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POSIT MTF

FIX and Connectivity Guidance

Updated April 17, 2019

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1. Overview

About this document

This guide provides all the necessary information needed to interface with POSIT MTF using the FIX protocol. Customers should use FIX version 4.2, however several tags contained within this document have been retrofitted to FIX 4.2 from later versions or based on recommendations from the FIX Trading Community, in particular to support MiFID II required membership information. To download and view the standard FIX specifications, visit www.fixtrading.org.

Please note that this document is not intended to replace the FIX protocol manuals, but to provide essential information specific to clients accessing the POSIT MTF.

The scope of this document applies to the following POSIT segments:

- Dark Segment
- Periodic Auction Segment

2. Connectivity

Customers may establish direct network connectivity to POSIT MTF via a variety of network providers including but not limited to:

BT Radianz
TNS
Atrium
IPC
Fixnetix
Encrypted Internet

Members may also choose to cross-connect if they have presence in InterXion Hanbury Street, London.

Connectivity is also supported by various OMS & EMS providers and FIX vendor networks including but not limited to:

Bloomberg
Fidessa
Flextrade
Portware
Charles River Network
Simcorp
Autex
Ullink/NyFIX
IRESS

Each member is allocated a FIX tcp/ip port per FIX session. Multiple FIX sessions can be assigned to each member. Minimum recommended bandwidth per FIX session is 256KB.

In the UAT test environment, connectivity may be established via internet if desired.

3. POSIT MTF

Participants may interact in any one of the following POSIT MTF market segments

- Dark Segment
- Periodic Auction Segment (“POSIT Auction”)

Equities Dark Segment

The Equities Dark segment offers the following matching systems, each accessed via separate routing destinations:

POSITNow system: Orders are matched on a pro rata size basis at the midpoint of the prevailing best bid and best offer of the financial instrument’s primary listing market.

POSIT Close system: Orders are matched on a pro rata size basis at the closing price of the financial instrument on its primary listing market.

POSIT LIS system: Orders are matched on a pro rata size basis. Orders entering the matching system will interact with other orders that are already resident in the system on the basis of price priority

The following orders types are supported: Market or Limit, except for POSIT LIS where a Limit must be specified. See section “Order types” for more details.

Participants may additionally choose to include each of the following trading constraints: Minimum Quantity and Self Match.

Minimum Quantity can be specified as either Minimum Acceptable Quantity (“MAQ”) or Minimum Execution Size (“MES”). Participants must instruct ITGL (the operator of POSIT MTF) their preference for Minimum Quantity to be treated as MAQ or MES as a participant level setting.

The following order time in force instructions are supported: DAY or Immediate or Cancel (“IOC”). An expiry time may also be specified.

Periodic Auction Segment

A periodic auction segment (“POSIT Auction”) running auctions at frequent intervals with randomised timing and subject to certain conditions being met, such auctions being triggered on receipt and acceptance of a buy or sell order into the system segment;

POSIT Auction contains two separate trading sessions: (1) Intraday and (2) After hours. Orders must state which trading session the respective order is to be submitted to.

Orders types supported: Market or Limit must be specified. A Peg Bid, Mid or Ask instruction can be specified for the intraday session, where the peg is pegged to the primary market listing of the relevant financial instrument. A Peg Closing price can be added for the After-

hours session, where the peg is pegged to the closing price of the primary market listing for the relevant financial instrument. See section “Order types” for more details.

Participants may additionally choose to include each of the following trading constraints: Minimum Quantity.

Minimum Quantity can be specified as either Minimum Acceptable Quantity (“MAQ”) or Minimum Execution Size (“MES”). Participants must instruct ITGL their preference for Minimum Quantity to be treated as MAQ or MES as a participant level setting.

The following order time in force instructions are supported: DAY or Good for One Auction. An expiry time may also be specified.

For more details on the functionality of the above segments please refer to the Participant Manual and Guidance document, available at itg.com.

