GPW WATS 4.02 Post Trade Gateway (FIX 5.0)

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1. correcting errors in the documentation or in the software;
2. clarification of the documentation content or removing ambiguity;
3. implementation of approved change requests or;
4. regulatory changes.

2. PREFACE

This document has been prepared by Warsaw Stock Exchange in order to help in the implementation process of GPW WATS trading platform.

This section describes functionality of GPW WATS Post Trade Gateway (FIX 5.0).

2.1. TARGET AUDIENCE

This document has been prepared to development staff, Independent Software Vendors who produce software integrated with GPW WATS, analysts, market participants and all clients who want to deepen their knowledge about GPW WATS.

2.2. DOCUMENT PURPOSE

This document provides a description of FIX Post Trade Gateway that operates within GPW WATS.

2.3. ASSOCIATED DOCUMENTS

GPW WATS 4.02 Post Trade Gateway (FIX 5.0) is a part of GPW WATS documentation set.

Please check the following documents to learn about the construction of Trading System.

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- GPW WATS 1.01 Trading System.

Please check the documentation of the trading protocols supported by GPW WATS.

- GPW WATS 2.01 Native Order Gateway Specification (this document),
- GPW WATS 2.02 FIX Order Gateway Specification.

Please check the description of the communication with Data Distribution Service.

- GPW WATS 3.01 Market Data Protocol.

Please check the description of the communication with Internet Data Distribution System.

- GPW WATS 3.02 Internet Data Distribution System,
- GPW WATS 3.03 Streaming Messages for IDDS,
- GPW WATS 3.04 Rest API Messages for IDDS.

Please check the additional documentation, which explains other services provided within GPW WATS.

- GPW WATS 4.01 Drop Copy Gateway,
- **GPW WATS 4.02 Post Trade Gateway** (this document),
- GPW WATS 5.01 Risk Management Gateway.

Please check the additional documentation describing the following:

- GPW WATS 2.03 Rejection Codes,

- GPW WATS 2.04 BenDec Message Definition Format,
- GPW WATS 4.03 Contract Notes,
- GPW WATS 6.01 Connectivity,
- GPW WATS 6.02 (ENG) Short Code Record Keeping,
- GPW WATS 6.02 (PL) Mapowanie Short Code,
- GPW WATS 6.03 Short-Long Mapper User Guide.

It is recommended to read ***GPW WATS 1.01 Trading System*** document first.

