

The tables below describe changes that will be in effect when the FINRA ORF technical migration commences on November 17, 2014.

Summary of TDDS Changes:

Function	TDDS Messages and Process (Through November 14, 2014)	TDDS Messages and Process v2.0 (Beginning November 17, 2014)																								
Bandwidth	500Kbps	800Kbps																								
Ports/IP Addresses (Production)	<table><tr><th>Multicast Group</th><th>Class D Multicast Address</th><th>Port</th><th>Source IP Address</th></tr><tr><td>Primary Group</td><td>224.3.0.6</td><td>55360</td><td>206.200.5.6</td></tr><tr><td>Secondary Group</td><td>224.3.0.16</td><td>55361</td><td>206.200.6.16</td></tr></table>	Multicast Group	Class D Multicast Address	Port	Source IP Address	Primary Group	224.3.0.6	55360	206.200.5.6	Secondary Group	224.3.0.16	55361	206.200.6.16	<table><tr><th>Multicast Group</th><th>Class D Multicast Address</th><th>Port</th><th>Source IP Address</th></tr><tr><td>Primary Group</td><td>224.3.0.10</td><td>55378</td><td>206.200.5.10</td></tr><tr><td>Secondary Group</td><td>224.3.0.20</td><td>55379</td><td>206.200.6.20</td></tr></table>	Multicast Group	Class D Multicast Address	Port	Source IP Address	Primary Group	224.3.0.10	55378	206.200.5.10	Secondary Group	224.3.0.20	55379	206.200.6.20
Multicast Group	Class D Multicast Address	Port	Source IP Address																							
Primary Group	224.3.0.6	55360	206.200.5.6																							
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Primary Group	224.3.0.10	55378	206.200.5.10																							
Secondary Group	224.3.0.20	55379	206.200.6.20																							
Ports/IP Addresses (Test Environment)	N/A	<table><tr><th>Multicast Group</th><th>Class D Multicast Address</th><th>Port</th><th>Source IP Address</th></tr><tr><td>Primary Group</td><td>233.56.159.130</td><td>55378</td><td>206.200.23.44</td></tr></table>	Multicast Group	Class D Multicast Address	Port	Source IP Address	Primary Group	233.56.159.130	55378	206.200.23.44																
Multicast Group	Class D Multicast Address	Port	Source IP Address																							
Primary Group	233.56.159.130	55378	206.200.23.44																							
Message Header	- Message Header Length is 22 bytes - Date/Time field requires ASCII conversion - Market Center Originator is one byte	- Message Header Length increased to 32 bytes - Date/Time field is numeric - Time includes milliseconds - Market Center Originator increased to two																								

		bytes
Trade Report (Short Form)	Category T, Type 1	- Category T, Type 5; No format changes employed for this message - Format will be used if specific trade conditions are met and if trade was executed and reported on current trading day

Function	TDDS Messages and Process (Through November 14, 2014)	TDDS Messages and Process (Beginning November 17, 2014)
Trade Report (Long Form)	• Category T, Type 2 • Current day transactions only • Security Symbol 11 bytes • One sale condition field is employed • Trade volume field is 9 bytes • Trade price field is 10 bytes	• Category T, Type 6 • Current day and T-3 as-of trades will be disseminated via the Long Form message • Format includes 17-byte Execution Date/Time in the message format • Security Symbol increased to 14 bytes • Four sale condition fields are employed to denote the possibility of multiple trade conditions for the transaction • Trade volume field decreased to 8 bytes • Trade price field increased to 12 bytes
Trade Cancel	• Category T, Type 3 • Current day transaction cancels only • Security Symbol 11 bytes • One sale condition field is employed • Trade volume field is 9 bytes • Trade price field is 10 bytes	• Category T, Type 7 • Current day and T-3 as-of cancel transactions will be disseminated via the Trade Cancel message • Format includes Original Dissemination Date and Original Message Sequence Number to distinguish trades being canceled from a previous day • Format includes 17-byte Execution Date/Time in the message format • Security Symbol increased to 14 bytes • Four sale condition fields are employed to denote the possibility of multiple trade conditions for the transaction • Trade volume field decreased to 8 bytes • Trade price field increased to 12 bytes