4. Certification

Members must complete a formal certification process as per the POSIT MTF Rule Book and Participant Manual. A certification test script is provided to prospective members

5. Working with FIX

FIX session reset timing

POSIT MTF is available during the market hours as referenced in the Participant Manual and Guidance documents available at itg.com. Members are expected to ensure they maintain connectivity during these hours. Session sequence numbers are reset daily outside market hours.

Recovery

During initialization or in the midst of a FIX session, message gaps may occur. It is the responsibility of the receiving application to monitor incoming sequence numbers to detect gaps. This information may then be used to respond with Resend Request messages.

POSIT MTF will maintain a list of sent messages, each with a unique sequence number. POSIT MTF’s FIX engine automatically stores all outbound messages for all connections onto disk. This disk file remains in place even if the FIX engine is stopped and restarted.

Certain administrative messages (which do not increment the sequence number) will not be sent in the retransmission of messages in response to a Resend Request from a client.

Cancel on disconnect

Cancel on disconnect may be implemented at FIX session level upon request.

Timestamps

POSIT timestamps (delivered in FIX tags 52 and 60) will be delivered at millisecond precision.

TVTIC – Trading Venue Transaction Identification Code

POSIT will provide the TVTIC value – a unique identifier assigned to all executions which are part of the same match – and provide this to members in FIX tag 8016 on their execution reports.

Pre Trade Transparency Waiver Flags (POSIT Equities Dark Segment Only)

Members are required to indicate the appropriate pre trade transparency waiver under which they are submitting their orders to the dark segment – either RPW (Reference Price Waiver) or LIS (Large in scale). This information should be included in FIX tag 9203 on new orders and cancel/replace requests.

Upon written request this information can be defaulted based on the size of your order.

Party Identification

Identifying the Parties of the Order

Members accessing the POSIT MTF are required to send additional FIX order message tags to identify the parties to the order using the PartyID repeating group tags detailed above.

The table below outlines what party data is required.

DATA ELEMENT	WHEN IS IDENTIFIER REQUIRED?
Client Identifier ¹	Required when order capacity is AOTC or MTCH
Investment Decision Maker ²	Required when order capacity is DEAL
Execution Decision Maker ²	Required on all orders

Notes on Data Elements

- 1 Client Identifier may be an LEI (for a firm) or a National ID (for an individual)
- 2 Investment Decision and Execution Decision Maker may be a National ID (for an individual) or Algo ID (for an algorithm)

POSIT MTF requires the sending of this information as integer short codes. The purpose of the short code is to reduce the amount of sensitive data handled by the trading system and to minimise any latency impact with smaller message sizes. These short codes will each represent an identifier such as an LEI, Algo ID or natural person. Clients will need to provide POSIT MTF with short to long code mappings prior to or no later than end of each trading day in order to facilitate the venue's order record keeping requirements. POSIT MTF will support submission of the short/long code mappings via secure ftp file upload.

The additional short code information should be sent using the NoPartyIDs repeating group.

TA G	FIELD NAME	COMMENTS	REQUIRED?
453	NoPartyIDs	Indicates the number of instances of the repeating group NewOrderPtyRptGrp to follow	Required
448	PartyID	The code representing the client or decision maker represented by this block	Required Reserved values 0=None (for Client ID) 1=AGGR (for Client ID) 2=PNAL (for Client ID) 3=CLIENT / NORE (for Execution Decision Maker)
447	PartyIDSource	P=Short Code	Required
452	PartyRole	3=Client ID 122=Investment Decision Maker 12=Execution Decision Maker	Required
2376	PartyRoleQualifier	Required if using long codes 22=Algorithm 23=Firm or Legal Entity 24=Natural Person	Required 23 only valid for 452=3 (Client ID)

See appendix A for further information on the Identifier Mapping upload site.

Examples of repeating group values

DEAL capacity order – includes Investment Decision Maker (person), Execution Decision Maker (algorithm):

453=2
448=2399, 447=P, 452=122, 2376=24
448=30984, 447=P, 452=12, 2376=22

AOTC capacity order – includes Client ID, Execution Decision Maker (person)

453=2
448=9043874, 447=P, 452=3, 2376=23
448=12984, 447=P, 452=12, 2376=24

AOTC capacity order – includes Client ID, Execution Decision Maker (algorithm)

453=2

448=9043874, 447=P, 452=3, 2376=23
448=12984, 447=P, 452=12, 2376=24

Where a tag such as Client ID or Investment Decision Maker is not required, it may be omitted, or sent with a value of '0'.