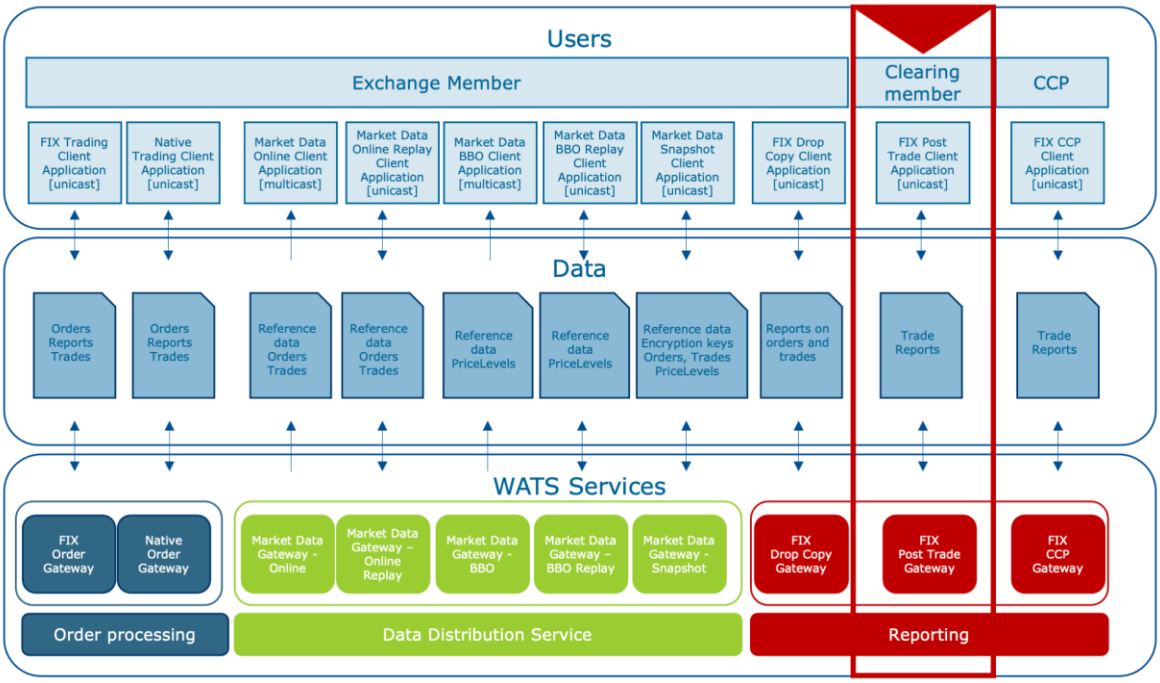
3. Document History

Version	Date	Description
0.51	29.06.2023	The initial publication of the documentation.
0.52	26.07.2023	Publication of v0.52.
0.53	16.08.2023	Publication of v0.53.
0.54	19.09.2023	Trade Capture Report (AE) for Post Trade Gateway added.
0.55	16.10.2023	Publication of v0.55.
0.56	08.11.2023	Publication of v0.56.
0.57	30.11.2023	Table for chapter 5.2 updated. Minor editorial changes.
0.58	15.12.2023	Publication of v0.58.
0.59	15.01.2024	Publication of v0.59.
0.60	29.02.2024	Chapter 5.3 updated. Minor editorial changes.
0.62	25.03.2024	Chapter 5.2 updated with PTG related connection profiles' information.
1.0	30.04.2024	Trade Cancellation subsection added.
1.1	28.06.2024	Trade Capture Report (AE) updated.
1.1.2	9.08.2024	Publication of v1.1.2. No changes in the document.
1.2	18.09.2024	Publication of v1.2. No changes in the document.
1.3	18.10.2024	Publication of v1.3. No changes in the document.
1.4	6.12.2024	Unpublished version. No changes in the document.
1.5	30.01.2025	Section 5.2 Removal of the connection profile types.
1.5.4	30.04.2025	Publication of version 1.5.4. No changes in the document.
1.6	26.05.2025	Publication of version 1.6. No changes in the document.
1.6.5	18.06.2025	Publication of version 1.6.5. No changes in the document.
1.6.6	10.07.2025	Publication of version 1.6.6. No changes in the document.
1.6.7	7.08.2025	Lengths, data types and values of the fields in Trade Capture Report (AE) have been amended. The full list of changes is available in Changelog.
1.6.8	14.08.2025	Publication of version 1.6.8. No changes in the document.
1.6.12	12.09.2025	Publication of version 1.6.12. No changes in the document.
1.6.15	29.09.2025	Publication of version 1.6.15. No changes in the document.
1.6.16	24.10.2025	Publication of version 1.6.16. No changes in the document.
1.7.1	18.11.2025	Publication of version 1.7.1. No changes in the document.
1.7.1.1	12.12.2025	Publication of version 1.7.1.1. No changes in the document.
1.7.2-1.7.4		No changes in the document.
1.7.5	06.03.2026	Publication of version 1.7.5. No changes in the document.
1.7.6-1.7.9		No changes in the document.
1.7.10	03.06.2026	Publication of version 1.7.10. No changes in the document.

4. Service Description

The chapter Service Description characterizes Post Trade Gateway (PTG) as a reporting module that operates within GPW WATS. It presents the fundamentals of the service provided by WSE (GPW) as a mechanism that allows to fulfill authorized users a role of a clearing member, receive real-time confirmations about their transactions to be settled during a current trading day

Figure 1. GPW WATS Services



4.1. Post Trade Gateway Introduction

Post Trade Gateway should enable real-time communication with clearing members. The user only acts as a recipient of the data. Post Trade Gateway does not support order submissions.

