Binary EntryPoint Order Routing

Certification Script

Versão: 1.3
Last Modification: January 10, 2023

Contact Details

Trading Certification

- o **tradingcertification@b3.com.br**
- o +55 11 2565-5023

Content

Revision History

Data	Versão	Description	Author
May 26, 2023	1.0	- Initial version	EHTI RC
January 09, 2024	1.2	- New Steps on scenario M. Mass Cancel	EHTI

1. Preface

This document describes the series of tests that qualify a third-party institution to connect to B3 for the purpose of routing orders for Derivatives and Equities segments).EntryPoint Simple Binary Encoding (SBE) in version 1.0 Little Endian based on FIXP.

FIXP é technical specification for an electronic communication of high-performance trade-related message.
It is an open standard managed by members of. https:/www.fixtrading.org/standards/fixp-online

This outlines the certification process to route orders through B3 Binary EntryPoint and is provided for third-parties which need trading connectivity with B3.

To request copies of this document, please contact: tradingcertification@b3.com.br

2. Introduction

The test scenarios will be executed sequentially, and each one will be available for 15 minutes, this way, the expected results can be verified and initially analyzed in case of failure.

Pré-requirements

All FIX messages should follow the specification in " BinaryEntryPoint-MessageReference-6.4.2-enUS " e no " BinaryEntryPoint-MessageSpecificationGuidelines" that are available on B3's clients website at: **https://Customers.b3.com.br/pt_br/roadmap/sobre/atualizacao-de-gateway-de-negociacao-binario.htm**

3. Glossary

GTD	Good Till Date
GTC	Good Till Cancel
IOC	Immediate or Cancel
FAK	Fill and Kill
FOK	Fill or Kill
ATC	At the Close
GFA	Good for Auction
HFT	High Frequence Trader
RLP	Retail Liquidity Provider
RLT	Retail Liquidity Taker

Step	Description	Expected result	Req	Status	
A1.Negotiate/Establish **Available for: PUMA Equities; PUMA Derivatives**				
A1.1	**Customer: Send Negotiate with wrong password (Credentials)**	Receive a NegotiateReject with Logon reject message	**N**	☐ **Pass**	☐ N/E
A1.2	**Customer: Send Negotiate**	Receive NegotiateResponse	**Y**	☐ **Pass**	☐ N/E
A1.3	**Customer: Send Establish**	Receive EstablishAck	**Y**	☐ **Pass**	☐ N/E
A1.3	**Trading Certification: Modify the session sequence to a greater value sequencial da sessão para that the one sent by Customer**	Receive EstablishReject message, informing the sequential sent was too low than expected. Receive the informed value by Trading Certification	**Y**	☐ **Pass**	☐ N/E

Step	Description	Expected result	Req	Status	
A2. Sequence (Heartbeat)				
A2.1	**Customer: Send Sequence**	Receive Sequence	**Y**	☐ **Pass**	☐ N/E

Step	Description	Expected result	Req	Status	
A3. Terminate				
A3.1	**Customer: Send Terminate**	Receive Terminate	**N**	☐ **Pass**	☐ N/E

	A4. Retransmit Request Available for: Equities and Derivatives				
Step	Description	Expected result	Req	Status	
A4.1	**TRADING CERTIFICATION: Send 100 messages.** **Customer: Send RetransmitRequest of first 100 messages fromSeqNum)**	Receive a Retransmission Customer: Confirm taht o SeqNum da primeira e da última mensagem	**Y**	☐ **Pass**	☐ N/E
A4.2	**Customer disconects the session** **TRADING CERTIFICATION: Send 100 messages.** **Customer: Send Resend Request of 100 first messages (fromSeqNum)**	Receive a Retransmission Customer: Confirmation of SeqNum of first and last message.	**Y**	☐ **Pass**	☐ N/E
A4.3	**TRADING CERTIFICATION: Send 100 messages.** **Customer: Receive messages** **Customer: disconnect the session** **TRADING CERTIFICATION: Send 100 messages.** **Customer: Reconecta a sessão** **Customer: Send RetransmitRequest from remaining messages (fromSeqNum)**	Receive messages Receive only the remaining messages (the SeqNum from last received Message must be equal to SeqNum from last generated messaged).	**Y**	☐ **Pass**	☐ N/E

B1. Simple LIMIT Orders with validity DAY				
SimpleNewOrder Order Type "2", TimeInForce "0"				
Available for: PUMA Equities; Puma Derivatives Access Model: DMA and Trading Desk				
Step	**Description**	**Expected result**	**Req**	**Status**
B1.1	Customer: Send simple buy limit order, DAY • 100@20,00 TRADING CERTIFICATION: Send simple sell limit order, DAY • 100@20,00	Order filled - Trade	Y	☐ Pass ☐ N/E
B1.2	Customer: Send simple buy limit order, DAY • 200@20,00 TRADING CERTIFICATION: Send sell limit order, DAY • 100@20,00	Order partial filled - Trade Orders on book: • Buy 100@20,00	Y	☐ Pass ☐ N/E
B1.3	Customer: Modify pending buy order • From: 100@20,00 • Modify to: 300@21,00	Modify pending order on book Orders on book: • Buy 200@21,00	Y	☐ Pass ☐ N/E
B1.4	TRADING CERTIFICATION: Send Sell limit order, DAY • 100@21,00	Modified order partial filled - Trade Orders on book: • Buy 100@21,00	Y	☐ Pass ☐ N/E
B1.5	Customer: Send Cancel pending order • Quantity book: 100@21,00	Cancel pending order.	Y	☐ Pass ☐ N/E
B1.6	TRADING CERTIFICATION: Send buy limit order, DAY • 200@20,00 Customer: Send Sell limit order, DAY • 100@21,00	Orders on book: • Buy 200@20,00 • Sell 100@21,00	Y	☐ Pass ☐ N/E
B1.7	Customer: Send modification of pending sell order, • De: 100@21,00 • Modify to: 300@20,00	Modified order partial filled - Trade Orders on book: • Sell 100@20,00	Y	☐ Pass ☐ N/E
B1.8	Customer: Logout connection with the Exchange	Receive Terminate message logout.	Y	☐ Pass ☐ N/E
B1.9	TRADING CERTIFICATION: Send cancelamento de ordem de Sell simples LIMIT, DAY	Cancel pending order	Y	☐ Pass ☐ N/E

Step	Description	Expected result	Req	Status	
B1.10	Customer:Send RetransmitRequest message	Orders that were not sent, should not be transmitted to Exchange. Execution Report messages are retransmitted.	Y	☐ **Pass**	☐ **N/E**
B1.11	TRADING CERTIFICATION: Cancel trade(s)	Trade Cancel	Y	☐ **Pass**	☐ **N/E**

B2. LIMIT Orders with validity IOC/FAK

NewOrderSingle; OrdType "2"; TimeInForce "3"
Available for: PUMA Equities; PUMA Derivatives; Access Model: DMA and Trading Desk

Step	Description	Expected result	Req	Status	
B2.1	Customer: Send Buy LIMIT order, IOC/FAK • 100@20,00	Immediate Cancel order	Y	☐ **Pass**	☐ **N/E**
B2.2	TRADING CERTIFICATION: Send LIMIT sell order, DAY • 100@20,00 Customer: Send Buy LIMIT order, IOC/FAK • 200@20,00	Order partial filled. • Trade. Pending canceled quantity: • Buy 100@20,00	Y	☐ **Pass**	☐ **N/E**
B2.3	Customer: Send Buy LIMIT order, DAY • 100@20,00 Customer: Send modification of buy order with validity IOC/FAK	Execution on modified order • Canceled Order	N	☐ **Pass**	☐ **N/E**
B2.4	TRADING CERTIFICATION: Send Buy limit order, DAY • 200@20,00 Customer: Send Sell limit order, IOC/FAK • 100@20,00	Order filled. • Trade. Pending quantity • Buy 100@20,00	Y	☐ **Pass**	☐ **N/E**
B2.5	Customer: Send Sell LIMIT order, IOC/FAK • 100@20,00	Order filled. Trade.	Y	☐ **Pass**	☐ **N/E**
B2.6	TRADING CERTIFICATION: Cancel trade(s)	Trade Cancel	Y	☐ **Pass**	☐ **N/E**

B3. LIMIT Orders with validity FOK

NewOrderSingle; OrdType "2"; TimeInForce "4"
Available for: PUMA Equities; Puma Derivatives Access Model: DMA and Trading Desk

