

CME STP FIX Support for BrokerTec Trades

To support the integration of BrokerTec markets with CME Group technology, subject to applicable regulatory approvals, transactions executed on CME Globex, BrokerTec Direct, and registered external deals will be available for consumption on CME STP in both FIX and [FIXML](#) formats.

CME STP FIX will support a variety of fixed income transactions, including cash transactions on bonds as well as repurchase transactions (repos) on bonds. These include:

- CME Globex-matched:
 - US Treasury (UST) Actives
 - US Repos
 - EU Repos
 - European Government Bonds (EGBs)

Customers may entitle vendors to access their data, which will be controlled through entitlement and account configuration.

CME STP FIX will continue to support existing CME Group products and CME Bilateral and Cleared Elsewhere products. See current [specifications](#).



- CME STP supports implied and non-implied Curve Ratio (RV) Spreads for US Treasury Actives, reflected in MLegRptTyp=2 (leg of spread) messages.
- MLegRptTyp=3 (spread) messages are only reflected on non-implied Curve Ratio(RV) spreads messages.

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Key Events and Dates

For key events and dates please see the [BrokerTec Integration time table](#).

Revision History

Date	Description
3/2/2021	Added Production Service Availability section
2/3/2021	Dictionary updated on 1/29/2021 Added tag-35 MsgType=3 to Spec & dictionaries. CollateralReport - Missing value 8=Replace added to tag 20012-CollateralReportTransactionType Trade Capture Report – tags 99400, 719, 99401 added for Exercise and Assignment Trades. Not applicable to BrokerTec.
12/4/2020	Added General Collateral Use cases.

12/3 /2020	Added Regulatory fields and Identifiers section in use cases. Party block use cases updated to clarify BIC code case.
11/3 /2020	Simplified & added clarity to connectivity section.
11/3 /2020	Added Internet IP.
11/2 /2020	Added CME STP FIX and FIXML Cancel and Amend behavior
10/22 /2020	CME STP API Connectivity - removed the URL stpfixapinr.cmegroup.com .
10/21 /2020	CME STP FIX Data Dictionary : <ul style="list-style-type: none"> • URL=https://www.cmegroup.com/stp/files/cme-stp-fix-dictionary.xml - points to data dictionary BrokerTec Supplement to STP Message Specification : <ul style="list-style-type: none"> • URL=https://www.cmegroup.com/trading/straight-through-processing/files/stp-gap.xlsx - points to gap analysis of current vs future state for BrokerTec STP
10/20 /2020	Updated IP information for BrokerTec legacy line connectivity
10/13 /2020	Updated STP FIX Data Dictionary
10/13 /2020	Added tag 30-LastMkt for TradeCaptureReport(AE) and Collateral Report(BA)
10/11 /2020	CME STP FIX - TradeCaptureReportRequest for BrokerTec Trades Added note for Tag 779-LastUpdateTime timestamp value
10/9 /2020	Added CME STP API Connectivity
10/1 /2020	CME STP FIX - TradeCaptureReport - Parties for BrokerTec Trades tag 452 description added for value 44: For Brokertec, this value is iLink SenderID, also known as GUS (Global User Signature) CME STP FIX - TradeCaptureReport for BrokerTec Trades <ul style="list-style-type: none"> • updated description for tag1003 The unique ID assigned to the trade entity once it is received or matched by the exchange or central counterparty. However it's not unique across all BTEC products i.e. Repo GC, Repo Special/GCF, and cash. • Replace description for tag 1040 Globally unique across different BrokerTec products and recommended to be used to uniquely identify a trade. For GC Repo, this tag in TradeCaptureReport (35=AE) ties to it's CollateralReport (35=BA).
9/30 /2020	Updated: CME STP FIX - CollateralReport - Parties for BrokerTec Trades CME STP FIX - CollateralReport for BrokerTec Trades CME STP FIX - TradeCaptureReport - SideRegulatoryTradeIDGrp for BrokerTec Trades
9/30 /2020	Updated STP FIX Data Dictionary
9/21 /2020	CME STP FIX - FIX Message Specifications for BrokerTec Trades Updated CME STP FIX Data Dictionary