		• Currency field eliminated from Summary portion of message
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Function	TDDS Messages and Process (Through November 14, 2014)	TDDS Messages and Process v2.0 (Beginning November 17, 2014)
Trade Correction	• Category T, Type 4 • Current day transaction corrections only • Security Symbol 11 bytes • One sale condition field is employed • Trade volume field is 9 bytes • Trade price field is 10 bytes	• Category T, Type 8 • Current day and T-3 as-of trade correction transactions will be disseminated via the Trade Correction message • Format includes Original Dissemination Date and Original Message Sequence Number to distinguish trades being corrected from a previous day • Format includes 17-byte Execution Date/Time in the message format • Security Symbol increased to 14 bytes • Four sale condition fields are employed in original and corrected trade message portion to denote the possibility of multiple trade conditions for the transaction • Trade volume field decreased to 8 bytes • Trade price field increased to 12 bytes • Currency field eliminated from Summary portion of message
Trade Summary	• Category A, Type 1 • Security Symbol 11 bytes • First trade summary event is disseminated at 5:20 p.m. ET • Second trade summary event is disseminated at 8:10 p.m. ET	• Category A, Type 2 • Security Symbol increased to 14 bytes • First trade summary event remains disseminated at 5:20 p.m. ET • Second trade summary event will now be disseminated at 6:45 p.m. ET
General Administrative	• Category A, Type A • Fixed format text message of 300 byte character maximum	• Category A, Type A; No format changes required for this message

Security Trade Halt	N/A	• Category A, Type H • Halt and Resume trading action for individual securities • Message formats includes Action; Security Symbol; Date/Time; Reason Code
Security Trade Halts (Pre - Open Spin)	N/A	• Category A, Type H • Trading Halt pre-open spin for individual securities which remain in a halted state from a previous day • Message format includes Action; Security Symbol; Date/Time; Reason Code • Trading Halt Spin takes place at 7:30 a.m. ET

Function	TDDS Messages and Process (Through November 14, 2014)	TDDS Messages and Process v2.0 (Beginning November 17, 2014)
Trade Halt (Extraordinary Market Event)	N/A	• Category A, Type M • Extraordinary Market Event halt and resume trading action (for all securities) • Message format includes Action; Date/Time; Reason Code
Trade Halt (Market Wide Circuit Breaker)	N/A	• Category A, Type M • Market Wide Circuit Breaker halt and resume trading action (for all securities) • Message format includes Action; Date/Time; Reason Code
Test Cycle Control Messages	Category C, Type M; Category C, Type N	Discontinued these messages
Control Messages	These control messages disseminate “Q” as the Market Center Originator • Category C, Type O - Market Open • Category C, Type C - Market Closed • Category C, Type X - End of Trade Reporting The following control messages are disseminated at these times: End of Trade Reporting Control Message - 8:05 p.m. ET End of Day Control Message - 8:20 p.m. ET End of Retransmissions Control Message disseminated at 8:23 p.m. ET End of Transmissions Control Message - 8:26 p.m. ET	The following control messages will disseminate F as the Market Center Originator • Category C, Type O - Market Open • Category C, Type C - Market Closed • Category C, Type X - End of Trade Reporting The following control messages will be disseminated at these times: End of Trade Reporting Control Message – 8:05 p.m. ET End of Day Control Message - 8:20 p.m. ET End of Retransmissions Control Message disseminated at 8:23 p.m. ET End of Transmissions Control Message – 8:26 p.m. ET

Summary of BBDS Changes:

Function	BBDS (Through November 14, 2014)	BBDS (Beginning November 17, 2014)
EMC Halt/Resume	• Category C, Type A (Halt) • Category C, Type B (Resume) • Used for emergency market events affecting all securities	• Process eliminated on this feed • Firms must process TDDS to receive the EMC data
Use of Other OTC Equity Identifier (u)	• Market Center Originator Code - Used in Trading Action Messages	• Will no longer be supported • Firms must process TDDS to receive the Other OTC Equity halt data