Step	Description	Expected result	Req	Status	
B3.1	Customer: Send Buy LIMIT order, FOK • 100@20,00	Immediate cancel order	N	☐ **Pass**	☐ **N/E**
B3.2	TRADING CERTIFICATION: Send buy LIMIT order, DAY • 200@20,00 Customer: Send Sell LIMIT order, FOK • 200@20,00	Order filled. Trade.	N	☐ **Pass**	☐ **N/E**
B3.3	TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 200@20,00 Customer: Send Sell LIMIT order, FOK • 400@20,00	Immediate Cancel order	N	☐ **Pass**	☐ **N/E**
B3.4	TRADING CERTIFICATION: Cancel trade(s)	Trade Cancel	N	☐ **Pass**	☐ **N/E**

	C1. MARKET TO LIMIT orders with validity DAY

NewOrderSingle; OrdType "K"; TimeInForce "0"
Available for: PUMA Equities; Puma Derivatives Access Model: DMA and Trading Desk

Step	Description	Expected result	Req	Status	
C1.1	TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 100@20,00 Customer: Send Sell MARKET order, DAY • 100@MARKET	Order filled. Trade.	N	☐ **Pass**	☐ **N/E**
C1.2	TRADING CERTIFICATION: Send Buy Limit order, DAY • 200@20,00 Customer: Send Sell MARKET order, DAY • 100@MARKET	Order filled. Trade. Orders on book: • Buy 100@20,00	N	Pass	N/E
C1.3	Customer: Send sell MARKET order, DAY • 200@MARKET	Order partial filled. Trade Orders on book: • Sell 100@20,00	N	☐ **Pass**	☐ **N/E**
C1.4	Customer: Send Cancel pending order • 100@20,00	Cancel pending order.	N	☐ **Pass**	☐ **N/E**
C1.5	TRADING CERTIFICATION: Send buy LIMIT order, DAY • 200@20,00 Customer: Send Sell LIMIT order, DAY • 100@21,00	Orders on book: • Buy 200@20,00 • Sell 100@21,00	N	☐ **Pass**	☐ **N/E**
C1.6	Customer: Send modification on Sell LIMIT order, DAY • De: 100@21,00 • Modify to: 200@MARKET	Order modified total filled: Trade.	N	☐ **Pass**	☐ **N/E**
C1.7	TRADING CERTIFICATION: Send Buy LIMIT Orders, DAY • 100@20,00 • 100@21,00 Customer: Send Sell MARKET orders, DAY • 200@MARKET	Order partial filled. Trade. Orders on book: • Buy 100@20,00 • Sell 100@21,00	N	☐ **Pass**	☐ **N/E**

Step	Description	Expected result	Req	Status	
C1.8	TRADING CERTIFICATION: Send cancellation of buy and sell limit order, DAY, including Customer's order	Cancel pending order(s)	N	☐ Pass	☐ N/E
C1.9	TRADING CERTIFICATION: Cancel trade(s)	Trade Cancel	N	☐ Pass	☐ N/E

C2. MARKET TO LIMIT orders with validity IOC/FAK NewOrderSingle; OrdType "K"; TimeInForce "3" Available for: PUMA Equities; Puma Derivatives Access Model: DMA and Trading Desk					
Step	**Description**	**Expected result**	**Req**	**Status**	
C2.1	TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 100@20,00 Customer: Send Sell MARKET order, IOC/FAK • 100@MARKET	Order filled. Trade.	N	☐ Pass	☐ N/E
C2.2	TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 100@20,00 Customer: Send Sell MARKET order, IOC/FAK • 200@MARKET	Order partial filled. • Trade. Cancel pending order	N	☐ Pass	☐ N/E
C2.3	TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 100@20,00 Customer: Send Sell LIMIT order, DAY • 100@21,00 Customer: Send modify on sell MARKET order, IOC/FAK	Execution of modified order Order filled - Trade	N	☐ Pass	☐ N/E
C2.4	TRADING CERTIFICATION: Send Sell limit order, DAY • 100@20,00 Customer: Send Buy MARKET orders, IOC/FAK • 300@MARKET	Order partial filled. • Trade. (qty 200) canceled order	N	☐ Pass	☐ N/E
C2.5	TRADING CERTIFICATION: Cancel trade(s)	Trade Cancel	N	☐ Pass	☐ N/E

C3. MARKET TO LIMIT Orders with validity FOK

NewOrderSingle; OrdType "K"; TimeInForce "4"
Available for: PUMA Equities; Puma Derivatives Access Model: DMA and Trading Desk

Step	Description	Expected result	Req	Status	
C3.1	Customer: Send Sell MARKET order, FOK • 200@MARKET	Order rejected, once there is no counterparty.	N	☐ **Pass**	☐ N/E
C3.2	TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 100@20,00 Customer: Send Sell MARKET order, FOK • 100@MARKET	Order filled. Trade.	N	☐ **Pass**	☐ N/E
C3.3	TRADING CERTIFICATION: Send buy limit order, DAY • 100@20,00 Customer: Send Sell MARKET orders, FOK • 200@MARKET	Accepted order then canceled.	N	☐ **Pass**	☐ N/E
C3.4	TRADING CERTIFICATION: Send Trade Cancel	Trade Cancel	N	☐ **Pass**	☐ N/E

	D1. LIMIT orders with validity DAY				
	NewOrderSingle Order Type "2", TimeInForce "0"				
	Available for: PUMA Equities; Puma Derivatives Access Model: DMA and Trading Desk				
Step	Description	Expected result	Req	Status	
D1.1	Customer: Send Buy LIMIT order, DAY • 100@20,00 TRADING CERTIFICATION: Send Sell LIMIT order, DAY • 100@20,00	Order filled - Trade	Y	☐ Pass	☐ N/E
D1.2	Customer: Send Buy LIMIT order, DAY • 200@20,00 TRADING CERTIFICATION: Send Sell LIMIT order, DAY • 100@20,00	Order partial filled - Trade Orders on book: • Buy 100@20,00	Y	☐ Pass	☐ N/E
D1.3	Customer: Modify pending Buy order • From: 100@20,00 • Modify to: 300@21,00	Modify pending order on book Orders on book: • Buy 200@21,00	Y	☐ Pass	☐ N/E
D1.4	TRADING CERTIFICATION: Send LIMIT Sell, DAY • 100@21,00	Modified order partial filled - Trade Orders on book: • Buy 100@21,00	Y	☐ Pass	☐ N/E
D1.5	Customer: Send Cancel pending order • Quantity book: 100@21,00	Cancel pending order.	Y	☐ Pass	☐ N/E
D1.6	TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 200@20,00 Customer: Send Sell LIMIT order, DAY • 100@21,00	Orders on book: • Buy 200@20,00 • Sell 100@21,00	Y	☐ Pass	☐ N/E
D1.7	Customer: Send modification of pending Sell order • From: 100@21,00 • Modify to: 300@20,00	Modified order partial filled - Trade Orders on book: • Sell 100@20,00	Y	☐ Pass	☐ N/E
D1.8	Customer: Logout connection with the Exchange	Receive Terminate message.	Y	☐ Pass	☐ N/E
D1.9	TRADING CERTIFICATION: Send cancellation of Sell LIMIT order, DAY	Cancel pending order	Y	☐ Pass	☐ N/E

Step	Description	Expected result	Req	Status	
D1.10	Customer:Send RetransmitRequest message	The orders that were noAs Orders que não foram Senddas não devem ser transmitidas à Bolsa. Mensagens Execution Report são retransmitidas	Y	☐ Pass	☐ N/E
D1.11	TRADING CERTIFICATION: Cancel trade(s)	Trade Cancel	Y	☐ Pass	☐ N/E

	D2. LIMIT Orders with validity GTC NewOrderSingle; OrdType "2"; TimeInForce "1" Available for: PUMA Equities; Access Model: DMA and Trading Desk				
Step	Description	Expected result	Req	Status	
D2.1	Customer: Send Buy LIMIT order, GTC • 100@20,00 TRADING CERTIFICATION: Send Sell LIMIT order, DAY • 100@20,00	Order filled. Trade.	N	☐ Pass	☐ N/E
D2.2	Customer: Send Buy LIMIT order, GTC • 200@20,00 TRADING CERTIFICATION: Send Sell LIMIT order, DAY • 100@20,00	Order partial filled. Trade. Orders on book: • Buy 100@20,00	N	☐ Pass	☐ N/E
D2.3	Customer: Send modification of pending buy order • De: 100@20,00 • Modify to: 300@21,00	Modification of pending order on book Orders on book: • Buy 200@21,00	N	☐ Pass	☐ N/E
D2.4	TRADING CERTIFICATION: Send Sell LIMIT order, GTC 100@21,00	Modified order partial filled Trade. Orders on book: • Buy 100@21,00	N	☐ Pass	☐ N/E
D2.5	Customer: Send Cancel pending order • 100@21,00	Cancel pending order.	N	☐ Pass	☐ N/E
D2.6	TRADING CERTIFICATION: Send buy LIMIT order, DAY 200@20,00 Customer: Send Sell LIMIT order, GTC • 100@21,00	Orders on book: • Buy 200@20,00 • Sell 100@21,00	N	☐ Pass	☐ N/E
D2.7	Customer: Send modification of pending Sell order.	Modified order partial filled: Trade.	N	☐ Pass	☐ N/E

