



**Information Package on Shakedown Connectivity Test and
Market Rehearsals
HKEx Orion Market Data Platform
Securities Market & Index Datafeed Products (OMD-C)**

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CONTENTS

1. Overview	3
2. <i>Shakedown Connectivity Test Session (SCT) (Already completed)</i>	4
3. Market Rehearsal	5
3.1. First Market Rehearsal (Half-day Test Session) <i>(Already completed)</i>	5
3.2. Second Market Rehearsal (Full-Day Test Session).....	6
4. Confirmation of Readiness Status.....	7
5. Post Release Test and Rollout	7
6. Stabilisation and Parallel Run Periods after Rollout	7
6.1. Stabilisation Period	7
6.2. Extended Period for Parallel Run	7
6.3. Grace period for Parallel-run	7
7. Important Note	8
8. Enquiries	8
9. Appendices.....	9

1. Overview

This document provides details on the on-boarding activities in which OMD-C Clients who have successfully completed the Readiness Test and declared their system readiness are required to participate should they wish to receive production data from OMD-C upon its Batch 1 rollout.

These mandatory on-boarding activities include a Shakedown Connectivity Test Session (SCT) and two Market Rehearsals (MRs) as per schedule below.

A Post Release Test (PRT) mandatory for all Batch 1 Clients will also be arranged for the **Saturday or Sunday** before the production rollout of OMD-C. Clients are required to have successfully completed both MRs and the PRT in order to join the Batch 1 rollout.

Test	Date	Objectives
1 st SCT (Already completed)	22 June 2013	(1) HKEx to perform final checking on system setup (2) Clients to ensure that the setup of their systems for making connection to the OMD-C production host in both primary and backup sites via their SDNet and/or HSN circuits is in proper order before the First MR
2 nd SCT (Already completed)	29 June 2013	(1) HKEx to perform final checking on system setup (2) Clients to ensure that the setup of their systems for making connection to the OMD-C production host in both primary and backup sites via their SDNet and/or HSN circuits is in proper order before the First MR (3) Optional for those clients who have successfully completed the SCT on 22 Jun 2013.
First MR ¹ (Already completed)	24 August 2013	(1) To enable clients to verify their system capability of processing data received from the OMD-C in the production environment (2) To enable clients to verify their system capability of handling high data volume from OMD-C in the production environment
Second MR ¹	7 September 2013	(1) To enable clients to verify their system capability of and internal procedures for handling OMD-C site failover in the production environment (2) To enable clients to verify their capability of failing over to MDS or its original data source for production data should their connection to OMD-C fail
PRT	To Be Announced	(1) HKEx to perform final checking before system rollout (2) Clients to ensure their system readiness for receiving production data from OMD-C

¹ During the MR, MDF 3.8 and MDF* will be available to facilitate data verifications by existing clients. AMS/3.8 will also be available to facilitate loop test by OMD-C Clients who are also Exchange Participants.

2. Shakedown Connectivity Test Session (SCT) (Already completed)

Date	22 June / 29 June 2013 (SCT on 29 Jun 2013 is optional for those clients who have successfully completed the SCT on 22 Jun 2013)
Objectives	<p>(1) HKEx to perform final checking on system setup</p> <p>(2) Clients to ensure that the setup of their systems for making connection to the OMD-C production host via their SDNet and/or HSN circuits is in proper order before the 1st MR</p> <p>a. Network carriers have correctly configured the clients' production circuits so as to enable clients' access to their respective entitled multicast channels</p> <p>b. Clients have access to their entitled real-time multicast channels</p> <p>c. Clients can successfully connect and logon to the 2 RTS servers in Primary site and have access to their entitled RTS channels</p> <p>d. Clients can successfully connect and logon to the 2 RTS servers in the backup site and have access to their entitled RTS channels from the backup site</p>
Test Rundown	As per Appendix A.1
Clients' Actions	<p><u>Before joining the SCT</u></p> <ul style="list-style-type: none"> • submit the Test Participation Form as per Appendix B.1 and B.2 • ensure their production SDNet/2 and/or HSN circuits are installed properly with the necessary bandwidth • ensure correct configuration for the connection between their system and OMD-C production host according to the OMD-C Connectivity Guide and the Production Configuration sheet provided by HKEx for each of the OMD-C the datafeeds subscribed <p><u>During the SCT</u></p> <ul style="list-style-type: none"> • ensure they can receive data from all of their entitled real-time and refresh multicast channels • ensure that they can logon to both the primary and secondary RTS servers on the primary site and receive data from all of their entitled RTS channels • ensure that they can logon to both the primary and secondary RTS servers on the backup site and receive data from all of their entitled RTS channels • High volume data close to full system capacity will be transmitted within the timeslots specified in the Test Rundown <p><u>After the SCT</u></p> <ul style="list-style-type: none"> • discard the data received during the SCT
Test Result Report	Complete and return the Test Result Form as per Appendix C.1 and C.2
Typhoon and Black Rainstorm Arrangement	As per Appendix E

