# CONSOLIDATED AUDIT TRAIL ("CAT") CLOCK SYNCHRONIZATION CERTIFICATION BY

Interactive Brokers Corp.

TO

#### PARTICIPANTS OF THE CAT NMS PLAN

March 7, 2019

### CLOCK SYNCHRONIZATION CERTIFICATION BY

Interactive Brokers Corp.	hereby acknowledges that it is	a member of the following	
national securities exchange(s) and/or national securities association(s) (please select all that apply):			
☐ BOX Options Exchange LLC	☐ Financial Industry Regulatory Authority, Inc.	□ NASDAQ MRX, LLC	
☐ Cboe BYX Exchange, Inc.	☐ Investors Exchange LLC	☐ NASDAQ PHLX LLC	
☐ Cboe BZX Exchange, Inc.	☐ Miami International Securities Exchange LLC	☐ The NASDAQ Stock Market LLC	
☑ Cboe C2 Exchange, Inc.	☐ MIAX PEARL, LLC	☐ New York Stock Exchange LLC	
☐ Cboe EDGA Exchange, Inc.	☐ MIAX Emerald, LLC	□ NYSE American LLC	
☐ Cboe EDGX Exchange, Inc.	□ NASDAQ BX, Inc.	□ NYSE Arca, Inc.	
☑ Cboe Exchange, Inc.	□ NASDAQ GEMX, LLC	☐ NYSE National, Inc.	
☐ Chicago Stock Exchange, Inc.	□ NASDAQ ISE, LLC	☐ Other:	
To achieve compliance with the clock synchronization requirements of the CAT compliance rule, including any interpretive or exemptive guidance applicable to such rule, of each national securities exchange and/or national securities association identified above (the "Clock Synchronization Requirement"), the undersigned, who is duly authorized to execute this certification on behalf of <a href="Interactive Brokers Corp">Interactive Brokers Corp</a> , hereby certifies that <a href="Interactive Brokers Corp">Interactive Brokers Corp</a> .  (1) synchronized its Business Clocks, other than such Business Clocks used solely for Manual Order Events or used solely for the time of allocation on Allocation Reports, at a			
minimum to within a fifty	(50) millisecond tolerance of the tir Γechnology, and maintains such syr	ne maintained by the National	
(B) its Business Clocks use	rance of the time maintained by the	lely for Manual Order Events and on Allocation Reports at a minimum and National Institute of Standards and	

Capitalized terms are defined as set forth in the CAT compliance rule series of each national securities exchange and national securities association.

### EXECUTED as of the date first written above.

By: Jon Bil

Name: Tom Barkanic

Title: Manager Systems Administration

CCO: Arnold Feist

## CONSOLIDATED AUDIT TRAIL ("CAT") CLOCK SYNCHRONIZATION CERTIFICATION BY

Interactive Brokers LLC

TO

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☑ Cboe BYX Exchange, Inc.	☑ Investors Exchange LLC	☑ NASDAQ PHLX LLC
☑ Cboe BZX Exchange, Inc.	<ul><li>Miami International Securities Exchange LLC</li></ul>	☐ The NASDAQ Stock Market LLC
☐ Cboe C2 Exchange, Inc.	☑ MIAX PEARL, LLC	☑ New York Stock Exchange LLC
☑ Cboe EDGA Exchange, Inc.	☑ MIAX Emerald, LLC	☑ NYSE American LLC
☑ Cboe EDGX Exchange, Inc.	☑ NASDAQ BX, Inc.	☑ NYSE Arca, Inc.
☐ Cboe Exchange, Inc.	☑ NASDAQ GEMX, LLC	☑ NYSE National, Inc.
Chicago Stock Exchange, Inc.	☑ NASDAQ ISE, LLC	☐ Other:
including any interpretive or exemple exchange and/or national securities Requirement"), the undersigned, was Interactive Brokers LLC  (1) synchronize for Manual Order Events of minimum to within a fifty of the synchronize for Manual Order Events of minimum to within a fifty of the synchronize for Manual Order Events of minimum to within a fifty of the synchronize for Manual Order Events of the synchronize fo	association identified above (the "C	le, of each national securities Clock Synchronization s certification on behalf of ve Brokers LLC has: such Business Clocks used solely ion on Allocation Reports, at a ne maintained by the National
(2) synchronized (A) its Business Clocks used solely for Manual Order Events and		

Capitalized terms are defined as set forth in the CAT compliance rule series of each national securities exchange and national securities association.

Technology, and maintains such synchronization.

(B) its Business Clocks used solely for the time of allocation on Allocation Reports at a minimum to within a one second tolerance of the time maintained by the National Institute of Standards and

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