	De: 100@21,00				
	• Modify to: 300@20,00	Orders on book: • Sell 100@20,00			
D2.8	TRADING CERTIFICATION: Send cancellation of Sell LIMIT order, GTC	Cancel pending order.	N	☐ **Pass**	☐ **N/E**
D2.9	TRADING CERTIFICATION: Cancel trade(s)	Trade Cancel	N	☐ **Pass**	☐ **N/E**

<table>
<tr><td colspan="6" align="center">D3. LIMIT Orders with validity IOC/FAK

NewOrderSingle; OrdType "2"; TimeInForce "3"
Available for: PUMA Equities; PUMA Derivatives; Access Model: DMA and Trading Desk</td></tr>
<tr><th>Step</th><th>Description</th><th>Expected result</th><th>Req</th><th colspan="2">Status</th></tr>
<tr>
<td>D3.1</td>
<td>Customer: Send Buy LIMIT order Buy LIMIT order, IOC/FAK
• 100@20,00</td>
<td>Immediate order cancel</td>
<td>Y</td>
<td>☐ Pass</td>
<td>☐ N/E</td>
</tr>
<tr>
<td>D3.2</td>
<td>TRADING CERTIFICATION: Send Sell LIMIT order, DAY
• 100@20,00

Customer: Send Buy LIMIT order, IOC/FAK
• 200@20,00</td>
<td>Order partial filled.

• Trade.

Pending canceled quantity

• Buy 100@20,00</td>
<td>Y</td>
<td>☐ Pass</td>
<td>☐ N/E</td>
</tr>
<tr>
<td>D3.3</td>
<td>Customer: Send Buy LIMIT order, DAY
• 100@20,00

Customer: Send modification of buy order with validity IOC/FAK</td>
<td>Modification of order executed.:

• Oferta cancelada.</td>
<td>N</td>
<td>☐ Pass</td>
<td>☐ N/E</td>
</tr>
<tr>
<td>D3.4</td>
<td>TRADING CERTIFICATION: Send Buy LIMIT order, DAY
• 200@20,00

Customer: Send Sell LIMIT order, IOC/FAK
• 100@20,00</td>
<td>Order filled.

• Trade.

Pending quantity :

• Buy 100@20,00</td>
<td>Y</td>
<td>☐ Pass</td>
<td>☐ N/E</td>
</tr>
<tr>
<td>D3.5</td>
<td>Customer: Send Sell LIMIT order, IOC/FAK
• 100@20,00</td>
<td>Order filled. Trade.</td>
<td>Y</td>
<td>☐ Pass</td>
<td>☐ N/E</td>
</tr>
<tr>
<td>D3.6</td>
<td>TRADING CERTIFICATION: Cancel trade(s)</td>
<td>Trade Cancel</td>
<td>Y</td>
<td>☐ Pass</td>
<td>☐ N/E</td>
</tr>
</table>

D4. LIMIT Orders with validity GTD

NewOrderSingle; OrdType "2"; TimeInForce "6"
Available for: PUMA Equities; Access Model: DMA and Trading Desk

Step	Description	Expected result	Req	Status	
D4.1	Customer: Send Buy LIMIT order, GTD • 100@20,00 TRADING CERTIFICATION: Send Sell LIMIT order, DAY • 100@20,00	Order filled. Trade.	N	☐ Pass	☐ N/E
D4.2	Customer: Send Buy LIMIT order, GTD • 200@20,00 TRADING CERTIFICATION: Send Sell LIMIT order, GTD • 100@20,00	Order partial filled. Trade. Orders on book: • Buy 100@20,00	N	☐ Pass	☐ N/E
D4.3	Customer: Send modification of pending buyI order • De: 100@20,00 • Modify to: 300@21,00	Modificação da ordem pendente on book Orders on book: • Buy 200@21,00	N	☐ Pass	☐ N/E
D4.4	TRADING CERTIFICATION: Send Sell LIMIT order, GTD • 100@21,00	Modified order partial filled: Trade. Orders on book: • Buy 100@21,00	N	☐ Pass	☐ N/E
D4.5	Customer: Send Cancel pending order • 100@21,00	Cancel pending order.	N	☐ Pass	☐ N/E
D4.6	TRADING CERTIFICATION: Send Buy LIMIT order, GTD • 200@20,00 Customer: Send Sell LIMIT order, GTD • 100@21,00	Orders on book: • Buy 200@20,00 • Sell 100@21,00	N	☐ Pass	☐ N/E
D4.7	Customer: Send modification of pending sell order • De: 100@21,00 • Modify to: 300@20,00	Modified order partial filled: Trade. Orders on book: • Sell 100@20,00	N	☐ Pass	☐ N/E
D4.8	Customer: Send Buy LIMIT order, GTD with old date: • 100@20,00	Order rejected	N	☐ Pass	☐ N/E
D4.9	TRADING CERTIFICATION: Send Sell LIMIT order.	Cancel pending order.	N	☐ Pass	☐ N/E

Step	Description	Expected result	Req	Status	
D4.10	TRADING CERTIFICATION: Cancel trade(s)	Trade Cancel	N	☐ Pass	☐ N/E

D5. LIMIT Orders with validity FOK

NewOrderSingle; OrdType "2"; TimeInForce "4"
Available for: PUMA Equities; Puma Derivatives Access Model: DMA and Trading Desk

Step	Description	Expected result	Req	Status	
D5.1	Customer: Send Buy LIMIT order, FOK • 100@20,00	Immediate order cancel .	N	☐ Pass	☐ N/E
D5.2	TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 200@20,00 Customer: Send Sell LIMIT order, FOK • 200@20,00	Order filled. Trade.	N	☐ Pass	☐ N/E
D5.3	TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 200@20,00 Customer: Send Sell LIMIT order, FOK • 400@20,00	Immediate order cancel .	N	☐ Pass	☐ N/E
D5.4	TRADING CERTIFICATION: Cancel trade(s)	Trade Cancel	N	☐ Pass	☐ N/E

	E1. MARKET TO LIMIT orders with validity DAY NewOrderSingle; OrdType "K"; TimeInForce "0" Available for: PUMA Equities; Puma Derivatives Access Model: DMA and Trading Desk				
Step	Description	Expected result	Req	Status	
E1.1	TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 100@20,00 Customer: Send Sell MARKET order, DAY • 100@MARKET	Order filled. Trade.	N	☐ **Pass**	☐ **N/E**
E1.2	TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 200@20,00 Customer: Send Sell MARKET order, DAY • 100@MARKET	Order filled. Trade. Orders on book: • Buy 100@20,00	N	☐ **Pass**	☐ **N/E**
E1.3	Customer: Send Sell MARKET order, DAY • 200@MARKET	Order partial filled. Trade Orders on book: • Sell 100@20,00	N	☐ **Pass**	☐ **N/E**
E1.4	Customer: Send Cancel pending order • 100@20,00	Cancel pending order.	N	☐ **Pass**	☐ **N/E**
E1.5	TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 200@20,00 Customer: Send Sell LIMIT order, DAY • 100@21,00	Orders on book: • Buy 200@20,00 • Sell 100@21,00	N	☐ **Pass**	☐ **N/E**
E1.6	Customer: Send modification of Sell LIMIT Order, DAY • De: 100@21,00 • Modify to: 200@MARKET	Order total filled. Trade.	N	☐ **Pass**	☐ **N/E**
E1.7	TRADING CERTIFICATION: Send Buy Limit Orders, DAY • 100@20,00 • 100@21,00 Customer: Send Sell MARKET order, DAY • 200@MARKET	Order partial filled. Trade. Orders on book: • Buy 100@20,00 • Sell 100@21,00	N	☐ **Pass**	☐ **N/E**
E1.8	TRADING CERTIFICATION: Send cancellation of buy and Sell LIMIT orders, DAY, including Customer's order	Cancel pending order(s)	N	☐ **Pass**	☐ **N/E**

| E1.9 | TRADING CERTIFICATION: Cancel trade(s) | Trade Cancel | N | ☐ **Pass** | ☐ **N/E** |

E2. Orders a MARKET LIMIT with validity GTC NewOrderSingle; OrdType "K"; TimeInForce "2" Available for: PUMA Equities; Access Model: DMA and Trading Desk						

