

GPW WATS 1.2

BCP Tests - Guidelines for the use
of WA3 and WA2
as part of the Business Continuity Plan

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2. PREFACE

2.1. DOCUMENT PURPOSE

The purpose of this document is to describe activities related to switching tests of GPW Client infrastructure in the event of a malfunction of GPW WATS system modules in the WA3 data center and the need to use the WATS infrastructure in the WA2 data center.

Due to the architecture of the GPW WATS system, both data processing centers are involved in the standard operation of a trading session, but for the purposes of describing specific event scenarios, they will be referred to in the document as **PDC - Primary Data Center (WA3)** and **BDC - Backup Data Center (WA2)**.

2.2. ASSOCIATED DOCUMENTS

Please check the document below to learn about the GPW WATS Trading System.

- GPW WATS 1.01 Trading System.

Please check the documentation of the transaction protocols supported by GPW WATS:

- GPW WATS 2.01 Native Order Gateway Specification
- GPW WATS 2.02 FIX Order Gateway Specification

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

- GPW WATS 3.01 Market Data Protocol

Please check the description of communication with IDDS:

- 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 describing other services provided within GPW WATS:

- GPW WATS 4.01 Drop Copy Gateway
- GPW WATS 4.02 Post Trade Gateway
- GPW WATS 5.01 Risk Management Gateway

Please refer to the additional documentation describing rejection codes, binary data format and technical description of how to join the system:

- 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) Short Code Mapping
- GPW WATS 6.03 Short-Long Mapper User Guide.

3. DOCUMENT HISTORY

Version	Date	Description
1.0	30/08/2025	First publication of the document.
1.1	05/09/2025	Cancelation of date in chapter 4.3.2.1
1.2	22/04/2026	Addition of BCP provisions (introduction of Chapter 4.5)

4. INTRODUCTION

4.1. GPW WATS ARCHITECTURE

GPW WATS system operates in normal operating mode using both Data Centers (WA3 and WA2), however, in normal operating mode, the main modules responsible for the construction and management of the order book (Matching Engine) are launched in the **Primary Data Center (WA3)**.

Due to the above, the PDC (WA3) can be considered the primary data processing center of the GPW WATS system. Please note that during normal operating mode of the GPW WATS system, the BDC (WA2) contains active GPW WATS system modules, in particular the DDS module responsible for the distribution of market data (Stream B), so it should be treated as a full-fledged data processing center during the trading day.

4.2. EMERGENCY SCENARIOS

In accordance with the business continuity plans in force at the WSE, in particular the continuity of trading, two basic subgroups of scenarios implemented as part of the operation of GPW WATS system have been established.

For each subgroup, the scenarios are differentiated based on the timing of the event that triggers a specific scenario. In particular, the timing correlates with the current trading session phase.

Subgroup A) – scenarios addressing events, dysfunctions, failures that do not require the launch of BCP (Business Continuity Plan) scenarios and the transfer of quotations to G (WA2).

Subgroup A is a set of scenarios corresponding to situations requiring the recovery of critical business processes in High Availability (HA) mode.

Subgroup B) – Scenarios requiring the launch of the GPW WATS trading system, using only BDC (WA2) resources.

Subgroup B is a set of scenarios corresponding to situations resulting in the launch of the GPW WATS system and the recovery of critical business processes related to the operation of the GPW WATS system in Disaster mode. Recovery (DR).

IMPORTANT: The following assumptions and scenarios do not apply directly to GPW colocation clients (HFT colocation) due to the specific nature of connecting these clients directly within one Data Center.

4.3. CHARACTERISTICS OF EMERGENCY SCENARIOS

4.3.1. SUBGROUP A - (HA SCENARIOS)

This subgroup of scenarios includes all scenarios supported by GPW operational procedures describing the maintenance of critical business processes related to the GPW WATS system, which do NOT require the launch of key GPW WATS system modules (Matcher) in the BDC (WA2) centre and do NOT have to result in disruption (suspension) of the trading session.