The primary objective of the service is to send accurate information about all transactions during a single trading day, including CLOB (on-book) and off-book (block + cross) transactions. The service does not support historical trading data.

Transaction confirmations are disseminated through Trade Capture Reports (AE) as a unidirectional form of communication. The information about cancellation or amendments will be sent in the same way.

The service implements FIX 5.0 SP2 protocol.

4.2. Usage Scenarios

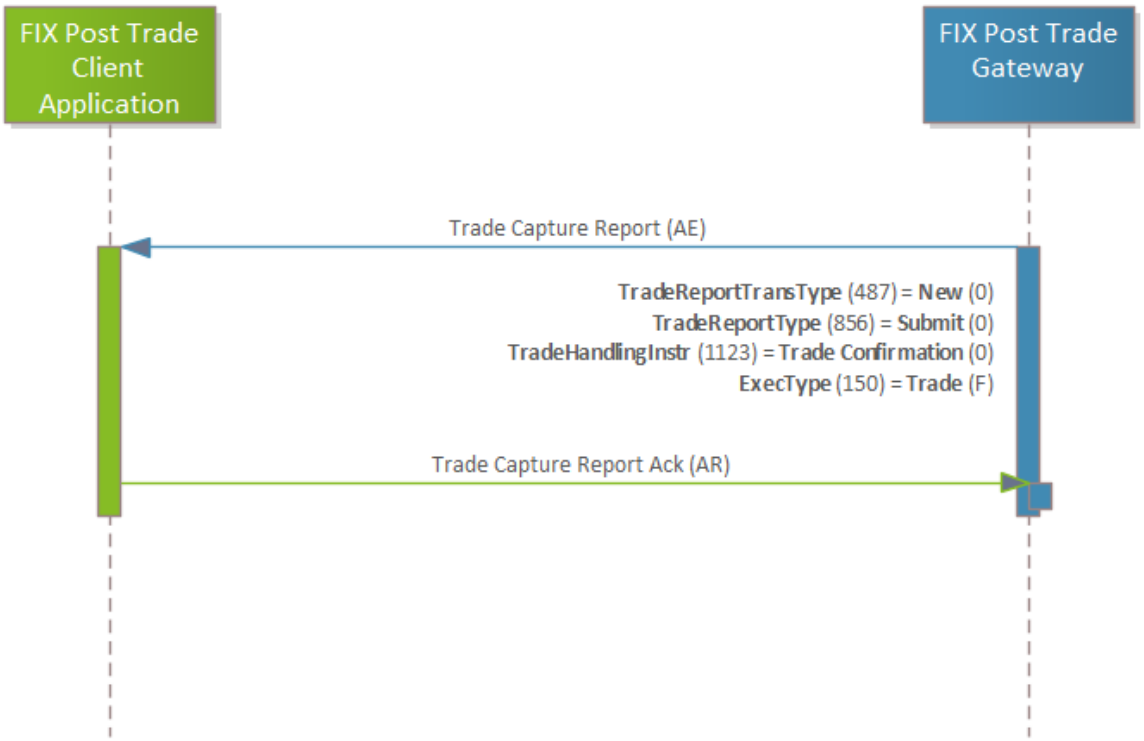
After sending the transaction report for settlement to CCP, Post Trade Gateway immediately sends transaction confirmation to the clearing member. The communication runs parallel to the messages generated and populated through the Order Gateways, such as the FIX - Execution Report (8) and Native - Trade.

Both parties involved in the settled transactions receive individual Trade Capture Reports (AE) with predefined tags, as illustrated in the following example:

- TradeReportTransType (487) = 0 (New),
- TradeReportType (856) = 0 (Submit),
- TradeHandlingInstr (1123) = 0 (Trade Confirmation),
- ExecType (150) = F (Trade).

Please see the chart below with the process flow.

Figure 2. Process flow – trade submit.



4.2.1. TRADE CANCELLATION

Post Trade Gateway triggers TradeCaptureReport (AE) message. Information about the trade cancellation event, regardless Market Model Type (i.e. Clob, Block, Cross, Hybrid Market, IPO, Tender Offer). Cancellation can be recognized by tag/field 150 (ExecType) with expected value H (Trade Cancel).