Step	Description	Expected result	Req	Status	
E2.1	TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 100@20,00 Customer: Send Sell MARKET order, GTC • 100@MARKET	Order filled. Trade.	N	☐ **Pass**	☐ **N/E**
E2.2	TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 200@20,00 Customer: Send Sell MARKET order, GTC • 100@MARKET	Order filled. Trade. Orders on book: Buy 100@20,00	N	☐ **Pass**	☐ **N/E**
E2.3	Customer: Send Sell MARKET order, GTC • 200@MARKET	Order partial filled. Trade Orders on book: • Sell 100@20,00	N	☐ **Pass**	☐ **N/E**
E2.4	Customer: Send Cancel pending order • 100@20,00	Cancel pending order.	N	☐ **Pass**	☐ **N/E**
E2.5	TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 200@20,00 Customer: Send Sell LIMIT order, GTC • 100@21,00	Orders on book: • Buy 200@20,00 • Sell 100@21,00	N	☐ **Pass**	☐ **N/E**
E2.6	Customer: Send modification of Sell LIMIT Order, GTC • De: 100@21,00 • Modify to: 200@MARKET	Execução total da ordem modificada: Trade.	N	☐ **Pass**	☐ **N/E**
E2.7	TRADING CERTIFICATION: Send Buy Limit Orders, DAY • 100@20,00 • 100@21,00	Order partial filled. Trade.	N	☐ **Pass**	☐ **N/E**

Step	Description	Expected result	Req	Status	
	Customer: Send Sell MARKET order, GTC • 200@MARKET	Orders on book: • Buy 100@20.00 • Sell 100@21,00			
E2.8	TRADING CERTIFICATION: Send cancellation of buy ordere Sell LIMIT, GTC, incluindo ordem do Customer	Cancel pending order(s).	N	☐ **Pass**	☐ **N/E**
E2.9	TRADING CERTIFICATION: Cancel trade(s)	Trade Cancel	N	☐ **Pass**	☐ **N/E**

E3. MARKET TO LIMIT with validity IOC/FAK NewOrderSingle; OrdType "K"; TimeInForce "3" Available for: PUMA Equities; Puma Derivatives Access Model: DMA and Trading Desk		

Step	Description	Expected result	Req	Status	
E3.1	TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 100@20,00 Customer: Send Sell MARKET order, IOC/FAK • 100@MARKET	Order filled. Trade.	N	☐ **Pass**	☐ **N/E**
E3.2	TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 100@20,00 Customer: Send Sell MARKET order, IOC/FAK • 200@MARKET	Order partial filled. • Trade. Cancel pending order	N	☐ **Pass**	☐ **N/E**
E3.3	TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 100@20,00 Customer: Send Sell LIMIT order, DAY • 100@21,00 Customer: Send modificação da ordem de Sell para validade a MARKET, IOC/FAK	Execução de modificação de ordem Order filled - Trade	N	☐ **Pass**	☐ **N/E**
E3.4	TRADING CERTIFICATION: Send Sell LIMIT order, DAY • 100@20,00 Customer: Send order de Buy a MARKET, IOC/FAK • 300@MARKET	Order partial filled. • Trade. Oferta (qtd 200) cancelada.	N	☐ **Pass**	☐ **N/E**
E3.5	TRADING CERTIFICATION: Cancel trade(s)	Trade Cancel	N	☐ **Pass**	☐ **N/E**

E4. MARKET TO LIMIT with validity GTD

NewOrderSingle; OrdType "K"; TimeInForce "6"
Available for: PUMA Equities; Access Model: DMA and Trading Desk

Step	Description	Expected result	Req	Status	
E4.1	TRADING CERTIFICATION: Send Buy LIMIT order, GTD • 100@20,00 Customer: Send Sell MARKET order, GTD • 100@MARKET	Order filled. Trade.	N	☐ **Pass**	☐ **N/E**
E4.2	TRADING CERTIFICATION: Send Buy LIMIT order, GTD • 100@20,00 Customer: Send Sell MARKET order, GTD • 200@MARKET	Order partial filled. Trade. Orders on book: • Sell 100@20,00	N	☐ **Pass**	☐ **N/E**
E4.3	Customer: Send modificação da ordem de Sell pendente • De: 100@20,00 • Modify to: 300@MARKET	Rejeição da modificação da ordem, once there is no counterparty.	N	☐ **Pass**	☐ **N/E**
E4.4	TRADING CERTIFICATION: Send Buy LIMIT order, GTD • 100@21,00	Order Total filled. Trade.	N	☐ **Pass**	☐ **N/E**
E4.5	Customer: Send Sell MARKET order, GTD • 100@MARKET	Order rejected, once there is no counterparty.	N	☐ **Pass**	☐ **N/E**
E4.6	TRADING CERTIFICATION: Send Buy LIMIT order, GTD • 100@20,00 Customer: Send Sell MARKET order, GTD • 200@MARKET	Partial filled Orders on book: • Sell 100@20.00	N	☐ **Pass**	☐ **N/E**
E4.7	TRADING CERTIFICATION: Send cancellation of Sell order	Cancel pending order.	N	☐ **Pass**	☐ **N/E**
E4.8	TRADING CERTIFICATION: Cancel trade(s)	Trade Cancel	N	☐ **Pass**	☐ **N/E**

	E5. MARKET TO LIMIT order with validity FOK NewOrderSingle; OrdType "K"; TimeInForce "4" Available for: PUMA Equities; Puma Derivatives Access Model: DMA and Trading Desk				
Step	Description	Expected result	Req	Status	
E5.1	Customer: Send Sell MARKET order, FOK • 200@MARKET	Order rejected, once there is no counterparty.	N	☐ **Pass**	☐ **N/E**
E5.2	TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 100@20,00 Customer: Send Sell MARKET order, FOK • 100@MARKET	Order filled. Trade.	N	☐ **Pass**	☐ **N/E**
E5.3	TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 100@20,00 Customer: Send Sell MARKET order, FOK • 200@MARKET	Accepted order then canceled.	N	☐ **Pass**	☐ **N/E**
E5.4	TRADING CERTIFICATION: Send Trade Cancel	Trade Cancel	N	☐ **Pass**	☐ **N/E**

F1. STOP LIMIT Orders with validity DAY					
NewOrderSingle; OrdType "4"; TimeInForce "0" Available for: PUMA Equities; Puma Derivatives Access Model: DMA and Trading Desk					
Step	Description	Expected result	Req	Status	
F1.1	Customer: Send STOP Buy Order, DAY • 100@22,10 • Stop Price: 22,00 TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 100@22,00 TRADING CERTIFICATION: Send Sell LIMIT order, DAY • 100@22,00 TRADING CERTIFICATION: Generate a trade at price 22,00 TRADING CERTIFICATION: Send Sell LIMIT order, DAY • 100@22,00 TRADING CERTIFICATION: Generate a trade at price 22,10	Order triggered and total filled	N	☐ Pass	☐ N/E
F1.2	Customer: Send STOP Buy Order, DAY • 200@22,30 · Stop Price: 22,20 TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 100@22,20 TRADING CERTIFICATION: Send Sell LIMIT order, DAY • 100@22,20 TRADING CERTIFICATION: Generate a trade at price 22,20 TRADING CERTIFICATION: Send Sell LIMIT order, DAY • 100@22,20 TRADING CERTIFICATION: Generate a trade at price 22,30	Order triggered and partiallly filled Orders on book: • Buy 100@22,30	N	☐ Pass	☐ N/E

Step	Description	Expected result	Req	Status	
F1.3	Customer: Send Cancel pending order • 100@22,30	Cancel pending order.	N	☐ **Pass**	☐ **N/E**
F1.4	TRADING CERTIFICATION: Cancel trade(s)	Trade Cancel	N	☐ **Pass**	☐ **N/E**

F2. STOP LIMIT Orders with validity GTC NewOrderSingle; OrdType "4"; TimeInForce "1" Available for: PUMA Equities; Access Model: DMA and Trading Desk					
Step	**Description**	**Expected result**	**Req**	**Status**	
F2.1	Customer: Send STOP Buy Order, GTC • 100@23,10 • Stop Price: 23,00 TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 100@23,00 TRADING CERTIFICATION: Send Sell LIMIT order, DAY • 100@23,00 TRADING CERTIFICATION: Generate a trade at price 23,00 TRADING CERTIFICATION: Send Sell LIMIT order, DAY • 100@23,00 TRADING CERTIFICATION: Generate a trade at price 23,10	Order triggered and total filled	N	☐ **Pass**	☐ **N/E**
F2.2	Customer: Send STOP Buy Order, GTC • 200@23,30 • Stop Price: 23,20 TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 100@23,20 TRADING CERTIFICATION: Send Sell LIMIT order, DAY • 100@23,20 TRADING CERTIFICATION: Generate a trade at price 23,20 TRADING CERTIFICATION: Send Sell LIMIT order, DAY	Order triggered and partiallly filled Orders on book: • Buy 100@23,30	N	☐ **Pass**	☐ **N/E**

