

GPW WATS 4.01 Drop Copy 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 the basic information about the FIX Drop Copy Gateway document. You will become acquainted with the target audience, the document's purpose and all necessary documents you should read in conjunction with this Protocol specification. You will also find information in this document about the service order procedure, the Drop Copy scheme and associated use cases.

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 Drop Copy Gateway available in GPW WATS.

2.3. ASSOCIATED DOCUMENTS

GPW WATS 4.01 Drop Copy 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.

- 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** (this document),
- GPW WATS 4.02 Post Trade Gateway,
- 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 version 0.52.
0.53	16.08.2023	Publication of version 0.53.
0.54	20.09.2023	Publication of version 0.54.
0.55	16.10.2023	Publication of version 0.55.
0.56	08.11.2023	Publication of version 0.56.
0.57	30.11.2023	Figure 1 updated. Minor editorial changes.
0.58	14.12.2023	Publication of version 0.58.
0.59	15.01.2024	Publication of version 0.59.
0.62	25.03.2024	The message MassQuoteAck has been included in the DC.
1.0	30.04.2024	Trade Cancellation description added.
1.1	28.06.2024	Publication of version 1.1. No changes in the document.
1.1.2	9.08.2024	Publication of version 1.1.2. No changes in the document.
1.2	18.09.2024	Publication of version 1.2. No changes in the document.
1.3	17.10.2024	Publication of version 1.3. No changes in the document.
1.4	6.12.2024	Unpublished version. All changes in this version have been documented in v1.5.
1.5	3.02.2025	4.3 Parties: FeeStructureID added.
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	Publication of version 1.6.7. No changes in the document.
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.

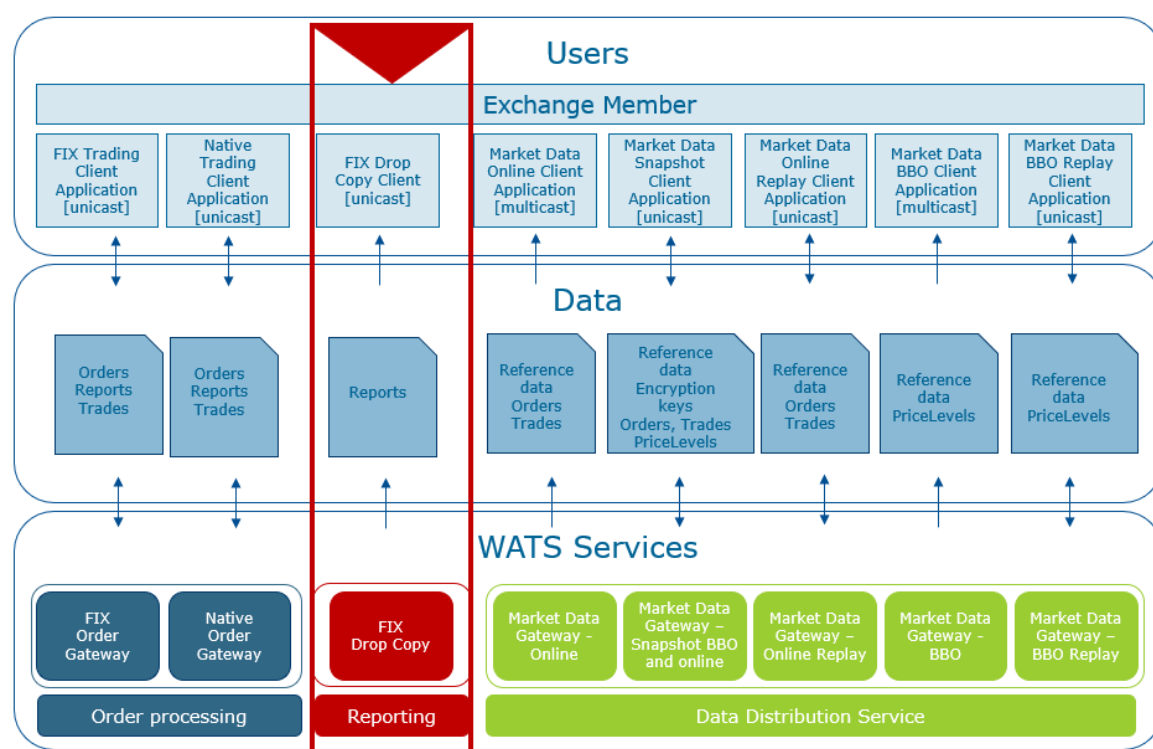
4. SERVICE DESCRIPTION

This chapter presents the basic drop copy mechanism within GPW WATS. It provides an overview of the service, including common issues, involved parties, supported events and service protocol. The information is presented in the broader context of the system gateways. In addition this specification includes practical examples to extend understanding of the FIX Drop Copy Gateway.

