Confidential

IORS – Remove Support for Non-Persistent GT Orders

Issue 1.0

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Related documents

None

Summary of changes

A history of significant changes to this template is described in the table below.

Issue	Date	Author	Change
0.1	02/18/2014	J. Frondoso	Initial draft
0.2	03/17/2014	J. Frondoso	Incorporated comments from draft BRD review with team
0.3	03/20/2014	J. Frondoso	Updated BRD based on persistent value suppression/configuration
0.4	03/27/2014	J. Frondoso	Incorporated review feedback from Dev
1.0	03/28/2014	J. Frondoso	First issue to project team

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Chapter 1. Introduction

1.1. Business Case

Non-persistent GT (GTC/GTD) orders are at the risk of running into issues during certain operational procedures. These issues impact our members' GT orders and their ability to interact with them. Normally, non-persistent GT orders are carried over the next business/trading day without issue as long as the Matcher stops and its products are in the POST_END_OF_DAY state. However, non-persistent GT orders are unnecessarily deleted when the Matcher stops and its products are in any other state except POST_END_OF_DAY during the following times:

- During non-trading hours when product state is not in POST_END_OF_DAY state
- During weekend checkouts, when product state rotation occurs, if the Matcher stops at any time and its product state is not in POST_END_OF_DAY

After polling our members and educating them on the behavior of non-persistent GT orders, they are in favor with removing the non-persistent functionality. Starting with the 10.0 release, the Gateway will reject incoming non-persistent GT orders. Our TMS team will ensure the members are ready for this change.

1.2. Scope

IORS SIR 260967, GW/OFI SIR 260773

This change only affects GTC/GTD orders.

1.3. Planned Benefits

The benefit is that there will be no more occurrences where members' non-persistent GT orders are deleted unintentionally due to any operational procedures done outside of regular trading hours.

1.4. Priority

Priority is high and requested for R10.

1.5. Key Definitions, Acronyms, and Abbreviations

Acronym	Description
IORS	ISE Order Routing Service
ORA	Order Router Adapter
DCA	Drop Copy Adapter
DB	Database
GT	Good 'Til (means GTD and GTC are both being referenced)
GTD	Good Til Date
GTC	Good Til Cancel

ME	Matching Engine
POB	Private Order Broadcast
TIB	Trade Item Broadcast
DIB	Deal Item Broadcast

Chapter 2. Overview

2.1. Current Behavior

IORS users can mark all GT orders as persistent on the adapter level by using **PersistentGTOrders**. This setting can be overwritten on an order by order basis by setting ExecInst (tag 18) = 'Q'. If PersistentGTOrders = true, all GTC and GTD orders will be submitted to the core as persistent orders. IORS appends the value 'H' in the ExecInst (tag 18) field for persisted orders. Note: IORS also performs a check to see if the user already put 'H' – to prevent duplicate value. Execution reports will also have the value 'H' in the ExecInst field.

2.2. Proposed Solution

IORS will permanently set the **PersistentGTOrders** adapter configuration to true. If the user sets ExecInst = 'Q' on the order to override the configuration, IORS will pass it through to the Gateway as it does today. The Gateway will reject all incoming non-persistent GT orders.

The core is converting all non-persistent GT orders to persistent on Day 0. IORS will also need to update the state of all non-persistent GT orders to persistent in its database. When this conversion happens, subsequent ERs of the converted persisted GT orders will receive the value 'H' in ExecInst (tag 18) = 'H'. This is unexpected for members who originally marked orders as non-persistent. Therefore, receiving the ExecInst value 'H' will be configurable per adapter. The configuration will instruct ORA to either leave or suppress the value 'H' in ExecInst. On Day 1, members who currently have PersistentGTOrders = true will not have the 'H' value suppressed. As of today, there are five member firms (39 adapters) that have PersistentGTOrders = true. These adapters are listed in the Appendix and will be listed in the Day One Document. Another query for adapters with PersistentGTOrders = true will be done on Day 0 for accuracy. All other adapters not on this list are assumed to have PersistentGTOrders = false, and they will have the configuration set to suppress 'H'. Conformance testing will be optional.

2.2. Assumptions

1. If ExecInst = 'Q' comes on an order to override the PersistentGTOrders configuration, ORA will pass it through to the Gateway, as it does today. The Gateway will reject all incoming non-persistent GT orders starting in R10.
2. In the event that the core crashes, IORS will continue to suppress OUTS it generates for persisted GT orders.
3. On Day 1:
    a. Adapters who currently have PersistentGTOrders = true will not have the ExecInst value 'H' suppressed.
    b. Adapters who currently have PersistentGTOrders = false will have the ExecInst value 'H' suppressed.

Chapter 3. Detailed Requirements

3.1. Configuration Change

The existing adapter configuration called ***PersistentGTOrders*** will permanently be set to true for all adapters.

3.2. ORA

When configured, ORA will remove the ExecInst (tag 18) value ‘H’ on the message that it receives from the POB for GTC or GTD orders. ORA will only strip out the ‘H’ if ‘H’ is among multiple values in tag 18. If ORA strips out the ‘H’ and ‘H’ is the only value in tag 18, then tag 18 will be treated as an optional field without a value that the member will not receive (standard FIX behavior for optional tags without a value).