Step	Description	Expected result	Req	Status	
	• 100@23,20 TRADING CERTIFICATION: Generate a trade at price 23,30				
F2.3	Customer: Send Cancel pending order • 100@23,30	Cancel pending order.	N	☐ **Pass**	☐ **N/E**
F2.4	TRADING CERTIFICATION: Cancel trade(s)	Trade Cancel	N	☐ **Pass**	☐ **N/E**

F3. STOP LIMIT Orders with validity GTD					
NewOrderSingle; OrdType "4"; TimeInForce "6" **Available for: PUMA Equities; Access Model: DMA and Trading Desk**					
Step	Description	Expected result	Req	Status	
F3.1	Customer: Send STOP Buy Order, GTD • 100@25,10 · Stop Price: 25,00 TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 100@25,00 TRADING CERTIFICATION: Send Sell LIMIT order, DAY • 100@25,00 TRADING CERTIFICATION: Generate a trade at price 25,00 TRADING CERTIFICATION: Send Sell LIMIT order, DAY • 100@25,00 TRADING CERTIFICATION: Generate a trade at price 25,10	Order triggered and total filled	N	☐ **Pass**	☐ **N/E**
F3.2	Customer: Send STOP Buy Order, GTD • 200@25,30 · Stop Price: 25,20 TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 100@25,20 TRADING CERTIFICATION: Send Sell LIMIT order, DAY • 100@25,20 TRADING CERTIFICATION: Generate a trade at price 25,20	Order triggered and partiallly filled Orders on book: • Buy 100@25,30	N	☐ **Pass**	☐ **N/E**

Step	Description	Expected result	Req	Status	
	TRADING CERTIFICATION: Send Sell LIMIT order, DAY • 100@25,30 TRADING CERTIFICATION: Generate a trade at price 25,30.				
F3.3	Customer: Send Cancel pending order • 100@25,30	Cancel pending order.	N	☐ **Pass**	☐ **N/E**
F3.4	TRADING CERTIFICATION: Cancel trade(s)	Trade Cancel	N	☐ **Pass**	☐ **N/E**

G. Order Entry with Minimum Quantity					
MinQty Available for: PUMA Equities; Puma Derivatives Access Model: DMA and Trading Desk					
Step	**Description**	**Expected result**	**Req**	**Status**	
G.1	TRADING CERTIFICATION: Send 2 Sell LIMIT orders, DAY • 100@20,00 Customer: Send Buy LIMIT orders, DAY • 200@20,00 • Quantity mínima: 100	Order partial and total filled	N	☐ **Pass**	☐ **N/E**
G.2	Customer: Send Buy LIMIT orders, DAY • 200@20,00 • Quantity mínima: 100	Order accepted and canceled.	N	☐ **Pass**	☐ **N/E**
G.3	TRADING CERTIFICATION: Send 2 Sell LIMIT orders, DAY • 100@20,00 Customer: Send Buy LIMIT orders, GTC • 200@20,00 • Minimum quantity: 100	Order partial and total filled.	N	☐ **Pass**	☐ **N/E**
G.4	TRADING CERTIFICATION: Send 1 Sell LIMIT order, DAY • 100@20,00 Customer: Send Buy LIMIT Orders, IOC/FAK • 200@20,00 • Minimum Quantity: 100	Order partial filled. Order Cancelled	N	☐ **Pass**	☐ **N/E**
G.5	TRADING CERTIFICATION: Send 2 Sell LIMIT orders, DAY	Order partial and total filled	N	☐ **Pass**	☐ **N/E**

	• 100@20,00 Customer: Send Buy LIMIT order, GTD • 200@20,00 • Minimum quantity 100			

<table>
<tr><td colspan="7">H. Order entry with Disclosed quantity

MaxFloor
Available for: PUMA Equities; Puma Derivatives Access Model: DMA and Trading Desk</td></tr>
<tr><td>Step</td><td>Description</td><td>Expected result</td><td>Req</td><td colspan="3">Status</td></tr>
<tr>
<td>H.1</td>
<td>Customer: Send Buy LIMIT order, DAY
• 200@20,00
• Disclosed quantity: 100

TRADING CERTIFICATION: Send 2 Sell limit Orders, DAY
• 100@20,00</td>
<td>Order Partial and total filled</td>
<td>N</td>
<td>☐ Pass</td>
<td>☐ N/E</td>
</tr>
<tr>
<td>H.2</td>
<td>Customer: Send buy limit order, GTC
• 200@20,00
• Disclosed quantity: 100

TRADING CERTIFICATION: Send 2 Sell LIMIT Orders, DAY
• 100@20,00</td>
<td>Order Partial and total filled</td>
<td>N</td>
<td>☐ Pass</td>
<td>☐ N/E</td>
</tr>
<tr>
<td>H.3</td>
<td>TRADING CERTIFICATION: Send Sell LIMIT order, DAY
• 100@20,00

Customer: Send Buy LIMIT order, DAY
• 200@20,00
• Disclosed quantity: 100</td>
<td>Order partial filled.

Order on book
• Buy 100@20,00</td>
<td>N</td>
<td>☐ Pass</td>
<td>☐ N/E</td>
</tr>
<tr>
<td>H.4</td>
<td>TRADING CERTIFICATION:
Send Cancel pending order</td>
<td>Cancel pending order.</td>
<td>N</td>
<td>☐ Pass</td>
<td>☐ N/E</td>
</tr>
</table>

I. Reserved status

New Order Single; OrdType "2";
Available for: PUMA Equities; Puma Derivatives Access Model: DMA and Trading Desk

Step	Description	Expected result	Req	Status	
	TRADING CERTIFICATION: Change on instrument status to Pre-Open (Reserved)				
I.1	Customer: Send Buy LIMIT order, DAY • 200@20,00 TRADING CERTIFICATION: Send Sell limit order, DAY • 200@20,00	Order entry with executions on the instrument opening. Orders on book: • Buy 200@20,00 • Sell 200@20,00	Y	☐ **Pass**	☐ **N/E**
I.2	Customer: Modify the quantity of order • 100@20,00	Modified rejected Orders on book: • Buy 200@20,00 • Sell 200@20,00	Y	☐ **Pass**	☐ **N/E**
I.3	Customer: Cancel buy order	Cancel rejected Orders on book: • Buy 200@20,00 • Sell 200@20,00	Y	☐ **Pass**	☐ **N/E**
I.4	Customer: Send Buy LIMIT order, DAY • 200@19,00	New Order Entry Orders on book: • Buy 200@20,00 • Buy 200@19,00 • Sell 200@20,00	Y	☐ **Pass**	☐ **N/E**
I.5	Customer: Modify order price (Buy: 19,00) • 200@19,50	Modified order Orders on book: • Buy 200@20,00 • Buy 200@19,50 • Sell 200@20,00	Y	☐ **Pass**	☐ **N/E**
I.6	Customer: Cancellation of Buy order (19,50)	Order Cancel Orders on book: • Buy 200@20,00 • Sell 200@20,00	Y	☐ **Pass**	☐ **N/E**
I.7	Customer: Send Buy LIMIT order, DAY	Order Entry	Y	☐ **Pass**	

Step	Description	Expected result	Req	Status	
	• 200@21,00	Orders on book: • Buy 200@21,00 • Buy 200@20,00 • Sell 200@20,00			☐ N/E
I.8	Customer: Cancel buy orders • 200@20,00	Order Canceled Orders on book: • Buy 200@21,00 • Sell 200@20,00	Y	☐ Pass	☐ N/E
I.9	TRADING CERTIFICATION: Modify the instrument status to OPEN	Total execution	Y	☐ Pass	☐ N/E
I.10	TRADING CERTIFICATION: Send Trading Cancel	Trade canceled	Y	☐ Pass	☐ N/E

	J. MARKET ON CLOSE				
	Available for: PUMA Equities				
Step	Description	Expected result	Req	Status	
J.1	TRADING CERTIFICATION: Send Buy LIMIT order, DAY • 100@20,00 Customer: Send order de Sell ATC • 100@MOC	Order Entry Orders on book: Buy 100@20,00 Sell 100@MOC	N	☐ Pass	☐ N/E
J.2	TRADING CERTIFICATION: Send Buy Buy LIMIT order, DAY • 200@21,00 Customer: Send Sell Order ATC • 200@MOC	Orders. Orders on book: • Buy 200@21,00 • Buy 100@20,00 • Sell 300@MOC	N	☐ Pass	☐ N/E
	TRADING CERTIFICATION: Config Closing Call and modify instrument sate to Closed.				
J.3	TRADING CERTIFICATION: Modify the instrument state to Open	Order filled ATC. Opening price: 21,00 Orders on book are canceled	N	☐ Pass	☐ N/E
J.4	TRADING CERTIFICATION: Send Trade Cancel	Trade Cancel	N	☐ Pass	☐ N/E

