x	x	x	x	x	х	х	
PARTIAL_ELEMENT In case of a partial termination, adds the tag, with information of decreased and outstanding notional.	x	x	x	x	x	x	x	
PAYMENT_AMOUNT Transfer settlement amount.								x
PAYMENT_CURRENCY Transfer settlement currency.								x
PAYMENT_DATE Transfer settle date.								x
PAYMENT_EE If trade has a single payment, adds the tag with relevant currency and amount Otherwise adds the periodicPayment tag without the optional tag.	x							
PAYMENT_END Attribute "EndDate" of BOTransfer.								х
PAYMENT_PAY_RECEIVE_STR If settlement amount of BOTRansfer is negative, then "PAY", otherwise "REC".								x
PAYMENT_REASON Transfer type.								x
PAYMENT_START Attribute "StartDate" of BOTransfer.								x
PAYMENT PAYMENT#ASSIGNED (assigned trade) If trade has a single payment, adds the tag with relevant currency and amount Otherwise adds the periodicPayment tag including the optional tag.	x	x						
RECEIVE_TIME Attribute "StartDate" of BOTransfer.	x	x	x	x	x	х	х	x
RECEIVER_CODE Counterparty DTCC Id.	x	x	x	x	x	x	x	x

Keyword Names	CDS Master Conf	CDS Matrix Names	CDS Index CDS ABS Index	CDS Index CDS ABS Index Standard Terms	CDS Index Tranche	CDS option	CDX option	Paymt
REF_ENTITY_ID_ELEMENT	x	x						
REF_ENTITY_ID_ELEMENT#ASSIGNED (assigned trade) Adds the tag populated with reference entity RED_PAIR when present.								
REF_ENTITY_NAME_ELEMENT REF_ENTITY_NAME_ELEMENT#ASSIGNED (assigned trade)	х	х						
Adds the with value: - If trade reference entity has a RED_PAIR attribute, then the RED_LEGAL_NAME attribute is retrieved - this case corresponds to standard case, when reference entity is known in MarkIt/RED - Otherwise it retrieves the DTCC_FREEFORM_NAME attribute - this attributes should be entered manually when reference entity is not known in RED/MarkIt - Otherwise it retrieves the RED_LEGAL_NAME attribute - this is done for clients who input legal names of reference entity in this field, whether it's in RED/MarkIt or not.								
REF_OB_ISIN	x	х						
REF_OB_ISIN#ASSIGNED (assigned trade) Get ISIN code for reference obligation. Business rule: If there is no reference obligation or if reference obligation has no ISIN code, dummy ISIN code "XSNOREFOBL00" is used. In case of EmergingEuropeanCorporateLPN trades, dummy ISIN code "XSUNKNOWN000" is used								
REFERENCE_ENTITY Attribute RefEntity of BOTransfer.								x
RELEASE_TIME Current date time.	х	х	x	х	х	х	х	x
SENDER_CODE DTCC ID of trade PO.	x	x	х	х	х	х	х	x
SOURCE_SSI_ELEMENT Adds the tag with information of sender contact attribute "SOURCE_SSI".								x
TERMINATION_DATE TERMINATION_DATE#ASSIGNED (assigned trade) Trade maturity date.	x	х	х	х	х	х	х	
TERMINATION_EFFECTIVE_DATE Termination effective date.	x	х	х	х	х	х	х	
TERMINATION_FEE_AMOUNT					х			

Keyword Names	CDS Master Conf	CDS Matrix Names	CDS Index CDS ABS Index	CDS Index CDS ABS Index Standard Terms	CDS Index Tranche	CDS option	CDX option	Paymt
Termination fee amount.								
TERMINATION_FEE_CURRENCY Termination fee currency.					х			
TERMINATION_FEE_DATE Termination fee date.					х			
TERMINATION_FEE_ELEMENT Tag populated with the information of the "TERMINATION FEE" fee.	x	x	x	×		x	х	
TERMINATION_FEE_PAYER DTCC ID of termination fee payer.					×			
TERMINATION_FEE_RECEIVER DTCC ID of termination fee receiver.					х			
TERMINATION_TRADE_DATE Termination trade date.	x	x	x	х	х	х	х	
TRADE_DATE TRADE_DATE#ASSIGNED (assigned trade) Trade date.	x	x	x	х	x	x	х	x
TRADE_ID_AMEND_SUPPLEMENT Deprecated, see TRADE_ID_SUPPLEMENT.	x	x	x	x	x	х	х	
TRADE_ID_SUPPLEMENT TradeRefNbrSupplement is populated with: - trade internal reference + "F" in case of a full termination - trade internal reference + TransferTo keyword + "P" in case of a partial termination - trade internal reference + TransferTo keyword + "N" in case of a novation - trade internal reference + TransferTo keyword + "I" in case of a notional increase - trade internal reference + "A" + message linkedId in case of an amendment (trade is confirmed already).	x	x	x	x	x	x	x	
TRADE_ID TRADE_ID#ASSIGNED (assigned trade) Trade internal reference.	x	x	x	x	x	x	x	x
TRADE_START_DATE See EFFECTIVE_DATE.	x	x	x	х	х	х	х	
TRADE_TYPE								x

Keyword Names	CDS Master Conf	CDS Matrix Names	CDS Index CDS ABS Index	CDS Index CDS ABS Index Standard Terms	CDS Index Tranche	CDS option	CDX option	Paymt
Product Type.								
TRANSFEREE#ASSIGNED DTCC Id of Novation_Transferee.	х	x	х	Х	x			
TRANSFEROR#ASSIGNED DTCC Id of Novation_Transferor.	х	x	х	х	х			
XSITYPE If message sub action is AMEND then "ModifyTradeConfirmation", otherwise "RequestTradeConfirmation".	x	x	x	х	x	x	х	