5. Supported Message Types

As previously mentioned in this document, Post Trade Gateway mechanism is supported by FIX 5.0 SP2. In this chapter you will become acquainted with all kinds of message types that Post Trade Gateway server supports.

5.1. Session Layer

In this section you can find a description of messages that are the components of the session layer. Please note that FIX session layer inside GPW WATS takes place according to the protocol FIX 5.0 SP2. For further information please refer to the document GPW WATS 2.02 FIX Order Gateway Specification (FIX 5.0).

In the context of Post Trade Gateway session layer operates the following messages:

- Logon (A),
- Heartbeat (0),
- Test Request (1),
- Resend Request (2),
- Reject (3),
- Sequence Reset (4),
- Logout (5).

5.2. Application Layer

Communication between Participant and Post Trade Gateway is handled via a one-sided Trade Capture Report (AE). You can learn more about the Trade Capture Report (AE) in document GPW WATS 2.02 FIX Order Gateway Specification (FIX 5.0) in the chapter Trade Capture Report.

The table below presents the significant differences applicable to PTG Trade Capture Report (AE):

FIX Tag	Name	Description	TCR Post Trade Gateway
2667	AlgoTradeIndicator	The tag provides information about source of the trade.	The value is mapped from PartyRoleQualifier (2376) as 22 = Algorithm.
1123	TradeHandlingInstr	It defines receiving method of TradeCaptureReport (AE).	Allowed value: 0 = Trade confirmation.
150	ExecType	Represents matter of the report.	Allowed values: F =Trade and H = Trade Cancel
48	SecurityID	ID of the security.	Allowed value: ISIN
22	SecurityIDSource	The tag provides information about class or source related to value in SecurityID (48).	Allowed value: 4 = ISIN
552	NoSides	The value indicates the number of side recurring group instances.	Allowed value: 1 = One Side
447	PartyIDSource	This field provides source of the field PartyID (448). It is only required when value for PartyID is added.	Possible values: P = Short code identifier D = Proprietary / Custom code
1444	SideLiquidityInd	The value can only be input for CLOB trades. The field helps to identify the liquidity provider or liquidity taker.	The value is mapped from Execution Report from field LastLiquidityInd (851). Applicable for CLOB trades.

5.3. Trade Capture Report (AE) for Post Trade Gateway

Tag			Field Name	Required	Conditional	Description	Data Type	Max Length	Values
C			StandardHeader	R					
571			TradeReportID	R		Unique identifier of trade capture report.	string	20 chars	ASCII: 0-9, A-Z, a-z
1003			TradeID	R		The unique ID assigned to the trade entity once it is received or matched by the exchange or central counterparty.	int	-	integer, 4 bytes
487			TradeReportTransType	R		Identifies Trade Report message transaction type.	int	-	0 = New 2 = Replace
856			TradeReportType	R		Type of Trade Report.	int	-	0 = Submit 7 = Trade Break
828			TrdType	R		Type of trade.	int	-	0 = Regular trade 22 = Privately negotiated trade 38 = Block trade (Large In Scale)
2667			AlgorithmicTradeIndicator	R		Indicates that the trade originates from a computer program or algorithm requiring little-to-no human intervention. In the context of ESMA MiFID II, a trade has to be flagged as "algorithmic" if at least one of the matched orders was submitted by a trading algorithm.	int		0 = Non-algorithmic trade 1 = Algorithmic trade

Tag			Field Name	Required	Conditional	Description	Data Type	Max Length	Values
1123			TradeHandlingInstr	R		Specified how the TradeCaptureReport (35=AE) should be handled by the respondent.	char	-	0 = Trade confirmation
150			ExecType	R		Type of execution being reported. Uses subset of ExecType (150) for trade capture reports.	char		F = Trade H = Trade Cancel
572			TradeReportRefID	C	Provided only in case of Trade Cancellations.	Reference identifier used with Cancel and Replace transaction types. The TradeReportID (571) that is being referenced for trade correction or cancelation.	string	20 characters	ASCII: 0-9, A-Z, a-z
818			SecondaryTradeReportID	C	Required for tradeReportType= Alleged or Submit	Unique system identifier of the trade.	string		integer, 8 bytes
1300			MarketSegmentID	R		Identifies the market segment.	string	-	integer, 4 bytes
1301			MarketID	R		Identifies the market.	string	4 chars	ASCII: 0-9, A-Z, a-z
C			Instrument	R					
48			SecurityID	R		Security identifier value of SecurityIDSource (22) type (e.g. ISIN, exchange symbol, etc). Requires SecurityIDSource.	string	-	integer, 4 bytes