K. Cross order with validity DAY

NewOrderCross, CrossedIndicatior
Available for: Puma Derivatives; PUMA Equities;
Access Model: Trading Desk (DMA only for Equities)

Step	Description	Expected result	Req	Status	
K.1	Customer: Send cross LIMIT order, DAY with SenderLocation BVMF and valid Entering Trader • 100@20,00	Order filled. Trade.	N	☐ **Pass**	☐ **N/E**
K.2	Customer: Send cross LIMIT order, DAY with SenderLocation BVMF and invalid Entering Trader • 100@20,00	Rejected order.	N	☐ **Pass**	☐ **N/E**
K.3	Customer: Send cross LIMIT order, DAY SenderLocation DMA and valid Entering Trader • 100@20,00	Rejected order.	N	☐ **Pass**	☐ **N/E**
K.4	Customer: Send order cross LIMIT, DAY with SenderLocation BVMF and valid Entering Trader and CrossedIndicator "1001" • 100@20,00	Order filled. Trade. CrossedIndicator "1001" (Structured Transaction)	N	☐ **Pass**	☐ **N/E**
K.5	Customer: Send cross LIMIT order, DAY with SenderLocation BVMF, valid Entering Trader and CrossedIndicator "1002" • 100@20,00	Order filled. Trade. CrossedIndicator "1002" (Operational Error)	N	☐ **Pass**	☐ **N/E**
K.6	Customer: Send cross LIMIT order, DAY with SenderLocation BVMF and valid Entering Trader and CrossedIndicator "1001" • 100@20,00	Order filled. Trade. CrossedIndicator "1003" (TWAP VWAP)	N	☐ **Pass**	☐ **N/E**
K.7	Customer: Send cross LIMIT order, DAY with SenderLocation BVMF, valid Entering Trader and CrossedIndicator "1004" • 100@20,00	Rejected order. Incorrect value of tag 2523.	N	☐ **Pass**	☐ **N/E**
K.8	TRADING CERTIFICATION: Cancel trade(s)	Trade Cancel	N	☐ **Pass**	☐ **N/E**

	L. OMC – Order Cancel during an Auction				
	OrderCancelRequest; ExecRestatementReason "203"				
	Available for: PUMA Equities; Puma Derivatives				
Step	Description	Expected result	Req	Status	
L.1	**Auction configuration** **Trading Certification:** Change the Instrument state to Pre-Open (Reserved)	Auction is configured for instrument	N	☐ **Pass**	☐ **N/E**
L.2	**Cancel order participating on Theoretical opening price.** **During Neutral phase without ExecRestatementReason "203"** **Customer:** Send Buy LIMIT order, DAY - 100@20,00 **Trading Certification:** Send Sell LIMIT order, DAY - 100@20,00 **Customer:** Send the cancellation of Buy LIMIT order, DAY - Do not send ExecRestatementReason	Buy order is accepted. Buy order cancellation is accepted	N	☐ **Pass**	☐ **N/E**
L.3	**Cancel order not participating on Theoretical opening price.** **During Neutral Phase without Send ExecRestatementReason "203"** **Customer:** Send Buy LIMIT order, DAY - 100@20,00 **Trading Certification:** Send Buy LIMIT order, DAY - 100@21,00 **Trading Certification:** Send Sell LIMIT order, DAY - 100@21,00 **Customer:** Send a cancellation of Buy LIMIT order, DAY - Do not Send ExecRestatementReason	Buy order is accepted. Buy order cancellation is accepted	N	☐ **Pass**	☐ **N/E**
L.4	**Cancel order participating on Theoretical opening price.** **During Neutral Phase with ExecRestatementReason "203"** **Customer:** Send Buy LIMIT order, DAY - 100@20,00 **Trading Certification:** Send Sell LIMIT order, DAY - 100@20,00 **Customer:** Send the cancellation of Buy LIMIT order, DAY - Send **ExecRestatementReason "203"**	Buy order is accepted. Cancellation of Buy order is accepted and the (ExecRestatementReason "203" is received on Execution Report_Cancel	N	☐ **Pass**	☐ **N/E**
L.5	**Cancel order participating on Theoretical opening price.**	Buy order is accepted. Buy order cancellation is rejected	N	☐ **Pass**	☐ **N/E**

	During Neutral phase with ExecRestatementReason "203" equals to a value that does not exist in the dictionary. **Customer:** Send Buy LIMIT order, DAY - 100@20,00 **Trading Certification:** Send Sell LIMIT order, DAY - 100@20,00 **Customer:** Send the cancellation of Buy LIMIT order, DAY - Send a tag 378 (ExecRestatementReason)				
L.6	**B3 Sends the cancellation of order participating on theoretical opening price** **During Neutral Phase with ExecRestatementReason "203"** **Trading Certification:** Send the cancellation of Buy LIMIT order, DAY, informing Operational error.	Cancellation of Buy order is accepted and the **ExecRestatementReason "203"** (Cancel order due to Operational Error) is received on Execution Report_Cancel	N	☐ **Pass**	☐ **N/E**
L.7	**Cancellation of order participation on theoretical opening price by Firmsoft (B3 system)** **During Neutral Phase** **Customer:** Send LIMIT order, DAY - 100@20,00 **Trading Certification:** Send Sell LIMIT order, DAY - 100@20,00 **Trading Certification:** Send the cancellation, Buy LIMIT order, DAY, from Firmsoft	Buy order is accepted. Cancellation of Buy order is accepted and the **ExecRestatementReason "205"** (Cancel from Firmsoft due to Operational Error) is received on Execution Report_Cancel	C	☐ **Pass**	☐ **N/E**
L.8	**Cancellation of order participating on theoretical opening price** **During Error phase withoutExecRestatementReason "203"** **Customer:** Send Buy LIMIT order, DAY - 100@20,00 **Trading Certification:** Send Sell LIMIT order, DAY - 100@20,00 **Customer:** Send the cancellation of Buy LIMIT order, DAY - Do not Send **ExecRestatementReason "203"**	Buy order is accepted. Buy order cancellation is rejected	N	☐ **Pass**	☐ **N/E**
L.9	**B3 Sends the cancellation of order participating on theoretical opening price** **During Error phase without ExecRestatementReason "203"** **Trading Certification:** Send cancellation of Buy LIMIT order, DAY, Informing operational error.	Cancellation of Buy order is accepted and the **ExecRestatementReason "204"** (Cancel order due to Operational Error) is received on Execution Report_Cancel	N	☐ **Pass**	☐ **N/E**
L.10	**Cancellation of order not participating on theoretical opening price**	Buy order is accepted. Buy order cancellation is accepted	N	☐ **Pass**	☐ **N/E**

	During Error phase without ExecRestatementReason "203"				
	Customer: Send Buy LIMIT order, DAY - 100@20,00				
	Trading Certification: Send Buy LIMIT order, DAY - 100@21,00				
	Trading Certification: Send Sell LIMIT order, DAY - 100@21,00				
	Customer: Send the cancellation of Buy LIMIT order, DAY - Do not Send a ExecRestatementReason				
L.11	**Cancellation of order participating on theoretical opening price** **During Error phase with ExecRestatementReason "203"** **(Use na existing value of dictionary)** **Customer:** Send Buy LIMIT order, DAY - 100@20,00 **Trading Certification:** Send Sell LIMIT order, DAY - 100@20,00 **Customer:** Send cancellation of Buy LIMIT order, DAY - Send a (ExecRestatementReason)	Buy order is accepted. Buy order cancellation is rejected	N	☐ **Pass**	☐ **N/E**
L.12	**Cancellation of order participating on theoretical opening price.** **During Error phase with ExecRestatementReason "203"** **Customer:** Send Buy LIMIT order, DAY - 100@20,00 **Trading Certification:** Send Sell LIMIT order, DAY - 100@20,00 **Customer:** Send cancellation of Buy LIMIT order, DAY - Send **ExecRestatementReason "203"** (Cancel order due to Operational Error)	Buy order is accepted. Cancellation of Buy order is accepted and the **ExecRestatementReason "204"** (Order canceled due to Operational Error) is received on Execution Report_Cancel	N	☐ **Pass**	☐ **N/E**
L.13	**Cancellation of order not participating on theoretical opening price.** **During Error phase with ExecRestatementReason "203"** **Customer: Send Buy LIMI orderT, DAY - 100@20,00** **Trading Certification:** Send Buy LIMIT order, DAY - 100@21,00 **Trading Certification:** Send Sell LIMIT order, DAY - 100@21,00 **Customer:** Send cancellation of Buy LIMIT order, DAY **ExecRestatementReason "203"** (Cancel order due to Operational Error)	Buy order is accepted. Cancellation of Buy order is accepted and the **ExecRestatementReason "203"** (Cancel order due to Operational Error) is received on Execution Report_Cancel	N	☐ **Pass**	☐ **N/E**