4.1. DROP COPY GATEWAY SERVICE INTRODUCTION

Drop Copy Gateway is an integral module within GPW WATS system that allows reporting activities of given exchange member users. Drop Copy enables replication of orders and/or trades reports in real-time manner and provides copies with the data directly to Trading Members. In the diagram below the drop copy service is presented in the context of other GPW WATS services.

Figure 1. GPW WATS Services



Drop Copy Gateway (DC) are forms of safeguards against order and trade loss. The service allows real-time receipt of execution and transaction reports of an exchange member. Drop Copy Gateway does not allow for order submission. Each exchange member is responsible for designing and maintaining Drop Copy Gateway access architecture.

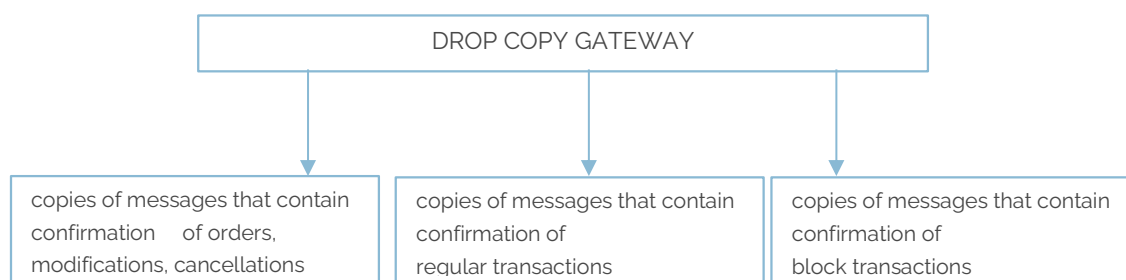
The service implements FIX 5.0 SP2 protocol.

In summary, Drop Copy Gateway allows Participants to improve maintenance and adequacy of the data through an ongoing distribution of a copy of back office information.

4.2. DROP COPY GATEWAY INFORMATION SCOPE

Configuration of the service is performed by the system operator. The configuration scope includes determining the list of Native or FIX Order Gateway connections monitored within the service, as well as the information scope divided into order execution and transaction reports. FIX Drop Copy Gateway has been designed for Trading Members only.

Drop Copy Gateway functionality enables the configuration of different data ranges received, including order execution reports, regular transaction reports, and block transaction reports, as depicted in the diagram below:



The drop copy aggregates transaction and order confirmation messages within its connection from the users of a given exchange member.

4.3. PARTIES

The parties involved in reported orders and transactions are consistent with the messages sent to the Order Gateways, specifically for orders and regular transactions the following roles are used in the Party (453) group:

- Client ID,
- Executing Trader,
- Investment Decision Maker,
- Clearing Firm.

For block transactions, additional information about the Contra Firm is provided.

Below is an example of the Party group:

A FIX message fragment:

```
453=3|448=4294967212|447=P|452=3|2376=24|448=3294967200|447=P|452=12|2376=22|448=5483847|447=P|452=122|2376=24|
```

The table below provides a fields description:

Field	Description
NoPartyIDs	3
PartyIDSource	SHORT_CODE_IDENTIFIER (P)
PartyID	4294967212
PartyRole	CLIENT_ID (3)
PartyRoleQualifier	NATURAL_PERSON (24)

Field	Description
PartyIDSource	SHORT_CODE_IDENTIFIER (P)
PartyID	3294967200
PartyRole	EXECUTING_TRADER (12)
PartyRoleQualifier	ALGORITHM (22)
PartyIDSource	SHORT_CODE_IDENTIFIER (P)
PartyID	5483847
PartyRole	INVESTMENT_DECISION_MAKER (122)
PartyRoleQualifier	NATURAL_PERSON (24)