3. Market Rehearsal

3.1. First Market Rehearsal (Half-day Test Session) *(Already completed)*

Date	24 August 2013
Objectives	<p>(1) To enable clients to verify their system capability of processing data received from the OMD-C in the production environment</p> <p>(2) To enable clients to verify their system capability of handling high data volume from OMD-C in the production environment</p>
Test Rundown	As per Appendix A.2
Clients' Actions	<p><u>Before joining the MR</u></p> <ul style="list-style-type: none"> • submit the Test Participation Form as per Appendix B.3 • ensure the healthiness of their connection to the OMD-C production host and all connections for OMD-C Batch 1 rollout are ready in place for the MR <p><u>During the MR</u></p> <ul style="list-style-type: none"> • existing MDF 3.8 and MDF* clients can connect to the MDS production host to receive MDF 3.8 and/or MDF* data if they wish to reconcile the data received from MDS and OMD-C at their end • high volume data close to full system capacity will be transmitted within the timeslots specified in the Test Rundown <p><u>After the MR</u></p> <ul style="list-style-type: none"> • discard the data received during the MR
Test Result Report	Complete and return the Test Result Form as per Appendix C.3
Typhoon and Black Rainstorm Arrangement	As per Appendix E

3.2. Second Market Rehearsal (Full-Day Test Session)

Date	7 September 2013
Objectives	<p>(1) To enable clients to verify their system capability of and internal procedures for handling OMD-C site failover in the production environment</p> <p>(2) To enable clients to verify their capability of failing over to MDS or its original data source, e.g. BSS OG for production data should their connection to OMD-C fail</p>
Test Rundown	As per Appendix A.3
Clients' Actions	<p><u>Before joining the MR:</u></p> <ul style="list-style-type: none"> • submit the Test Participation Form as per Appendix B.4 • ensure the healthiness of their connection to the OMD-C production host <p><u>During the MR:</u></p> <ul style="list-style-type: none"> • existing MDF 3.8 and MDF* clients can connect to the MDS production host to receive MDF 3.8 and/or MDF* data if they wish to reconcile the data received from MDS and OMD-C at their end • a simulated OMD-C site failover will occur as per the Test Rundown. Clients should ensure that their system can switch over to the backup site smoothly and take this opportunity to rehearse their contingency procedures for handling such incident • a simulated scenario will occur as per the Test Rundown where Clients should trigger clients' fallback procedure to switch the data source to their original source (such as MDF 3.8, MDF* or BSS OG) to resume services to their downstream users <p><u>After the MR</u></p> <ul style="list-style-type: none"> • discard the data received during the MR
Test Result Report	Complete and return the Test Result Form as per Appendix C.4
Typhoon and Black Rainstorm Arrangement	As per Appendix E

4. Confirmation of Readiness Status

After completion of the Market Rehearsals, Batch 1 clients are required to confirm their readiness status by returning the completed OMD-C Readiness Status Confirmation Form by **12:00noon of 9 September 2013 (Mon) HK Time** as per Appendix D.

5. Post Release Test and Rollout

A Post Release Test (PRT) will be conducted on the Saturday or Sunday immediately before the rollout of OMD-C for the final assurance of readiness by both HKEx and Clients.

Test schedule and rundown of the PRT will be distributed in due course.

6. Stabilisation and Parallel Run Periods after Rollout

6.1. Stabilisation Period

The first two weeks after the OMD-C initial rollout will be the stabilisation period where clients are required to retain their current systems for receiving MDF 3.8, MDF* or BSS OG data. In case of any severe incident that clients fail to receive production data from OMD-C, clients should have the capability to fallback to their original source such as MDF 3.8, MDF* or BSS OG as the data source and continue their operation in a proper manner with the data from their original data source (MDF 3.8, MDF* or BSS OG). Clients should also avoid any unnecessary changes to their SDNet/2 circuits that are connecting to the OMD-C host during the stabilisation period.