Step	Description	Expected result	Req	Status	
L.14	**Cancellation of order participating on theoretical opening price from Firmsoft (Sistema da B3)** **During Error phase** **Customer:** Send Buy LIMIT order, DAY - 100@20,00 **Trading Certification:** Send oferta de Sell LIMIT, DAY - 100@20,00 **Trading Certification:** Send cancellation via Firmsoft, of Buy LIMIT order, DAY	Buy order is accepted. Cancellation of Buy order is accepted and **ExecRestatementReason "206"** (Order canceled via Firmsoft due to Operational Error) is received on Execution Report_Cancel	C	☐ **Pass**	☐ **N/E**

M. Mass Cancel					
OrderMassActionRequest					
Available for: PUMA Equities; Puma Derivatives; Acesso DMA and Trading Desk					
Step	**Description**	**Expected result**	**Req**	**Status**	
M.1	**Customer:** Send 5 Buy Orders, DAY, for a single instrument. **Customer:** Send mass cancel message OrderMassActionRequest indicating Only the buy side (Side=Buy)	The Buy orders will be canceled, OrderMassActionReport received.	C	☐ **Pass**	☐ **N/E**
M.2	**Customer:** Send 5 Sell Orders, DAY, for a single instrument. **Customer:** Send mass cancel message OrderMassActionRequest indicating Only the sell side (Side=Sell)	The Sell orders will be canceled, OrderMassActionReport received.	C	☐ **Pass**	☐ **N/E**
M.3	**Customer:** Send 5 buy orders for two instruments from the same group. **Customer:** Send mass cancel message OrderMassActionRequest, indicating only one SecurityID.	Only the orders from the selected SecurityID will be canceled. Message OrderMassActionReport and Execution Report_Cancel from canceled messages are received.	C	☐ **Pass**	☐ **N/E**
M.4	**Customer:** Send 5 buy orders, DAY, with OrdTagID **Customer:** Send 5 buy orders, DAY, without OrdTagID **Customer:** Send mass cancel message OrderMassActionRequest, indicating the OrdTagID.	Only the orders sent with the OrdTagID will be canceled. Message OrderMassActionReport and Execution Report_Cancel from canceled messages are received.	C	☐ **Pass**	☐ **N/E**
M.5	**Customer:** Send 5 orders, DAY. **Customer:** Send mass cancel message OrderMassActionRequest, indicating an incorrect SecurityID.	Orders are not canceled. OrderMassActionRepor message received.	C	☐ **Pass**	☐ **N/E**
M.6	**Customer:** Send 5 orders, DAY. **Customer:** Send mass cancel message OrderMassActionRequest, indicating an invalid SecurityID.	Orders are not canceled. OrderMassActionRepor message received.	C	☐ **Pass**	☐ **N/E**
	Client: Send 5 sell orders, validity DAY, informing an InvestorID 100|123456789				

Step	Description	Expected result	Req	Status	
M.7	Client: Send 5 sell orders, validity DAY, informing the same InvestorID as in the previous step, for a different FIX session. Client: Send a mass cancellation of the orders (35=CA) informing the InverstorID (35508=100|123456789) and the Asset (6937).	Sell orders will be canceled. Message 35=BZ and Execution Report of cancellations received.	C	Pass	N/E
M.8	Client: Send 5 sell orders, validity DAY, informing an InvestorID 100|123456789 Client: Send 5 sell orders, validity DAY, informing the same InvestorID as in the previous step, for a different FIX session. Client: Send mass cancellation of the sell o (35=CA) informing the InverstorID (35508=100|123456789) and the Symbol (55).	Sell orders will be canceled. Message 35=BZ and Execution Report of cancellations received.	C	Pass	N/E
M.9	Client: Send 5 sell orders, validity DAY, informing an InvestorID 100|123456789 Customer: Send sell orders, valid DAILY, with the same InvestorID as in the previous step, for a different FIX session. Customer: Send mass cancellation of offers (35=CA) informing InverstorID (35508=100|123456789) and ordTagId (35505)	Sell orders will be canceled. Message 35=BZ and Execution Report of cancellations received.	C	Pass	N/E
M.10	**Client:** Send 5 sell orders, validity DAY, informing an InvestorID 100|123456789 **Client:** Send Mass Cancellation of offers ofertas (35=CA) informing the InverstorID (35508=100|123456789) and MassActionType for Cancel and Suspend Orders (1373=4) **Client:** Send new orders	Sell orders will be canceled. Message 35=BZ and Execution Report of cancellations received. The new orders are cancelled.	C	Pass	N/E
M.11	**Client: Send** Mass Cancellation message with MassActionType for Release orders from suspension (1373=2) **Cliente:** Send new orders	Orders are accepted.	C	Pass	N/E

N. Cancel on Disconnect					
Available for: PUMA Equities; Access Model: DMA					
Step	**Description**	**Expected result**	**Req**	**Status**	

N.1	**Customer**: Send Establish with cancelOnDisconnectType= CANCEL_ON_DISCONNECT_ OR_TERMINATE and codTimeoutWindow=1000	Session Connected	C	☐ Pass	☐ N/E
N.2	**Customer**: Send 5 Buy Orders	Order entry	C	☐ Pass	☐ N/E
N.3	**Customer**: Disconnect the application via TERMINATE	Disconnected session	C	☐ Pass	☐ N/E
N.4	**Customer**: Wait 100 miliseconds and connect via ESTABLISH	Session Connected	C	☐ Pass	☐ N/E
N.5	**Customer**: Resend RetransmitRequest with fromSeqNo=last sequential and count=5	RetransmitResponse with canceled messages.	C	☐ Pass	☐ N/E
N.6	**Customer**: Send an Establish with tag cancelOnDisconnectType= CANCEL_ON_DISCONNECT_ OR_TERMINATE and codTimeoutWindow=1000	Session Connected	C	☐ Pass	☐ N/E
N.7	**Customer**: Send 5 Buy orders	Order entry	C	☐ Pass	☐ N/E
N.8	**Customer**: Disconnect the application via Task Manager.	Disconnected session	C	☐ Pass	☐ N/E
N.9	**Customer**: Wait 100 miliseconds and connect via ESTABLISH	Session Connected	C	☐ Pass	☐ N/E
N.10	**Customer**: Resend RetransmitRequest with fromSeqNo= last sequential e count=5	RetransmitResponse with canceled messages.	C	☐ Pass	☐ N/E
N.11	**Customer**: Send an Establish with tag cancelOnDisconnectType= *CANCEL_ON_TERMINATE_O NLY* and codTimeoutWindow=1000	Session Connected	C	☐ Pass	☐ N/E
N.12	**Customer**: Send 5 buy orders.	Order entry	C	☐ Pass	☐ N/E
N.13	**Customer**: Disconnect the application via TERMINATE	Disconnected session	C	☐ Pass	☐ N/E

N.14	**Customer**: Wait 100 miliseconds and connect via ESTABLISH	Session Connected	C	☐ Pass	☐ N/E
N.15	**Customer**: Resend RetransmitRequest with fromSeqNo= last sequential and count=5	RetransmitResponse with canceled messages.	C	☐ Pass	☐ N/E
N.16	**Customer**: Send an Establish with tag cancelOnSiconnectType= *CANCEL_ON_DISCONNECT_ ONLY* and codTimeoutWindow=1000	Session Connected	C	☐ Pass	☐ N/E
N.17	**Customer**: Send 5 Buy orders	Order entry	C	☐ Pass	☐ N/E
N.18	**Customer**: Disconnect the application via Task Manager.	Disconnected session	C	☐ Pass	☐ N/E
N.19	**Customer**: Wait 100 miliseconds and connect via ESTABLISH	Session Connected	C	☐ Pass	☐ N/E
N.20	**Customer**: Resend RetransmitRequest with fromSeqNo= last sequential and count=5	RetransmitResponse with canceled messages.	C	☐ Pass	☐ N/E
N.21	**Customer**: Send an Establish with tag cancelOnSiconnectType= *CANCEL_ON_TERMINATE_O NLY* and codTimeoutWindow=1000	Session Connected	C	☐ Pass	☐ N/E
N.22	**Customer**: Send 5 Buy Orders.	Order entry	C	☐ Pass	☐ N/E
N.23	**Customer**: Disconnect the application via Task Manager.	Disconnected session	C	☐ Pass	☐ N/E
N.24	**Customer**: Wait 100 miliseconds and connect via ESTABLISH	Connected session	C	☐ Pass	☐ N/E