Scenarios below apply to both New Order Single and New Order Multileg.

Scenario 1:

- Configuration is set to remove ‘H’ in ExecInst (tag 18).
- ORA receives *tag 18 = z, H, G* on a GT order
- Result: All values except ‘H’ will get passed back to the member. Tag 18 = z, G is sent back to the member

Scenario 2:

- Configuration is set to remove ‘H’ in ExecInst (tag 18).
- ORA receives *tag 18 = H, G* on a GT order
- Result: All values except ‘H’ will get passed back to the member. Tag 18 = G is sent back to the member

Scenario 3:

- Configuration is set to remove ‘H’ in ExecInst (tag 18).
- ORA receives *tag 18 = H* on a GT order
- Result: Tag 18 isn’t sent back to the member because Tag 18 is an optional field that is now blank

Scenario 4:

- Configuration is set to keep ‘H’ in ExecInst (tag 18).
- ORA receives *tag 18 = H* on a GT order
- Result: Tag 18 = H is sent back to the member

Scenario 5:

- Configuration is set to keep ‘H’ in ExecInst (tag 18).

- ORA receives *tag 18 = z, H, G* on a GT order
- Result: Tag 18 = z, H, G is sent back to the member

Scenario 6:

- Configuration is set to keep ‘H’ in ExecInst (tag 18).
- ORA receives a cancel/replace with *tag 18 = z, H, G* on a GT order
- Result: Tag 18 = z, H, G is sent back on the cancel/replace ack to the member

Scenario 7:

- Configuration is set to remove ‘H’ in ExecInst (tag 18).
- ORA receives a cancel/replace with *tag 18 = H, G* on a GT order
- Result: All values except ‘H’ will get passed back to the member. Tag 18 = G is sent back on the cancel/replace ack to the member

New Configuration

A new adapter configuration will control whether or not ORA will remove the ExecInst value ‘H’. This configuration will be available to both ORA and DCA. The default behavior is to instruct ORA and DCA to **not** remove the ExecInst value ‘H’ on the message that is sent back to the member.

Day 0 Conversion

The IORS database will need to handle converting non-persistent GT order to persistent before Day 1. A tool will be provided to turn on the persistent flag to True for all GT orders.

3.3. DCA

Order Drop Copy

Order drop copy subscribers can choose whether or not to receive the ExecInst value ‘H’ on the message that it receives from the POB for GTC or GTD orders. The same configuration used to control the suppression in ORA will do the same for Order Drop Copy.

Trade Drop Copy

No impact to trade drop copy because it does not process ExecInst(18).

3.4. POB

No impact to the POB.

Chapter 4. Non-Functional Requirements

4.1. Connectivity

No change to IORS' connectivity to the core.

4.2. Monitoring

No changes to the trading tools.

4.3. Security

No changes to entitlements, security, etc.

4.4. Reliability

No changes – the applications will continue to generate the current alerts to Market Ops and Computer Ops if there are errors or disconnections.

4.5. Availability

The BU level configurations in ORA cannot be changed intraday. It will be changed EOD, effective the next trading day.

4.6. Auditability

Application logs always have start-up, connection, and configuration information. No changes to the logs or generation of the logs.

4.7. Documentation

FIX manual and Ops document will need to be updated.

External communication to members will be needed to communicate changes.

4.8. Data Requirements

By Day 0, we will need a list of adapters who have PersistentGTOrders = True. This is because on Day 1, those adapters will not have ExecInst value 'H' suppressed. Adapters not on that list are assumed to have PersistentGTOrders = False, and they will have the ExecInst value 'H' suppressed.

4.9. Billing

No changes.

4.10. Acceptance Criteria

The application must confirm to ISE Operations standards. Specifically, the application must go through BAT, OAT, PAT and MAT process for acceptance.

4.11. Legal

No changes.

4.12. Rollout Strategy

Rollout will be across the board when R10 goes live.

4.13. Appendix

As of March 20, 2014, adapters with PersistentGTOrders = True:

#	Fix Adapter Name	Firm	Fix Port	CompID	Core Login	Core GW/Port	Service Group
1.	BAM31E_22562	BAM	22562	MERKE	BAM31E-1	pc-mgw14-406:10106	IORS.BSI.ORA_02
2.	BAM32E_22560	BAM	22560	MLPATT	BAM32E-1	pc-mgw14-406:10106	IORS.BSI.ORA_02
3.	BAM33E_22563	BAM	22563	MERME	BAM33E-1	pc-mgw14-406:10106	IORS.BSI.ORA_02
4.	BAM41E_22567	BAM	22567	MERUE	BAM41E-1	pc-mgw14-406:10106	IORS.BSI.ORA_02
5.	BAM42E_22568	BAM	22568	MERVE	BAM42E-1	pc-mgw14-406:10106	IORS.BSI.ORA_02
6.	BAM43E_22569	BAM	22569	MERWE	BAM43E-1	pc-mgw14-406:10106	IORS.BSI.ORA_02
7.	CDL01E_22540	CDL	22540	CES	CDL01E-1	pc-mgw14-406:10106	IORS.BSI.ORA_05
8.	CDL02E_22546	CDL	22546	CES5	CDL02E-1	pc-mgw14-406:10106	IORS.BSI.ORA_05
9.	CDL04E_22544	CDL	22544	CES4	CDL04E-1	pc-mgw15-406:10106	IORS.BSI.ORA_05
10.	CDL06E_22543	CDL	22543	CES3	CDL06E-1	pc-mgw15-406:10106	IORS.BSI.ORA_05
11.	CDL07E_22530	CDL	22530	CIT	CDL07E-1	pc-mgw15-406:10106	IORS.BSI.ORA_05
12.	CDL08E_22532	CDL	22532	CIT2	CDL08E-1	pc-mgw15-406:10106	IORS.BSI.ORA_05
13.	CDL09E_22533	CDL	22533	CIT3	CDL09E-1	pc-mgw15-406:10106	IORS.BSI.ORA_05
14.	CDL10E_22534	CDL	22534	CIT4	CDL10E-1	pc-mgw15-406:10106	IORS.BSI.ORA_05
15.	BAM52E_22786	BAM	22786	MLPATT6	BAM52E-1	pc-mgw11-406:10106	IORS.BSI.ORA_09

#	Fix Adapter Name	Firm	Fix Port	CompID	Core Login	Core GW/Port	Service Group
16.	JPM14E_21020	JPM	21020	BSC	JPM14E-1	pc-mgw11-406:10106	IORS.BSI.ORA_09
17.	JPM15E_21110	JPM	21110	BNS	JPM15E-1	pc-mgw11-406:10106	IORS.BSI.ORA_09
18.	EBSSB_21444	EBS	21444	EBSSB	BAM53E-1	pc-mgw13-406:10106	IORS.BSI.ORA_11
19.	EBSSB_21444	EBS	21444	EBSSB	BAM54E-1	pc-mgw13-406:10106	IORS.BSI.ORA_11
20.	UBS01E_22623	UBS	22623	UBSI3	UBS01E-1	pc-mgw12-406:10106	IORS.BSI.ORA_14
21.	UBS02E_22620	UBS	22620	UBSI	UBS02E-1	pc-mgw12-406:10106	IORS.BSI.ORA_14
22.	UBS03E_22622	UBS	22622	UBSI2	UBS03E-1	pc-mgw12-406:10106	IORS.BSI.ORA_14
23.	BAM56E_24090	BAM	24090	BAMLG	BAM56E-1	pc-mgw11-406:10106	IORS.BSI.ORA_19
24.	BAM57E_24092	BAM	24092	BAMLG2	BAM57E-1	pc-mgw12-406:10106	IORS.BSI.ORA_19
25.	BAM58E_24093	BAM	24093	BAMLG3	BAM58E-1	pc-mgw13-406:10106	IORS.BSI.ORA_19
26.	BAM59E_24094	BAM	24094	BAMLG4	BAM59E-1	pc-mgw14-406:10106	IORS.BSI.ORA_19
27.	EBS12E_24060	EBS	24060	EBSG	EBS12E-1	pc-mgw14-406:10106	IORS.BSI.ORA_19
28.	CDL40E_24010	CDL	24010	CESG	CDL40E-1	pc-mgw14-406:10106	IORS.BSI.ORA_20
29.	CDL41E_24012	CDL	24012	CESG2	CDL41E-1	pc-mgw15-406:10106	IORS.BSI.ORA_20
30.	CDL42E_24013	CDL	24013	CESG3	CDL42E-1	pc-mgw15-406:10106	IORS.BSI.ORA_20
31.	CDL43E_24014	CDL	24014	CESG4	CDL43E-1	pc-mgw14-406:10106	IORS.BSI.ORA_20
32.	CDL44E_24190	CDL	24190	CITG	CDL44E-1	pc-mgw13-406:10106	IORS.BSI.ORA_20
33.	CDL45E_24192	CDL	24192	CITG2	CDL45E-1	pc-mgw14-406:10106	IORS.BSI.ORA_20
34.	CDL46E_24193	CDL	24193	CITG3	CDL46E-1	pc-mgw15-406:10106	IORS.BSI.ORA_20

#	Fix Adapter Name	Firm	Fix Port	CompID	Core Login	Core GW/Port	Service Group
35.	CDL47E_24194	CDL	24194	CITG4	CDL47E-1	pc-mgw16-406:10106	IORS.BSI.ORA_20
36.	EBS13E_24062	EBS	24062	EBSG2	EBS13E-1	pc-mgw14-406:10106	IORS.BSI.ORA_20
37.	EBSSBG_24230	EBS	24230	EBSSBG	BAM60E-1	pc-mgw14-406:10106	IORS.BSI.ORA_21
38.	EBSSBG_24230	EBS	24230	EBSSBG	BAM61E-1	pc-mgw15-406:10106	IORS.BSI.ORA_21
39.	UBS37E_24110	UBS	24110	UBSIG	UBS37E-1	pc-mgw16-406:10106	IORS.BSI.ORA_22

4.14. Open Questions / Future Enhancements