DEA activity

Customers should indicate whether any DEA activity is involved in their order. POSIT MTF can default this flag for customers if required/applicable.

Algorithmic Trade Indicator

Customers should indicate if their order was generated by an algo. This can be defaulted from the Investment and/or Execution Decision Maker information provided.

Order Capacity

Customers should indicate the trading capacity in which the venue participant or member submits an order. Valid values are -

P (DEAL) – dealing on own account

R (MTCH) – matched principal

A (AOTC) – any other capacity

POSIT MTF *executions* will always be marked as AOTC indicated by FIX tag 29=1.

Supported POSIT Destinations

POSIT MTF supports trading to multiple trading destinations via a single FIX session.

The following FIX tags can be used to route to POSIT.

Tag 100 (ExDestination) or Tag 57 (TargetSubID) or Tag 6005

Below is a list of supported POSIT destinations, relevant segment MIC codes and the corresponding default values we would expect in ExDestination or TargetSubID:

TAG VALUE	EXPLANATION	SEGMENT MIC CODE
POSN	POSIT NOW – dark segment, continuous matching from 8:00 – market close.	XPOS
POSL	POSIT LIS ANY PRICE	XPOS
POSC	POSIT CLOSE – dark segment, after primary market close	XPOS
POSA	POSIT AUCTION – periodic auction segment	XPAC
POSX	POSIT AUCTION CLOSE – not pegged	XPAC
POSP	POSIT AUCTION CLOSE – pegged to closing price	XPAC

Symbology

POSIT MTF required clients to send FIX tags 55, 48 and 22 to indicate the symbol on an order. The value in tag 55 is not validated but this is required as a mandatory FIX tag on all orders. Tag 65 can be optionally sent, but will be ignored. It is suggested that the client either sends the exchange ticker for the instrument or copies the value they send in tag 48 into tag 55. The following tag 22 values are supported.

Symbol Types (Tag 22)

ORDER TYPE		
2	Sedol	√
4	ISIN	√ If sending ISIN, MIC code must be sent in tag 100 or 207 to uniquely identify the appropriate listing
5	RIC code	√
A	Bloomberg symbol	√ Bloomberg 2 part key (without yellow key)

6.FIX Messages

Messages supported

POSIT MTF (Equities Dark and Periodic Auction segments) support the following FIX message types.

TAG 35 VALUE	MESSAGE TYPE
0	Heartbeat
1	Test Request
2	Resend Request
3	Reject
4	Sequence Reset
5	Logout
8	Execution Report
9	Order Cancel Reject
A	Logon
C	Email
D	Order Single
F	Order Cancel Request
G	Cancel/Replace Request
H	Order Status Request
Q	Don't Know Trade (DK)

Admin Messages

POSIT MTF fully supports all FIX Administrative messages as defined by the FIX 4.2 protocol.

Email

Below is an example of the FIX tags that POSIT MTF will normally send out in an email message. Email messages are optional and can be turned off if the client wishes to do so. Email messages sent by the client are saved into our log files.

TAG	FIELD NAME	REQUIRED	COMMENTS
	<i>Standard Header</i>	Y	MsgType = C
164	EmailThreadID	Y	Client Name
94	EmailType	Y	0 = New
147	Subject	Y	Specifies the Subject text
33	LinesOfText	Y	Number of lines in text
58	Text	Y	Displayable text. This may be sent after the completion of a POSIT match or by the system administrator.
	<i>Standard Trailer</i>	Y	

Supported Order Types (Tag 40)

ORDER TYPE		
1	Market	√
2	Limit	√
P	Pegged	√

Sending Pegged Orders

The POSIT Now destination only supports mid point pegging. POSIT Periodic Auction segment (POSA destination) additionally supports passive and aggressive pegging.