6.2. Extended Period for Parallel Run

Feed providing vendors are required to extend the above stabilisation period for another two weeks after the end of it with the same arrangement. Other clients are highly recommended to adopt the same approach for risk mitigation.

6.3. Grace period for Parallel-run

MDS/3.8 will be up and running 6 months after the initial rollout or until the end of the stabilisation period for last batch rollout, whichever is earlier. A grace period of 3 months will be granted to Batch 1 Clients with waiver on the Redistribution Fee and Connection Fee of MDF 3.8. A client will be liable to pay the Redistribution Fee and Connection Fee for both OMD-C and MDF 3.8 if it chooses to extend the parallel run period beyond the grace period.

7. Important Note

Participation in SCT, MR and PRT before OMD-C Rollout

- Clients must participate in either one session of *SCT (already completed)*, all MRs and PRT with all their connection circuit sets which will receive OMD-C data at the OMD-C initial rollout.
- Clients should allocate sufficient resources to provide support to HKEx staff and/or the network carrier(s) during the SCT, MRs and PRT to ensure successful completion. Your supporting staff members assigned for such support should be reachable by HKEx by phone and email during the test sessions.
- Clients planning to use their existing production HSN ports for receiving OMD-C data are required to participate in the connectivity test on the Saturday afternoon or Sunday morning immediately after the SCT and MRs (please refer to the test rundown for arrangement of the HSN connectivity test schedule). The test is important since it is to ensure that their connection(s) to other production systems, e.g. AMS/3.8, MDS/3.8, etc. via the HSN ports will stay intact on the next trading day.
- Existing MDF 3.8/MDF*/BSS OG clients should have their procedures for falling back on to MDF 3.8/ MDF*/BSS OG well in place before the Second MR where they will be required to rehearse and verify the effectiveness of the fallback procedures. The fallback procedures should allow the resumption of their operation in a timely manner and be able to maintain data integrity after the fallback.

Upon OMD-C Rollout

- Client should observe the requirements during the Stabilisation Period and the Extended Period for Parallel Run as stated in sections 6.1 and 6.2
- HKEx will inform clients of incidents that may affect our market data services and keep you updated of the situation by email. Therefore, it is very important for clients to provide appropriate business, technical and emergency contacts to HKEx to ensure effective communications with HKEx in such emergency.
- Clients should closely monitor their systems and applications after OMD-C rollout. Should there be any incident that may affect your dissemination of Hong Kong market data to customers, you should inform HKEx immediately.

8. Enquiries

For queries and/or further clarification on the SCT and MRs for OMD project, please contact us by -mail to OrionMarketData@hkex.com.hk.

Alternately, you may contact HKEx by phone at the following numbers:

IVSupport Hotline : (852) 2211 6558

9. Appendices

Appendix A Test Rundowns

- A.1 Test Rundown of OMD-C Shakedown Connectivity Test Session on 22 and 29 June 2013
- A.2 Test Rundown of OMD-C First Market Rehearsal on 24 August 2013
- A.3 Test Rundown of OMD-C Second Market Rehearsal on 7 September 2013

Appendix B Test Participation Forms

- B.1 Test Participation Form for OMD-C First Shakedown Connectivity Test Session
- B.2 Test Participation Form for OMD-C Second Shakedown Connectivity Test Session
- B.3 Test Participation Form for OMD-C First Market Rehearsal
- B.4 Test Participation Form for OMD-C Second Market Rehearsal

Appendix C Test Result Forms

- C.1 Test Result Form for OMD-C First Shakedown Connectivity Test Session
- C.2 Test Result Form for OMD-C Second Shakedown Connectivity Test Session
- C.3 Test Result Form for OMD-C First Market Rehearsal
- C.4 Test Result Form for OMD-C Second Market Rehearsal

Appendix D – OMD-C Readiness Status Confirmation Form

Appendix E – Typhoon and Black Rainstorm Arrangement



Appendix A.1

Activity Run-down
for OMD-C Shakedown Connectivity Test Session to be held on 22 June / 29 June
2013 (Already Completed)
(Mandatory)