9/8/2020	Updated Service Availability – Internal Errors
9/1/2020	CME STP FIX - TradeCaptureReport - Parties for BrokerTec Trades added the following enumeration to tag 803: <ul style="list-style-type: none"> • 16 - BIC (Bank Identification Code - SWIFT managed)
9/1/2020	CME STP FIX - TradeCaptureReport - TrdCapRptSideGrp for BrokerTec Trades <ul style="list-style-type: none"> • Added enumeration to tag 803 - PartySubIDType • 16 - BIC (Bank Identification Code - SWIFT managed) CME STP FIX - TradeCaptureReport - TrdCapRptSideGrp for BrokerTec Trades <ul style="list-style-type: none"> • Added tag 9373-Liquidity Flag
8/31/2020	Updated use case scenarios with CME Internal Error scenarios
8/4/2020	Added note regarding timing and availability of Collateral reports and a Collateral substitution
7/9/2020	Added sample messages for Collateral Assignment, Repo General Collateral (GC) Trades and General Collateral trade's
6/12/2020	Removed note - Trade cancels and adjusts will be addressed in future iterations of this documentation.
3/17/2020	CME STP supports non-implied Curve Ratio (RV) Spreads for US Treasury Actives.
3/16/2020	Updated key events and dates section and link directed to the BTec portal
2/28/2020	For BTEC EU Repos the clearing organization on the Repo and the bond may be different.
2/19/2020	Removed note on US treasury matched and traded through CME workstation
1/28/2020	Added logon messages Logon, Logon Ack, Logon Request and Logout Ack

Onboarding

[Contact CME Group](#) to get started with CME STP FIX.

Testing and Certification

Certification using Autocert+ is required for all STP FIX users.

Production Service Availability

CME STP service is available in PRODUCTION beginning 2 PM Central Time Sunday Afternoon, through 10 PM Central Time Friday. Internal testing could occur on weekends in the Production Environment (10 PM Friday – 2 PM Sunday Central Time).

Customers should only connect during the time of service availability.

Client System Impacts and Supporting Information

Access to Trade Capture and Collateral Reports


Cash trades will be available from CME STP for 31 calendar days, based on the trade date. Repo trades and collateral allocations will be available from CME STP for 31 calendar days or the term of trade plus 7 calendar days, whichever is greater.


If a trade is corrected during this cycle, that trade will reflect the most recent information with a new transaction date and time.

Subscriptions


BrokerTec exchanges, security types, and input sources will be supported on the subscription.

The Trade Capture Report Request (AD) message will be used to control the feed of trades and collateral.

 Entitlement will not be available for instrument attributes and that customers may use the existing instrument attributes for filtering or filter on the client side.

 Recovery/replay by sequence number from the original FIX session in the new FIX session (as supported by INET FIX) will not be supported.

CME STP FIX supports replay by sequence number within FIX sessions. For recovery/replay following the establishment of a new FIX session, customers use the start/end timestamp to control the range of time for replay.

 FIX session/sequence numbers are not maintained across the weekend, so when a customer re-connects Sunday night or Monday morning, the replay by sequence number for message from the previous week will not be available.

CME STP API Connectivity

Customers can connect to CME STP FIX API via the following options:

New Release Connectivity (Internet Only)

To access CME STP FIX API over the internet, customers must connect to the following URL over secure TCP: fixstpnr.cmegroup.com:443

Production Connectivity

 These URLs use certificates signed by an official trusted Certificate Authority (CA). Customers do not need to install additional certificates.