PEGGED ORDER TYPES		
Send 40=P and tag 18 with one of the following values:		
M	Mid	√ POSN / POSA Only
P	Aggressive	√ POSA Only
R	Passive	√ POSA Only

Supported TimeInForce (Order Time) (Tag 59)

TIME IN FORCE		
0	Day (default)	√
3	Immediate or Cancel (IOC)	√ POSN Only

Supported Order Sides (Tag 54)

ORDER SIDE		
1	Buy	√
2	Sell	√

Supported OrderCapacity Values (Tag 528)

RULE 80A		
A	AOTC	√
P	DEAL	√
R	MTCH	√

Supported ExecTransTypes (Tag 20)

TAG VALUE	EXPLANATION
0	New (for Acknowledgements, Fills, confirmation of Cancel, confirmation of Cancel/Replace, Nothing Done)
1	Cancel (Cancel an execution)
2	Correct (change in Price or Quantity)

Supported OrderStatus (Tag 39)

TAG VALUE	EXPLANATION
0	Acks on order
1	Partial Fill
2	Fill
3	Done for Day
4	Canceled
5	Replaced
6	Pending Cancel
8	Rejections on orders
E	Pending Replace

Supported Order Reject Reasons (Tag 103)

TAG VALUE	EXPLANATION
0	Invalid orders due to invalid specifications
1	Unknown symbol
2	Unavailable exchange (temporary problems or closed for the day)

7. Application messages

New order single

Below is the list of the FIX tags that POSIT MTF would accept in a FIX 4.2 Single Order. Please note that any FIX tags that are normally allowed in the FIX 4.2 protocol but do not appear below, will be ignored by POSIT MTF.

TAG	FIELD NAME	REQUIRED	COMMENTS
	<i>Standard Header</i>	Y	MsgType = D
11	ClOrdID	Y	Day unique id selected by client. 25 characters or less.
1	Account	N	Optional, returned on execution reports.

21	HandlInst	Y	Can be defaulted to 1 (Automated Execution, No Broker Intervention)
18	ExecInst	N	Refer to 'Sending Pegged Orders'
110	MinQty	N	Minimum Fill Quantity
100	ExDestination	N	Refer to 'Supported Destinations'
55	Symbol	Y	Refer to 'Symbology'
65	SymbolSfx	N	Refer to 'Symbology'
48	SecurityID	Y	Refer to 'Symbology'
22	IDSource	Y	Refer to 'Symbology'
54	Side	Y	Refer to 'Supported Order Sides'
60	TransactTime	Y	Time this order request was initiated/released. Supported to microsecond granularity.
38	OrderQty	Y	The number of shares for the order.
54	Side	Y	1=Buy 2=Sell
59	TimeInForce	N	0=Day (Default) 3=ImmediateOrCancel (POSN only)
126	ExpireTime	N	Expiration time of order. UTC Timestamp YYYYMMDD-HH:MM:SS
9204	OrderDuration	N	Specified duration of order (in milliseconds) upon order arrival
1724	Order Origination	N	Optional – can be defaulted 5=Order received from a direct access or sponsored access customer Used to indicate whether DEA activity (as defined under MIFID II) is involved in the order
528	TradingCapacity	N	Required – unless all orders can be defaulted to same value Replaces tag 47 A (AOTC) = any other capacity R (MTCH) = matched principal P (DEAL) = trading on own account
453	NoPartyIDs (repeating group)	Indicates the number of instances of the repeating group NewOrderPtyRptGrp to follow	Required – see Party Identification