Time	Activities
Friday (21 June / 28 June 2013)	
After 6:30pm	<p><u>Preparation</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Clients to ensure all production network equipment for their OMD-C connections are powered on after production hours <input type="checkbox"/> Clients to ensure all production databases required for the operation on the following trading day are properly backed up <input type="checkbox"/> Clients to ensure the version of their feed handler and downstream systems used in the shakedown connectivity test is OMD-C compatible. Otherwise their feed handler may fail to connect to the OMD-C host when OMD-C is brought up <input type="checkbox"/> Clients to ensure that they have made necessary network / application changes for connecting to the production OMD-C host with the correct OMD-C host IP addresses <input type="checkbox"/> Clients should ensure the bandwidths of the SDNet/2 lines / HSN connections are sufficient to support the datafeed product(s) they subscribed to as required.
Saturday (22 June / 29 June 2013)	
Before 9:00am	<p><u>Establish connection to OMD-C Host</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Clients to connect to the production OMD-C Host <input type="checkbox"/> Existing MDF 3.8 / MDF* clients can choose to connect to MDF 3.8 / MDF* as well by using the production password as of 21 June / 28 June 2013 during the SCT
Pre-opening Session	
9:00am – 9:30am	<ul style="list-style-type: none"> <input type="checkbox"/> HKEx will disseminate securities market data and index data via the production channels assigned for different OMD- C datafeeds during the following pre-opening sessions: <ul style="list-style-type: none"> - Order Input period (9:00am - 9:15am) - Pre-order Matching period (9:15am - 9:20am) - Order Matching period (9:20am - 9:28am) - Blocking period (9:28am - 9:30am) <input type="checkbox"/> Clients to verify that all of their connections to OMD-C are in proper order and their systems can receive data from all of the real-time and refresh multicast channels that they are entitled to access <input type="checkbox"/> Clients to verify that their systems can recover messages of all types that they are entitled to access from the retransmission services

Time	Activities
Morning Session (Continuous Trading)	
9:30am – 11:45am	<ul style="list-style-type: none"> <input type="checkbox"/> HKEx will disseminate securities market data and index data via the production channels assigned for different OMD-C datafeeds. <input type="checkbox"/> Clients to perform the same verification as in the pre-opening sessions <input type="checkbox"/> Existing MDF 3.8/MDF* clients can compare the data that they receive from OMD-C against those from MDF 3.8/MDF* for further ascertaining the functionality of their OMD-C feed handlers
Volume Test Session	
11:45am – 12:00noon	<ul style="list-style-type: none"> <input type="checkbox"/> HKEx will disseminate market data at increasing rate on all OMD-C datafeeds. There will be an instance lasting for about 5 minutes that real-time market data is published close to the maximum rates of the various channels. <input type="checkbox"/> Clients to verify that their systems are able to process and disseminate the high volume data properly without data loss or delay
Exchange Intervention from 12:00 noon to 12:05pm	
Mid-day Close at 12:05pm	
Simulate OMD-C failover to DR (backup) site	
12:05pm – 1:00pm	<ul style="list-style-type: none"> <input type="checkbox"/> HKEx will bring down OMD-C in the primary site and startup OMD-C servers in the backup site. <input type="checkbox"/> Clients should pay attention to HKEx's announcement of the simulated event via email. <input type="checkbox"/> Clients to prepare for the necessary configuration change to connect to the OMD-C backup site <input type="checkbox"/> Clients are expected to clear the data in cache upon receipt of the Sequence Reset messages and then obtain the latest market image from the refresh server and real-time channels from the backup site <p>Note: MDF 3.8/MDF* connection will remain at primary site.</p>
Afternoon Session (Continuous Trading)	
1:00pm – 4:00pm	<ul style="list-style-type: none"> <input type="checkbox"/> HKEx will disseminate securities market data and index data via the production channels assigned for different OMD-C datafeeds from the backup site. <input type="checkbox"/> Clients to perform the same verification as in the Morning Session <p>Note: Clients may connect to MDF 3.8/MDF* at primary site.</p>
Exchange Intervention from 4:00pm to 4:05pm	
Day Close at 4:05pm	
Client's day end process and test data clean up	
By 5:00pm	<ul style="list-style-type: none"> <input type="checkbox"/> Client to perform any day-end processes to ensure database integrity where applicable <input type="checkbox"/> Clients to clean up the test data received during the test <input type="checkbox"/> Clients to submit Test Result Form for the Shakedown Connectivity Test (Appendix C.1/C.2) (except clients who are required to participate in the HSN connectivity test on the next day)
Sunday (23 June / 30 June 2013)	