Tag			Field Name	Required	Conditional	Description	Data Type	Max Length	Values
22			SecurityIDSource	R		Identifies class or source of the SecurityID (48) value.	string	-	4 = ISIN
32			LastQty	R		Quantity (e.g. shares) bought/sold on this (last) fill (multiplied by the Lot Size).	qty	-	integer, 8 bytes
31			LastPx	R		Price of this (last) fill.	price	-	8 bytes (signed), 8 decimal places
15			Currency	R	It is recommended that systems provide the currency value whenever possible.	Identifies currency used for price. Absence of this field is interpreted as the default for the security.	currency	3 chars	XXX
60			TransactTime	R		Timestamp when the business transaction represented by the message occurred. Time the transaction represented by when this TradeCaptureReport (35=AE) occurred. Execution time of trade. Also describes the time of block trades.	UTCtimestamp	-	The following formats are accepted: YYYYMMDD-HH:MM:SS.nnnnnnnnn (UTC) YYYYMMDD-HH:MM:SS.uuuuuu (UTC) YYYYMMDD-HH:MM:SS.mmm (UTC)
64			SettlDate	R		Specific date of trade settlement (SettlementDate) in YYYYMMDD format.	localmktdate	-	YYYYMMDD (local) In case of block trades (for all asset classes except for derivatives) values from T+0 to T+30 are allowed.
C			TrdCapRptSideGrp	R					
552			NoSides	R		Number of Side repeating group instances.	numingroup		1 = One Side
54	→		Side	R	Required when NoSides(552) > 0.	Side of order.	char	-	1 = buy 2 = sell

Tag			Field Name	Required	Conditional	Description	Data Type	Max Length	Values
	C		Parties	R					
453	→		NoPartyIDs	R		Number of PartyID (448), PartyIDSource (447), PartyRole (452) and PartyRoleQualifier (2376) entries.	numingroup	-	2-5
448		→	PartyID	R	Required if NoPartyIDs (453) > 0.	Identification of the party.	For PartyIDSource (447) = D: string For PartyIDSource (447) = N: string For PartyIDSource (447) = P: integer	For PartyIDSource (447) = D and a) PartyRole (452) = 4: 20 char b) PartyRole (452) = 33: 8 bytes For PartyIDSource (447) = N and PartyRole (452) = 4: 20 char For PartyIDSource (447) = P: 4 bytes	"integer For clients, the following values are reserved for applicable use: Applicable to PartyRole value 3: 1 = AGGR (an aggregation of multiple client orders) 2 = PNAL (clients are pending allocation) Applicable to PartyRole value 12: 3 = NORE (timing and location of the execution determined by the client of the participant)"
447		→	PartyIDSource	R	Required if NoPartyIDs (453) > 0.	Used to identify classification source.	char	1 char	D = Proprietary / Custom code N = Legal Entity Identifier (LEI) P = Short code identifier
452		→	PartyRole	R	Required if NoPartyIDs (453) > 0.	Identifies the type of PartyID (448).	int	-	"For PartyIDSource (447) = D: 1 = Executing Firm 4 = Clearing Firm 33 = Interested Party