Clients must create a Domain Name Service (DNS) record in their systems to associate the DNS name and following IPs to access the STP services or they will receive certificate errors:

Connectivity Option	DNS Name	IP
Internet access	stpfixapi.cmegroup.com:443	205.209.196.170
CME Glink, CME EConnect, CME LNet, CME Globex Hubs for Futures and Options	stpfixapi.cmegroup.com:443	167.204.41.90
CME GLink, CME EConnect, CME Globex Hubs, CME Globex Hub – Aurora and CME LNet for BrokerTec on CME Globex	stpfixapi.cmegroup.com:443	167.204.72.90
CDN Leased lines and Site to Site VPN	stpfixapi.cmegroup.com:443	167.204.72.90

Disaster Recovery Considerations


During a disaster recovery (DR) event clients will automatically be directed to the DR instance of CME STP FIX. Clients do not need to make any connectivity changes.

Please find CME Group connectivity options [here](#).

Session Connectivity and Session Layer Management

The FIX session layer must be compatible with CME STP standards. Specifically, customers will need to connect using TCP/IP over TLS (Transport Layer Security) 1.2, use CME SmartClick identifiers for authentication and establish connectivity using FIX 4.4.

 The minimum supported version of Transport Layer Security (TLS) for CME STP FIX is TLS 1.2.

 Password changes via the API and a User Notification (CB) message will not be supported.

BrokerTec Transactions

Identifying BrokerTec Transactions

BrokerTec transactions will be distinguishable on the API by the Security Exchange and Security Type fields. The input source will distinguish between transactions on CME Globex, BrokerTec Direct, and externally-registered deals.

General collateral (GC) repos require the post-trade allocation of specific bonds as collateral. To distinguish these collateral allocations from original trades, the API will support a new Collateral Report message.

Supporting Messages and Fields for BrokerTec Products

Collateral Allocations for General Collateral Repos

CME STP does not directly support allocating collateral for securities that support these BrokerTec General Collateral repos. This must be done through the [CME GC Allocation API](#).

CME STP will support these allocations using the [Collateral Report message](#).

Collateral allocation messages will be sent individually. Grouping and chaining will not be supported.

Trade and Allocation Identifiers

Existing CME Group Futures and Options trade and allocation identifiers will continue to be used.

Trade Capture Report Modifications

To harmonize between BrokerTec and CME STP the following fields and / or values will be supported:

- The Commission Group block will be used for commissions
- The Execution Timestamp will be included in the Report Side Block
- A globally-unique identifier (GUID) will be included in the Secondary Trade ID field (TradeCaptureReport/@TrdID2) to guarantee a unique identifier across all business days and CME asset classes.



Customers can only leverage the workup ID to associate products participating in workup (non-AON US Repo) across APIs.

The Exec IDs on iLink correspond to the individual trades which occur during the workup, while the STP values correspond to the summary sent at the end of workup.

For non-workup repos (US AON, all EU) the IDs can be associated across APIs leveraging the combination of ExecID and TrdNum e.g. UST actives/EGBs).

- Fields that support futures and options trading will be present on the Trade Capture Report including: Multi-Leg Reporting Type, Trade Report Status, Venue Type, Client Order ID, and Execution ID.
- For AON US and EU Repos on STP, the InstrumentGUID resolves to the standard (non-AON) instrument value.

General Collateral Repo Transactions

CME STP supports General Collateral (GC) repo transactions for the US and EU markets through the [CME GC Allocation API with submission of collateral allocation transactions through the CME GC Allocation API](#).

After a GC repo trade has been completed, the Trade Capture Report and a shell Collateral Report record will be available in near real-time in STP. The Collateral Report and Trade Capture Report will have the same Secondary Trade ID (TrdID2).

Collateral Allocations are submitted using the CME GC Allocation API. Subsequent Collateral Reports will be available in near real-time in STP, and have the same TrdID2 as the Trade Capture Report and initial Collateral Report.

Identifiers for collateral allocations on the GC Allocation API will be common with STP identifiers.