From a communication perspective, it is important to note the slightly different usage of COMPID compared to the base message sent to Order Gateways. The COMPID fields utilized in Drop Copy Gateway are provided below:

Field	Description
TargetCompID	An exchange member Drop Copy Gateway user COMP ID
SenderCompID	A Drop Copy Gateway service COMP ID
OnBehalfOfCompID	An connection identification of exchange member trading user, who is the primary recipient of the message. In the case of an FIX Gateway connection, it will be COMP_ID, and in the case of a Native Gateway connection, it will be information containing the connection id.

For communication purposes, FeeStructureID is also available to use.

Field	Description
FeeStructureID	The field is 1-byte integer and can take any value from 0 to 255. Optional identifier of a fee scheme for billing purposes.

5. DROP COPY GATEWAY CONFIGURATION

This chapter provides service configuration and connectivity information.

5.1. CONNECTION INFORMATION

The Drop Copy Gateway is a TCP/IP service. In order to establish a connection, it is necessary to obtain the IP address and port number.

Establishing a session with GPW WATS requires FIX protocol compliant login e.i. sending a Logon (A) message. To do this, it is necessary to have a SenderCompID (49), TargetCompID (56) and the token placed at RawData (96) field. You cannot log in with the same credentials multiple times.

The above parameters will be provided by the system operator.

A sample logon message with fields separated by '|' mark:

```
8=FIXT.1.1|9=94|35=A|49=2_1473|56=n8_fix_dc|34=1|52=20230421-  
05:27:53.191|95=8|96=ABCDEFGH|98=0|108=30|1137=9|10=026|
```

All parameters required for the connectivity group to connect to GPW WATS can be found in the document GPW WATS 6.01 Connectivity.

5.2. SERVICE CONFIGURATION

As mentioned above, configuration of the service is performed by the system operator. An exchange member should specify which trading connections will be monitored by the drop copy service to retransmit reports.

Next, for each trading connection, the exchange member should provide the expected informational scope. It is possible to receive all order and transaction reports, but it is also possible to narrow down the information to only orders or transactions, including block transactions.

5.3. FAILOVER AND RECOVERY

Due to reduction of operational risk within GPW WATS, the failover and recovery mechanism has been designed.

When there is temporary and short unavailability of Gateway, the exchange member should attempt to re-establish the connection and login to Gateway. Subsequently the messages will be resynchronized between the exchange member and Gateway based on the typical FIX protocol resend mechanism.

When there is a long-term unavailability of the primary Gateway, the procedure of switching to a secondary will be launched. In such a situation, the exchange member will receive information from the system operator about the need to switch to the secondary Gateway. The connection will be established with the same login parameters but on a new IP address and port number. After logging in, messages will be recovered at the business level.

6. SESSION LAYER

The primary objective of this chapter is to provide information on how the service functions within the context of FIX sessions.

6.1. DROP COPY SESSION MESSAGES

The following session messages have been defined for Drop Copy Gateway:

- Logon (A)
- Logout (5)
- ResendRequest (2)
- SequenceReset (4)
- Reject (3)
- Heartbeat (0)
- TestRequest (1)

Authentication for Drop Copy sessions is carried out as previously mentioned (refer to the Connection Information section).

7. APPLICATION LAYER

The primary objective of this chapter is to provide information on how the service functions within the context of application usage.

7.1. DROP COPY GATEWAY APPLICATION MESSAGES

The following application messages have been defined for the Drop Copy service:

- Execution Report (8),
- Mass Quote Ack (b),
- Trade Capture Report (AE),

In order to identify that outgoing message has been populated through Drop Copy, the field CopyMessageIndicator (FIX:797) occurs within the body of the message.

The DC connection can be configured to transmit either exclusively transaction data (Trades option) or a full range of informational content i.e., orders and transactions (Trades&Orders option). Detailed information regarding the scope of the transmitted information is provided below:

- for Trades option – Execution Report (8) with the status F (Trade) or H (Trade Cancel) and Trade Capture Reports (ExecType=Trade & TradeCancel),
- for Trades&Orders option – Execution Report (8) (all statuses) and Mass Quote Ack (b) as well. and Trade Capture Reports (all statuses).