Time	Activities
<p><i>HSN Connectivity test for clients planning to use existing production HSN ports for OMD-C</i></p> <p><i>This test is NOT applicable to Clients using SDNet/2 circuits or new HSN ports solely for connection to OMD-C production host at OMD-C initial rollout</i></p>	
<p>9:00am – 10:00am</p>	<ul style="list-style-type: none"> <input type="checkbox"/> HKEx to bring up production systems as required <input type="checkbox"/> Clients to make connection via the HSN ports to all of the production systems currently being accessed via the HSN ports
<p>By 11:00am</p>	<ul style="list-style-type: none"> <input type="checkbox"/> <u>Clients to submit Test Result Form for the Shakedown Connectivity Test (Appendix C.1/C.2)</u>



Appendix A.2

**Activity Run-down
 for OMD-C First Market Rehearsal to be held on 24 August 2013 (Already
 Completed) (Mandatory)**

Time	Activities
Friday (23 August 2013)	
After 6:30pm	<p><u>Preparation</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Clients to ensure all production network equipment for their OMD-C connections are powered on after production hours <input type="checkbox"/> Clients to ensure all production databases required for the operation on the following trading day are properly backed up <input type="checkbox"/> Clients to ensure the version of their feed handler and downstream systems used in the market rehearsal is OMD-C compatible. Otherwise their feed handler may fail to connect to the OMD-C host when OMD-C is brought up <input type="checkbox"/> Clients to ensure that they have made necessary network / application changes for connecting to the production OMD-C host with the correct OMD-C host IP addresses <input type="checkbox"/> Clients should ensure the bandwidths of the SDNet lines / HSN connections are sufficient to support the datafeed product(s) they subscribed to as required.
Saturday (24 August 2013)	
8:30am	<p><u>Establish connection to OMD-C Host</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Clients to connect to the production OMD-C Host <input type="checkbox"/> Clients can choose to connect to MDF 3.8 / MDF* as well by using the production password as of 23 August 2013 during the Market Rehearsal.
Pre-opening Session	
9:00am – 9:30am	<ul style="list-style-type: none"> <input type="checkbox"/> HKEx will disseminate securities market data and index data via the production channels assigned for different OMD-C datafeeds during the following pre-opening sessions: <ul style="list-style-type: none"> - Order Input period (9:00am - 9:15am) - Pre-order Matching period (9:15am - 9:20am) - Order Matching period (9:20am - 9:28am) - Blocking period (9:28am - 9:30am) <input type="checkbox"/> Clients to verify that all of their connections to OMD-C are in proper order and their systems can receive data from all of the real-time and refresh multicast channels that they are entitled to access <input type="checkbox"/> Clients to verify that their systems can recover messages of all types that they are entitled to access from the retransmission services

Morning Session (Continuous Trading)	
9:30am – 11:45am	<ul style="list-style-type: none"> <input type="checkbox"/> HKEx will disseminate securities market data and index data via the production channels assigned for different OMD-C datafeeds. <input type="checkbox"/> Clients to perform the same verification as in the pre-opening sessions <input type="checkbox"/> Clients can choose to compare the data that they receive from OMD-C against those from MDF 3.8/MDF* for further ascertaining the functionality of their OMD-C feed handlers
Volume Test Session	
11:45am – 12:00noon	<ul style="list-style-type: none"> <input type="checkbox"/> HKEx will disseminate market data at increasing rate on all OMD-C datafeeds. There will be an instance lasting for about 5 minutes that real-time market data is published close to the maximum rates of the various channels. <input type="checkbox"/> Clients to verify that their systems are able to process and disseminate the high volume data properly without data loss or delay
Exchange Intervention from 12:00 noon to 12:05pm	
Day Close at 12:05pm	
System Shutdown at 1:00pm	
Day-end process and return Test Result Form	
By 3:00pm	<ul style="list-style-type: none"> <input type="checkbox"/> Clients to perform any day-end processes to ensure database integrity where applicable <input type="checkbox"/> Clients to clean up the test data received during the test <input type="checkbox"/> <u>Clients to submit Test Result Form for the OMD-C First Market Rehearsal (Appendix C.3)</u> (except clients who are required to participate in the HSN connectivity test via separate schedule on the same day)
Saturday (24 Aug 2013)	
HSN Connectivity test for Clients planning to use existing production HSN ports for OMD-C	
This test is <u>NOT</u> applicable to Clients using SDNet/2 circuits or new HSN ports solely for connection to OMD-C production host at OMD-C initial rollout	
5:00pm – 6:00pm	<ul style="list-style-type: none"> <input type="checkbox"/> HKEx to bring up production systems as required <input type="checkbox"/> Clients to make connection via the HSN ports to all of the production systems currently being accessed via the HSN ports <input type="checkbox"/> <u>Clients to submit Test Result Form for the OMD-C First Market Rehearsal (Appendix C.3)</u>