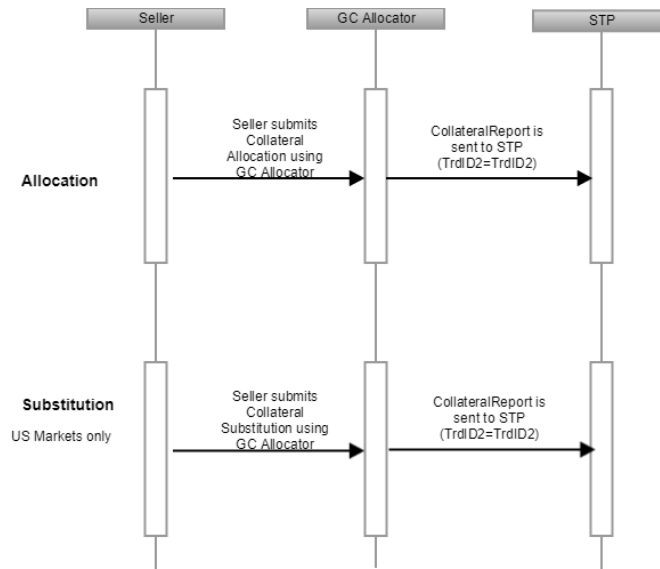
Substitutions can be made for US GC transactions by submitting a Collateral Substitution using CME GC Allocation API. Upon the completion of a Collateral Substitution, subsequent Collateral Reports will be available in near real-time in STP, and will have the same TrdID2 as the Trade Capture Report and initial Collateral Report.



For BTEC EU Repos the clearing organization on the repo and the bond may be different.

- For STP, the clearing organization is provided on the repo trades shell Collateral Report (Party Role = 21 and instrument reference) and the GC instrument is referenced on the allocations

A General Collateral Trade is Completed and a Trade Capture Report and CollateralReport (shell, indicating Collateral) are received
 CollateralReport/TrdID2 = TradeCaptureReport/TrdID2



All-or-None General Collateral Repo Trade Reconciliation

The All-or-None (AON) & None-AON Repo's are distinct instruments with their own independent SecurityID's & GUID's on order entry and market data messaging.

- On MDP 3.0 a Repo AON-eligible instrument is identified in the Security Definition (tag 35-MessageType=d) message by tag 872=InstAttribValue bit 23=1 (All or None instrument). For related AON and parent instruments, the counterpart instrument is identified in the Security Definition message repeating group tag 1650-RelatedSecurityID.
- In RD API v2 for BrokerTec, the attribute relatedInstrumentGuidInt at the instrument level will identify relationship between AON & none-AON instruments

In CME STP, the TradeCaptureReport for AON Repo reflects the Non-AON instrument SecurityID & GUID.

GC Repo Trade example

- A None-AON GC Repo trade was executed on Instrument **11111**.
 - TradeCaptureReport (AE) with SecondaryTradeID (1040) = 1234 is sent along with GC Shell (BA).
- A related AON Repo trade was executed on Instrument 99999.
 - TradeCaptureReport (AE) with SecondaryTradeID (1040) = abcd reported as None-AON GC Repo instrument **11111** along with a GeneralCollateral Shell (BA)

GC API trade search (/trades/search) result will reflect both of the None-AON and AON trades while CME STP will only reflect the Non-AON instrument details.

To reconcile GC API trade records with CME STP TradeCaptureReport (AE) customers are expected to use the Related Instrument attributes for AON Repo to identify the None-AON Repo.

Supporting Technical Documentation

These pages contain technical information required to implement the enhancements. These include message specifications, as well as use cases, and examples of how to connect to CME STP FIX.



"The order of non-repeating group tags is subject to change however the order of repeating group tags will be fixed."

- [CME STP FIX - Connectivity for BrokerTec Trades](#)
- [CME STP FIX - FIX Message Specifications for BrokerTec Trades](#)
- [CME STP FIX - Use Cases for BrokerTec Trades](#)
- [CME STP FIX - Samples for BrokerTec Trades](#)

Contact Information

For technical development support, contact [Certification Support for Electronic Trading \(CSET\)](#).

For production requests, please contact the [Global Command Center \(GCC\)](#).

For all other inquiries, please contact [Global Account Management \(GAM\)](#).

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