Tag			Field Name	Required	Conditional	Description	Data Type	Max Length	Values
									For PartyIDSource (447) = P: 3 = Client ID 12 = Executing Trader 122 = Investment Decision Maker"
2376		→	PartyRoleQualifier	R	Required if NoPartyIDs (453) > 0.	Used to further qualify the value of PartyRole (452).	int	-	For PartyIDSource (447) = D: 0=None 22 = Algorithm (applicable to PartyRole values 12 or 122) 23 = Firm or legal entity (LEI) (applicable to PartyRole value 3) 24 = Natural person (applicable to PartyRole values 3, 12, 122)
1	→		Account	O		Account mnemonic as agreed between buy and sell sides, e.g. broker and institution or investor/intermediary and fund manager.	string	16 chars	ASCII: 0-9, A-Z, a-z or ASCII 33-126
581	→		AccountType	O		Type of account associated with an order.	int	-	1 = Account is carried on customer side of the books 3 = House trader
58	→		Text	O		Free format text string.	string	18 chars	ASCII: 0-9, A-Z, a-z or ASCII 33-126
1444	→		SideLiquidityInd	O	Applicable only to CLOB trades, otherwise empty.	Indicator to identify whether this fill was a result of a liquidity provider providing or liquidity taker taking the liquidity.	int	-	1 = Added liquidity 2 = Removed liquidity 4 = Auction execution
20011	→		FeeStructureID	O		Optional identifier of a fee scheme for billing purposes.	num	-	integer, 1 byte
	C		TradeReportOrderDetail	O					

Tag			Field Name	Required	Conditional	Description	Data Type	Max Length	Values
37	→		OrderID	O	Applicable only to CLOB trades, otherwise empty.	OrderID is required to be unique for each chain of orders. Uniqueness must be guaranteed within a single trading day. Firms which accept multi-day orders should consider embedding a date within the OrderID field to assure uniqueness across days.	string	-	integer, 8 bytes
11	→		ClOrdID	O	Applicable only to CLOB trades, otherwise empty.	Unique identifier for order as assigned by the buy-side (institution, broker, intermediary etc. identified by SenderCompID (49) or OnBehalfOfCompID (5) as appropriate). Uniqueness must be guaranteed within a single trading day. Firms, particularly those which electronically submit multi-day orders, trade globally or throughout market close periods, should ensure uniqueness across days, for example by embedding a date within the ClOrdID field.	string	20 chars	ASCII: 0-9, A-Z, a-z
528	→		OrderCapacity	R		Designates the capacity of the firm placing the order.	char	-	A - Agency (mapped to AOTC) P - Principal (mapped to DEAL) R - Riskless Principal (mapped to MTCH)
529	→		OrderRestrictions	O		Restrictions associated with an order.	multiplecharvalue	-	5 - Acting as Market Maker or Specialist in the security

Tag			Field Name	Required	Conditional	Description	Data Type	Max Length	Values
1724	→		OrderOrigination	O		Identifies the origin of the order.	int	-	5 - Order received from a direct access or sponsored access customer
	C		OrderAttributeGrp						
2593	→		NoOrderAttributes	R		Number of order attribute entries.	numingroup	-	1
2594		→	OrderAttributeType	R		The type of order attribute.	int	-	2 - Liquidity provision activity order
2595		→	OrderAttributeValue	R		The value associated with the order attribute type specified in OrderAttributeType (2594).	string	1 char	Y - Yes N - No
C			TrdRegPublicationGrp						
2668	→		NoTrdRegPublications	R		Number of regulatory publication rules in repeating group.	num	-	0 or 1
2669		→	TrdRegPublicationType	O	Provided if NoTrdRegPublications (2668) = 1.	Specifies the type of regulatory trade publication. Additional reasons for the publication type may be specified in TrdRegPublicationReason (2670).	int		0 = Pre-trade transparency waiver
2670		→	TrdRegPublicationReason	O	Provided if NoTrdRegPublications (2668) = 1.	Additional reason for trade publication type specified in TrdRegPublicationType (2669). Reasons may be specific to regulatory trade publication rules.	int		0 = NLIQ 1 = OILQ 4 = ILQD 9 = LIS
381			GrossTradeAmt	R		The Settlement value is calculated in accordance with the	atm	-	8 bytes (signed), 2 decimal places

Tag			Field Name	Required	Conditional	Description	Data Type	Max Length	Values
						standard for a given type of the instrument.			
C			StandardTrailer	R					Trailer used in FIX TP messages.