N.25	**Customer**: Resend RetransmitRequest with fromSeqNo= last sequential and count=5	No messages received.	C	☐ Pass	☐ N/E
N.26	**Customer**: Send an Establish with cancelOnSiconnectType=*CANCEL_ON_DISCONNECT_ONLY* and codTimeoutWindow=1000	Connected session	C	☐ Pass	☐ N/E
N.27	**Customer**: Send 5 Buy Orders.	Order Entry	C	☐ Pass	☐ N/E
N.28	**Customer**: Disconnect the application via TERMINATE	Disconnected session	C	☐ Pass	☐ N/E
N.29	**Customer**: Wait 100 miliseconds and connect via ESTABLISH	Connected session	C	☐ Pass	☐ N/E
N.30	**Customer**: Resend RetransmitRequest with fromSeqNo= last sequential and count=5	No messages received.	C	☐ Pass	☐ N/E
N.31	**Customer**: Send an Establish with tag cancelOnSiconnectType=*DO_NOT_CANCEL_ON_DISCONNECT_OR_TERMINAT*E and codTimeoutWindow=1000	Connected session	C	☐ Pass	☐ N/E
N.32	**Customer**: Send 5 Orders de Buy.	Order Entry	C	☐ Pass	☐ N/E
N.33	**Customer**: Disconnect the application via TERMINATE	Disconnected session	C	☐ Pass	☐ N/E
N.34	**Customer**: Wait 100 miliseconds and connect via ESTABLISH	Connected session	C	☐ Pass	☐ N/E

N.35	**Customer**: Resend RetransmitRequest with fromSeqNo= last sequential and count=5	No messages received.	C	☐ Pass	☐ N/E
N.36	**Customer**: Send an Establish with tag cancelOnSiconnectType=*DO_NOT_CANCEL_ON_DISCONNECT_OR_TERMINAT*E and codTimeoutWindow=1000	Connected session	C	☐ Pass	☐ N/E
N.37	**Customer**: Send 5 Buy orders.	Order Entry	C	☐ Pass	☐ N/E
N.38	**Customer**: Disconnect the application via Task Manager.	Disconnected session	C	☐ Pass	☐ N/E
N.39	**Customer**: Wait 100 miliseconds and connect via ESTABLISH	Connected session	C	☐ Pass	☐ N/E
N.40	**Customer**: Resend RetransmitRequest with fromSeqNo= last sequential and count=5	No messages received.	C	☐ Pass	☐ N/E
N.41	**Customer**: Send an Establish with tag cancelOnSiconnectType=*CANCEL_ON_DISCONNECT_OR_TERMINATE* and codTimeoutWindow=10000	Connected session	C	☐ Pass	☐ N/E
N.42	**Customer**: Send 5 Buy Orders.	Order entry	C	☐ Pass	☐ N/E
N.43	**Customer**: Disconnect the application via Task Manager.	Disconnected session	C	☐ Pass	☐ N/E
N.44	**Customer**: Connects via ESTABLISH within the configured time limit.	Connected session	C	☐ Pass	☐ N/E

N.45	**Customer**: Resend RetransmitRequest with fromSeqNo= last sequential and count=5	No messages received.	C	☐ Pass	☐ N/E
N.46	**Customer**: Send an Establish with tag cancelOnSiconnectType=*CANCEL_ON_DISCONNECT_OR_TERMINATE* and codTimeoutWindow=10000	Connected session	C	☐ Pass	☐ N/E
N.47	**Customer**: Send 5 Buy Orders.	Order Entry	C	☐ Pass	☐ N/E
N.48	**Customer**: Disconnect the session via TERMINATE	Disconnected session	C	☐ Pass	☐ N/E
N.49	**Customer**: Connects via ESTABLISH within the configured time limit.	Connected session	C	☐ Pass	☐ N/E
N.50	**Customer**: Resend RetransmitRequest with fromSeqNo= last sequential and count=5	No messages received.	C	☐ Pass	☐ N/E
N.51	**Customer**: Send an Establish with tag cancelOnSiconnectType=*CANCEL_ON_TERMINATE_ONLY* and codTimeoutWindow=10000	Connected session	C	☐ Pass	☐ N/E
N.52	**Customer**: Send 5 Buy Orders.	Order entry	C	☐ Pass	☐ N/E
N.53	**Customer**: disconnect the session via TERMINATE	Disconnected session	C	☐ Pass	☐ N/E
N.54	**Customer**: Connects via ESTABLISH within the configured time limit.	Connected session	C	☐ Pass	☐ N/E
N.55	**Customer**: Resend RetransmitRequest with fromSeqNo= last sequential and count=5	No messages received.	C	☐ Pass	☐ N/E

Step	Description	Expected result	Req	Status	
N.56	**Customer**: Send Establish with cancelOnSiconnectType=*CANCEL_ON_DISCONNECT_ONLY e* codTimeoutWindow=10000	Connected session	C	☐ Pass	☐ N/E
N.57	**Customer**: Send 5 Buy Orders.	Order Entry	C	☐ Pass	☐ N/E
N.58	**Customer**: Disconnect the application via Task Manager.	Disconnected session	C	☐ Pass	☐ N/E
N.59	**Customer**: Connects via ESTABLISH within the configured time limit.	Connected session	C	☐ Pass	☐ N/E
N.60	**Customer**: Resend RetransmitRequest with fromSeqNo= last sequential and count=5	No messages received.	C	☐ Pass	☐ N/E

O. Self Trade Prevention					
Available for: PUMA Equities; Puma Derivatives Access Model: DMA and Trading Desk					
Step	**Description**	**Expected result**	**Req**	**Status**	
O.1	**Customer**: Send Buy limit order, DAY 100@20,00 InvestorID=12345 selfTradePreventionInstruction=1 **Customer**: Send Sell LIMIT order, DAY 100@20,00 InvestorID=12345	Buy order is accepted. Sell order is accepted and eliminated.	C	☐ Pass	☐ N/E
O.2	**Customer**: Send Buy limit order, DAY 100@20,00 InvestorID=12345 selfTradePreventionInstruction=2 **Customer**: Send Sell LIMIT order, DAY 100@20,00 InvestorID=12345	Buy order is accepted. Sell order is accepted. Buy order is eliminated.	C	☐ Pass	☐ N/E

| O.3 | **Customer**: Send Buy limit order, DAY 100@20,00 InvestorID=12345 selfTradePreventionInstruction=3

Customer: Send Sell limit order, DAY 100@20,00 InvestorID=12345 | Buy order is accepted. Sell order is accepted and then eliminated. Buy order is eliminated | C | ☐ Pass | ☐ N/E |

	P. H. A. – Falha na instância principal da aplicação Available for: PUMA Equities; PUMA Derivatives Modelos de acesso: Trading Desk e DMA					
Step	Description	Expected result	Req	Status		
P.1	**Customer: Send 10 Buy limit orders, DAY** • **100@20,00**	Receive 10 Execution Report's	**S**	☐ **Pass**		☐ N/E
Trading Certification: Executa o processo que irá simular falha na instância principal para que suba na instância de H.A. Obs: O tempo configurado para que a instância de H.A. suba no ambiente de certificação é de 30 segundos (esse valor pode ser diferente do ambiente de produção).						
P.2	**Customer: Reconectar a sessão antes da virada estar concluída (tempo menor que 30 segundos)**	Customer: Não consegue reconectar	**S**	☐ **Pass**		☐ N/E
P.3	**Customer: Reconectar a sessão**	Customer: Reconecta e o SequenceNumber é incrementado corretamente	**S**	☐ **Pass**		☐ N/E
P.4	**Customer: Send 10 Orders de Buy LIMIT, DAY** **100@20,00**	Customer: Receive 10 Execution Report's	**S**	☐ **Pass**		☐ N/E
P.5	**Customer: Send mensagem de logout**	Sessão FIX desconectada	**S**	☐ **Pass**		☐ N/E
P.6	**Trading Certification: Send cancelamento das 10 orders de Buy LIMIT, DAY**	Cancelamento das orders pendentes	**S**	☐ **Pass**		☐ N/E
P.7	**Customer: Send o RetransmitRequestde todas as mensagens**	Customer: Receive Retransmission. Customer: Confirma o SequenceNumber da primeira e da última mensagem	**S**	☐ **Pass**		☐ N/E