The setting of the options for a given connection is carried out by the System Operator at the request of the Exchange Member.

7.1.1. TRADE CANCELLATION

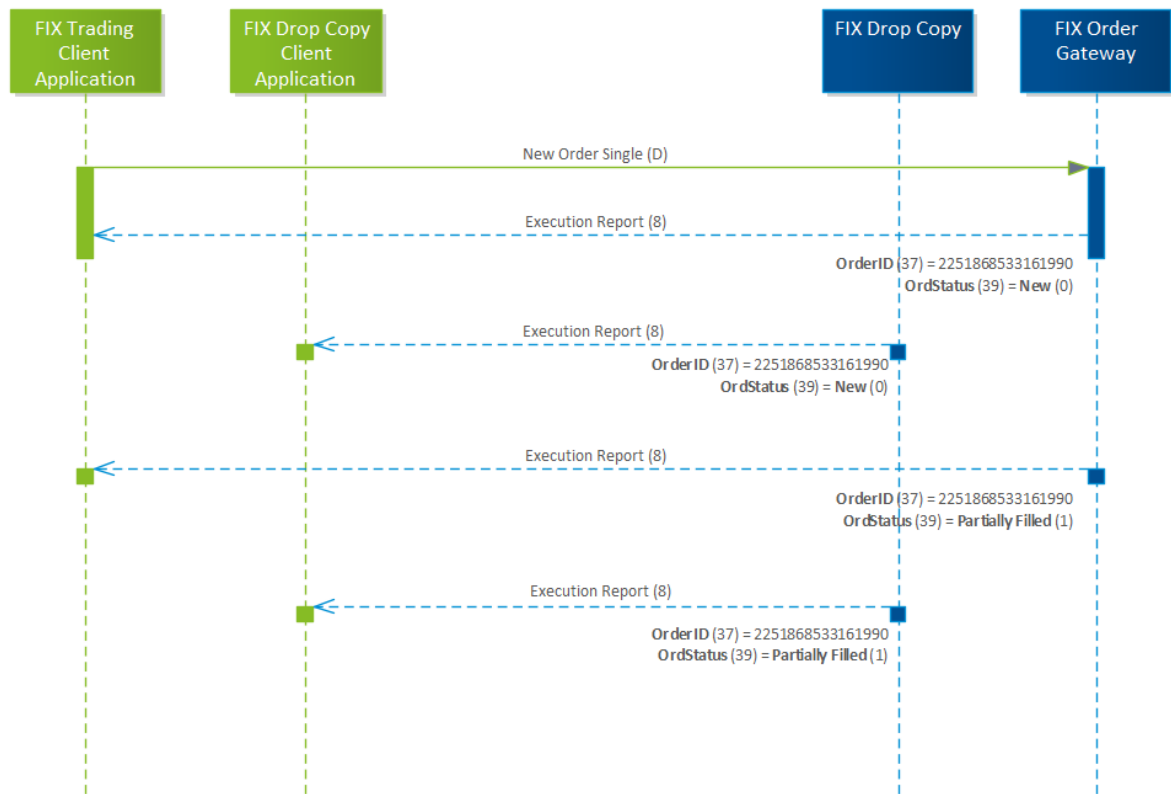
Notification of transaction cancellations is carried out through the following messages:

- ExecutionReport (8) stamped with tag 150 (ExecType) with value H (Trade Cancel) and tag 2341 (ExecTypeReason) with value 104 (Cancel by Market Operations) applicable for CLOB, Hybrid Market, Tender Offer and IPO trades,
- TradeCaptureReport (AE) stamped with tag 150 (ExecType) with value H (Trade Cancel) applicable for Block and Cross transactions.

7.2. BEHAVIOR MODEL

Drop Copy Gateway offers near real-time replicas of order and transaction reports, which ensure minimal intentional delays. The diagram below illustrates the typical behavior of Gateway:

Figure 1 Drop Copy – behavior model



8. MESSAGE FORMATS

The informational scope of messages used in Drop Copy service is the same as in FIX Order Gateway. To familiarize yourself with the specification at the level of individual message fields, please refer to document GPW WATS 2.02 FIX Order Gateway Specification (FIX 5.0).