Taking into account the redundant architecture of the GPW WATS system and the information in related documents, the system is resilient to the dysfunction of any individual GPW WATS component.

Taking the above into account, the scenarios from Subgroup A) include, among others:

S_A1 - GPW client loses single connection to GPW systems

S_A2 - unavailability of single Order Entry Gateway (OEG) FIX and BIN

S_A3 - failures of a single DDS (Data Distribution System) module

S_A4 - failures of each individual element of the GPW WATS technical network infrastructure within each of the data processing centers PDC (WA3) and BDC (WA2)).

4.3.1.1. S_A1

In accordance with GPW recommendations, each client connected to the GPW WATS system uses a redundant connection to both GPW data processing centers (PDC (WA3) and BDC (WA2)).

Access to the Order Entry Gateway (OEG) at both centers is available via any of the established connections. Traffic prioritization mechanisms allow the connected client to configure their access infrastructure to guarantee access to the GPW WATS system in the event of a single operator/link failure.

4.3.1.2. S_A2

Failure of a single OEG requires switching the client to an alternative OEG whose client access parameterization is consistent with the one normally used in the absence of incidents.

The switchover is only possible with the agreement and under the operational supervision of the WSE and requires action by the GPW WATS System Operation Team (OEG activation).

The OEG to which the client sessions are switched has an address from **BDC** (WA2) in accordance with the Connectivity document.

Details about switching within the protocol, BIN and FIX, respectively, are described in the associated documentation.

4.3.1.3. S_A3

Failure of a single DDS module, regardless of whether it is in PDC (WA2) or WA3 (BDC), will result in the distribution of market data from GPW WATS exclusively from one of the processing centers until the end of the session.

In such a case, arbitration mechanisms that involve comparing data in streams transmitted simultaneously from PDC (WA2) and BDC (WA3) will not be applicable, and message losses and ongoing market data processing must then be based solely on the Replay mechanism and Snapshot of a single stream.

4.3.1.4. S_A4

All elements of the network infrastructure within GPW WATS are configured redundantly, both within the internal GPW WATS network and access segments for GPW WATS system clients.

The mechanisms of traffic engineering and reliable switching in the event of failure of individual links/ports/inserts are based on the current recommendations of network equipment suppliers and correspond to the current standards of designing the architecture of telecommunication networks.

4.3.2. SUBGROUP B - (DR SCENARIOS)

The scenarios in this group address the situation in which IT resources supporting the handling of key processes within the GPW WATS system are unavailable and an operational transfer of key GPW WATS system modules to resources in **BDC** (WA2) is required.

In accordance with applicable regulations, the process of launching key GPW WATS services in **BDC** (WA2) should be completed within 2 hours.

Detailed operational activities for each moment of the occurrence of an incident requiring the activation of the Subgroup B scenario, with particular emphasis on the current state of the GPW WATS system and the trading session phase in the common part, assume:

1. Reliability and accountability of a continued or settled trading session (depending on the time of the incident), based on data available only in the currently available BDC (WA2).
2. The need to use technical connections and client access configuration to WATS interfaces available in such a case only within **BDC**.
3. Using only a single market data stream (Stream B) from **BDC** (WA2).
4. The ability of client applications to continue the current trading session after a break and technical switchover to the GPW WATS system interfaces located in **BDC** (WA2).
The status of interfaces in BDC (WA2) corresponds to the current state of the trading session and the client's ability to continue the session depends on determining the current state of its systems in accordance with the data available in the GPW WATS system running in **BDC** (WA2). (see related GPW WATS documentation: FIX/BIN port, DDS).

The moments that determine the implementation of a specific scenario are the key events of the trading session resulting from the quotation schedule:

S_B1 – incident/failure before the first transaction

S_B2 – incident/failure after the first transaction and up to two hours before the end of trading in the current trading session

IMPORTANT: Depending on current factors, with particular emphasis on the state of the market and the time remaining until the close of trading on the day of the incident, with the option of extending the session schedule and extending the trading session, the session on a given day may be continued and settled with BDC or only settled with BDC.