448	PartyID	The code representing the client or decision maker represented by this block	Required – see Party Identification
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447	PartyIDSource	P=Short Code	Required – see Party Identification
452	PartyRole	3=Client ID 122=Investment Decision Maker 12=Execution Decision Maker	Required – see Party Identification
2376	PartyRoleQualifier	Required if using long codes 22=Algorithm 23=Firm or Legal Entity 24=Natural Person	Required – see Party Identification 23 only valid for 452=3 (Client ID)
9200	AtPrice	N	1 = Trade “At price” instruction for POSIT Auction order
9201	GoodForOneAuction	N	1 = Good for one auction only
9205	GoodIfAuction	N	1 = Good If Auction only
9202	MemberSubID	N	Identifier of the member sub group the order is submitted under
9203	PriceWaiver	N	Indicates which pre trade transparency waiver the order is placed under Valid values: 0 = RPW 1 = LIS If instructed by the client, POSIT MTF can default the appropriate value on orders submitted to POSIT MTF
	<i>Standard Trailer</i>	Y	

Order Cancel/Replace Request

Below is the list of the FIX tags that POSIT MTF will accept in a FIX 4.2 Cancel/Replace. Any FIX tags that the FIX 4.2 standard allow sending in a Cancel/Replace but do not appear below are ignored.

TAG	FIELD NAME	REQUIRED	COMMENTS
	<i>Standard Header</i>	Y	MsgType = G
41	OrigClOrdID	Y	Unique identifier of original order as assigned by client.
11	ClOrdID	Y	Unique identifier of replacement order as assigned by client
1	Account	N	Ignored in Correction
18	ExecInst	N	Refer to ‘Sending Pegged Orders’
110	MinQty	N	Minimum fill Quantity

100	ExDestination	N	Must match original order
55	Symbol	Y	Must match original order
65	SymbolSfx	N	Must match original order
48	SecurityID	N	Must match original order
22	IDSource	N	Must match original order
54	Side	Y	Refer to Supported order side
38	OrderQty	Y	New Order Quantity
40	OrdType	Y	Refer to Supported order types
44	Price	N	Required for limit order types
59	TimelnForce	N	Must match original order
47	Rule80A	N	Must match original order
	<i>Standard Trailer</i>	Y	

Order Cancel Request

TAG	FIELD NAME	REQUIRED	COMMENTS
	<i>Standard Header</i>	Y	MsgType = F
41	OrigClOrdID	Y	Unique ID of original order as assigned by client
11	ClOrdID	Y	Unique ID of cancel request as assigned by the client
60	TransactTime	Y	Time this order request was initiated/released by the trader or trading system.
55	Symbol	Y	Up to 8 characters in Symbol.SymbolSfx
65	SymbolSfx	N	Up to 8 characters in Symbol.SymbolSfx
48	SecurityID	N	Ignored
22	IDSource	N	Ignored
54	Side	Y	Refer to Supported order side
38	OrderQty	Y	Original OrderQty for CxlType=F
58	Text	N	Ignored
	<i>Standard Trailer</i>	Y	

Don't Know Trade (DK)

TAG	FIELD NAME	REQUIRED	COMMENTS
	<i>Standard Header</i>	Y	MsgType = Q
37	OrderID	Y	Unique identifier for Order as assigned by broker. Uniqueness must be guaranteed within a single trading day.
17	ExecID	Y	Unique identifier of execution message as assigned by broker. Uniqueness must be guaranteed within a single trading day.
127	DKReason	Y	Reason for execution rejection. Valid values: A = Unknown symbol, B = Wrong side, C = Quantity exceeds order, D = No matching order,

			E = Price exceeds limit, Z = Other
55	Symbol	Y	Up to 8 characters
54	Side	Y	Order Side
38	OrderQty	Y	Number of shares ordered
32	LastShares	N	Quantity of shares bought/sold on this (last) fill.
31	LastPx	N	Price of this (last) fill
58	Text	N	Description of reason for the DK
	<i>Standard Trailer</i>	Y	

Order Status Request

TAG	FIELD NAME	REQUIRED	COMMENTS
	Standard Header	Y	MsgType = H
37	OrderID	N	Not used - Ignored
11	ClOrdID	Y	Original ID of the order sent by client
55	Symbol	Y	Up to 8 characters in Symbol.SymbolSfx
65	SymbolSfx	N	Up to 8 characters in Symbol.SymbolSfx
54	Side	Y	Order Side for original order sent with ClOrdID
	Standard Trailer	Y	

Execution Report

Below is the list of FIX tags that POSIT MTF will send in a FIX 4.2 Execution Report:

TAG	FIELD NAME	REQUIRED	COMMENTS
	<i>Standard Header</i>	Y	MsgType = 8
37	OrderID	Y	This is an POSIT MTF-assigned value
11	ClOrdID	N	As sent by the client
41	OrigClOrdID	N	Sent when responding to a Cancel or Cancel/Replace request, containing ClOrdID of the previous order.
17	ExecID	Y	Unique Execution Report ID
20	ExecTransType	Y	0=New 1=Amendment 2=Cancel
19	ExecRefID	N	Reference Identifier used when ExecTransType = 1 and 2
39	OrdStatus	Y	Refer to Supported Order Status
103	OrdRejReason	N	Refer to Supported Order Reject Reason
1	Account	N	Contains the account in the original order
55	Symbol	Y	Refer to Symbology
65	SymbolSfx	N	Refer to Symbology
48	SecurityID	N	If sent by the client in the original order, the same value will be returned

			in Execution Reports.
22	IDSource	N	If sent by the client in the original order, the same value will be returned in Execution Reports.
54	Side	Y	Refer to Supported order sides
38	OrderQty	Y	Number of shares ordered
40	OrdType	N	Refer to Supported Order Types
44	Price	N	Buy or Sell limit price
59	TimeInForce	N	Refer to Supported Time in Force
126	ExpireTime	N	Returned if set by the client in the New Order
18	ExecInst	N	Returned if supported and set by the client's New Order.
528	OrderCapacity	N	Can be optionally returned on executions
32	LastShares	Y	Quantity of shares bought/sold on this (last) fill.
31	LastPx	Y	Price of this (last) fill
30	LastMkt	Y	XPOS = POSIT Dark XPAC= POSIT AUCTION
851	LastLiquidityInd	Y	
14	CumQty	Y	Total number of shares executed so far
6	AvgPx	Y	Available average price after multiple executions on a particular order
60	TransactTime	N	Sent in Reports. Time of execution (GMT)
150	ExecType	Y	Displays the specific Execution Report.
151	LeavesQty	Y	Open shares
58	Text	N	Free format text string. Used mainly to indicate rejection reason when OrdStatus = 8 (rejected)
378	ExecRestatementReason	N	Set for unsolicited cancels or unsolicited order size modifications.
110	MinQty	N	Minimum fill quantity
8013	WaiverFlag	N	Sent on POSIT Equities dark segment fills where applicable 3=RFPT
8016	TradingVenueRegulatoryTradeID (Trading Venue Transaction Identifier Code – TVTIC)	Y	Sent on all fills
2524	TradeReportIndicator	N	1=Trade will be reported by trading venue as an on book trade
20073	TransactionReportingVenue	N	XOFF – execution will be transaction reported
20001	BrokerLEI	N	Not sent by default.

Cancel Reject

TAG	FIELD NAME	REQUIRED	COMMENTS
	<i>Standard Header</i>	Y	MsgType = 9
37	OrderID	Y	POSIT MTF assigned number for order with CIOrdID or 0 if the order was never received.
11	CIOrdID	Y	Unique order ID assigned by client to the cancel request or to the replacement order.
41	OrigCIOrdID	Y	CIOrdID of the previous order as assigned by the client, used to identify the previous order in cancel and cancel/replace requests.
39	OrdStatus	Y	The current status of the order.
102	CxlRejReason	N	Code to identify reason for cancel rejection. Valid values: 0 = Too late to cancel 1 = Unknown order 2 = Broker Option 3 = Order already in Pending Cancel or Pending Replace status
434	CxlRejResponseTo	Y	Identifies the type of request that a Cancel Reject is in response to. Valid values: 1 - Order Cancel Request 2 - Order Cancel/Replace Request
58	Text	N	Not used
	<i>Standard Trailer</i>	Y	

Contacts

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8. Appendix A

ITG Upload Process for Short to Long Code Mappings for POSIT MTF Members

Order Record Keeping requirements under RTS 24 require venues to collect additional information related to orders such as LEIs (Legal Entity Identifiers) and Investment/Execution Decision Maker IDs which may represent individuals or algorithm IDs.