S_B1

The failure and the decision to transfer quotations to **BDC** (WA2) occurs before the first transaction is concluded in a given session in the GPW WATS system.

In accordance with the adopted assumptions and within operational possibilities, GPW will modify the session schedule so that no transaction is concluded in PDC (WA2), and the session will be continued after the GPW WATS system is launched in **BDC** (WA2).

4.3.2.1. S_B2

The failure and the decision to transfer quotations to BDC (WA2) occurs after the first transaction is concluded in the current session in the WATS system.

Dress Rehearsal. Rehearsal test

The continuation and settlement of the session or only the settlement of the session will take place on the basis of the current data in BDC (WA2) in accordance with the scenario presented in the document:

GPW WATS 1.0 - Dress Rehearsal – General test

4.4. COMMUNICATION WITH GPW CLIENTS

Activation of any scenario from Subgroup B results in communication to all market participants in accordance with the operational procedures for the trading system applicable on the WSE.

Scenarios from Subgroup A, depending on the impact and potential consequences, based on the current assessment of the situation, will be handled in accordance with the internal procedures of GPW in communication with the clients they concern

4.5. MARKET DATA AND FIX/BIN CONNECTIVITY

Due to the potential variety of failure scenarios within the Disaster Recovery (DR) framework (section 4.3.2), the activation of which may occur only in the event of a large-scale failure with a significant impact on GPW's IT systems, it is necessary to ensure the reliability and auditability of the trading session state executed or settled using the resources of GPW's Disaster Recovery Site (BDC)(WA2)

Accordingly, all systems connected to GPW systems during the restoration of availability of critical services must treat the state of the systems running in ZCPD as the **current and reference state**, both for the purposes of continuing trading and settling the trading session, as well as – depending on the applicable scenario – solely for settlement purposes.

4.5.1. MARKET DATA

GPW guarantees that all messages transmitted up to the moment of system switch-over in accordance with the contingency plan – i.e. until the processing of the last transaction executed in the primary system – will be consistent both in terms of content and sequential numbering.

All subsequent messages will be assigned sequence numbers in accordance with the applicable **Market Data distribution protocols**, and their content will reflect the single, current state of the trading application launched under the contingency plan at the GPW Disaster Recovery Site (BDC).

Client applications, following the switch-over to the GPW Disaster Recovery Site (BDC), should retrieve a complete set of market data from that site and reconstruct the current market state on this basis, in accordance with their applicable internal data processing procedures.

GPW guarantees that all messages sent up to the system switch-over executed under the contingency plan – i.e. up to the moment the last valid transaction was processed in the primary system – will remain fully consistent both in terms of business content and sequential numbering.

All subsequent messages will contain sequence numbers assigned in accordance with the Market Data protocols, and their content will reflect the only valid and current state of the trading application launched under the contingency plan in **Backup Data Center (BDC)**.

GPW RECOMMENDATION

Participants should either:

- retrieve the full set of market data from the GPW Disaster Recovery Site (BDC), starting from the first data of the given trading day, and optionally process it sequentially from the beginning of the day, excluding data previously received from GPW's Primary Data Center prior to the failure and the activation of the BCP scenario;

or

- retrieve market data following the restart of the trading system in BDC, starting from the point indicated by GPW as the time of the last valid transaction processed prior to the failure, and subsequently continue the operation of the client application and message processing **solely on the basis of market data received from BDC.**

4.5.2. FIX/BIN

The procedures for restarting FIX/BIN sessions as part of the DR scenario activation and switching GPW operations from the Primary Site to the Disaster Recovery Site (BDC) are defined in the following documentation:

- GPW WATS Native Order Gateway Specification
- GPW WATS FIX Order Gateway Specification