In line with other MiFID II/EEA venues, ITG's POSIT MTF will support members sending this information as integer short codes on their FIX order messages.

A secure ftp upload service to allow members to provide their identifier mappings can be accessed via <sftp://sftp.idmgmt.itg.com>.

Any personal information will be held in strict confidence and not disclosed to third parties, other than to our regulator upon request. By providing your identifier mappings via ITG's secure ftp upload service you confirm that you have complied with your obligations under applicable data protection legislation in processing this information, including obtaining valid consent from data subjects, where appropriate.

To obtain a sftp login, please email itge-clientonboarding@virtu.com.

Via ftp, clients can

- Register and delete mappings
 - Bulk csv file upload via Secure FTP (SFTP)
- Obtain success/failure feedback on uploads
 - CSV file to indicate whether records were successfully uploaded or not. ITG will provide a feedback file to the client. The additional success field per record will indicate if the upload was successful. If not, the reason will be provided as to why the upload failed.
- Download a full list of registered short codes
 - Download CSV containing the registered short codes. *Long codes cannot be downloaded.*
- Download a list of short codes with missing long codes
 - Download CSV with list of the short codes mapping missing for the day

Note that short codes must be unique within an identifier code type.

Identifier Registration

1.1 File name and location

Identifier file name should follow the following format

/upload/XXXX_identifiers_YYYYMMDD_NNNN.csv

Where XXXX is the client identifier and NNNN is the file sequence number for the day in case of amendments.

Entries in the file are processed separately.

1.2 File Format

CSV file should contain a header and follow these fields in order

Field	Type	Description
Short code	Int (4 – 4,294,967,295)	ITG short code
Long code	50 chars string	Algorithm Id/ LEI / etc.
Type	String	See 3.1.2.1
Start date	ISO Date (YYYY-MM-DD)	Initial date the entry is valid from
End Date	ISO Date	Empty if entry still active, end data if no longer valid

1.3 Identification code types

Code	Value
Client-Person	National Id
Client-Entity	LEI
InvestorDecisionMaker-Person	National Id
InvestorDecisionMaker-Algo	Algo Id
ExecutionDecisionMaker-Person	National Id
ExecutionDecisionMaker-Algo	Algo Id

3.1.1 Sample Registration File

```
shortCode,longCode,codeType,fromDate,toDate
1234,AABBCDD99,Client-Person,2017-01-01,
4678,LEI9LER9LEI,Client-Entity,2017-01-01,2017-09-08
9101,3216549327891,InvestorDecisionMaker-Algo,2017-05-01
```

1.4 Feedback file

After upload, a feedback csv file with the registrant results will be available to download at

/download/XXXX_feedback_YYYYMMDD_NNNN.csv

Sample feedback file

```
shortCode,longCode,codeType,fromDate,toDate,Success
1234,*****,Client-Person,2017-01-01,Y
4678,*****,Client-Entity,2017-01-01,2017-19-08, N- Invalid Date
9101,*****,InvestorDecisionMaker-Algo,2017-05-01,Y
7419,*****,InvestorDecisionMaker,2017-05-01,N – Unknown code type
```

Identifier Listing

1.5 File name and Location

Download a list of all registered short codes. Long codes will be hashed.

File name and format will be

/download/XXXX_identifiersList_YYYYMMDD_NNNN.csv

1.6 Sample File

```
shortCode,longCode,codeType,fromDate,toDate
1234,*****,Client-Person,2017-01-01,
4678,*****,Client-Entity,2017-01-01,2017-09-08
9101,*****,InvestorDecisionMaker-Algo,2017-05-01
```

Missing Identifiers

1.7 File Name and Location

Download a list of short code used which were missing long code mapping.

File name and format will be

/download/XXXX_missingIdentifiers_YYYYMMDD_NNNN.csv

1.8 Sample File

```
shortCode,codeType
7878,Client-Person
3647Client-Entity
```