**Activity Run-down
 for OMD-C Second Market Rehearsal to be held on 7 September 2013
 (Mandatory)**

Time	Activities
Friday (6 September 2013)	
After 6:30pm	<p><u>Preparation</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Clients to ensure all production network equipment for their OMD-C connections are powered on after production hours <input type="checkbox"/> Clients to ensure all production databases required for the operation on the following trading day are properly backed up <input type="checkbox"/> Clients to ensure the version of their feed handler and downstream systems used in the market rehearsal is OMD-C compatible. Otherwise their feed handler may fail to connect to the OMD-C host when OMD-C is brought up <input type="checkbox"/> Clients to ensure that they have made necessary network / application changes for connecting to the production OMD-C host with the correct OMD-C host IP addresses <input type="checkbox"/> Clients should ensure the bandwidths of the SDNet lines / HSN connections are sufficient to support the datafeed product(s) they subscribed to as required.
Saturday (7 September 2013)	
8:30am	<p><u>Establish connection to OMD-C Host</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Clients to connect to the production OMD-C Host <input type="checkbox"/> Existing MDF 3.8 / MDF* clients should connect to MDF 3.8 / MDF* as well by using the production password as of 6 September 2013 during the Market Rehearsal.
Pre-opening Session	
9:00am – 9:30am	<ul style="list-style-type: none"> <input type="checkbox"/> HKEx will disseminate securities market data and index data via the production channels assigned for different OMD-C datafeeds during the following pre-opening sessions: <ul style="list-style-type: none"> - Order Input period (9:00am - 9:15am) - Pre-order Matching period (9:15am - 9:20am) - Order Matching period (9:20am - 9:28am) - Blocking period (9:28am - 9:30am)
Morning Session (Continuous Trading)	
9:30am – 10:00am	<ul style="list-style-type: none"> <input type="checkbox"/> HKEx will disseminate securities market data and index data via the production channels assigned for different OMD-C datafeeds.

Time	Activities
Simulate OMD-C Primary Site Failure	
10:00am – 10:10am	<ul style="list-style-type: none"> <input type="checkbox"/> HKEx will bring down OMD-C in the primary site <input type="checkbox"/> Clients should pay attention to HKEx’s announcement of the simulated event via email <input type="checkbox"/> Clients to prepare for the necessary configuration change to connect to the OMD-C backup site
Simulate OMD-C Failover to the DR (backup) site	
10:10am – 10:30am	<ul style="list-style-type: none"> <input type="checkbox"/> OMD-C backup site ready for connection <input type="checkbox"/> Clients should pay attention to HKEx’s announcement of the simulated event via email <input type="checkbox"/> Client to establish connection to the OMD-C backup site <input type="checkbox"/> Clients are expected to clear the data in cache upon receipt of the Sequence Reset messages and then obtain the latest market image from the refresh server and real-time channels from the backup Site <p>Note: MDF 3.8/MDF* connection will remain at primary site.</p>
Continuous Trading Session (continue)	
10:30am – 12:00noon	<ul style="list-style-type: none"> <input type="checkbox"/> HKEx will disseminate securities market data and index data via the production channels assigned for different OMD-C datafeeds from the backup site. <input type="checkbox"/> Clients to verify that all of their connections to OMD-C are in proper order and their systems can receive data from all of the real-time and refresh multicast channels that they are entitled to access <input type="checkbox"/> Clients to verify that their systems can recover messages of all types that they are entitled to access from the retransmission services <input type="checkbox"/> Existing MDF 3.8/MDF* clients can compare the data that they receive from the OMD-C backup site against those from MDF 3.8/MDF* at primary site.
Exchange Intervention from 12:00 noon to 12:05pm	
Mid-Day Close at 12:05pm	
Continuous Trading Session (continue)	
1:00pm – 2:00pm	<ul style="list-style-type: none"> <input type="checkbox"/> HKEx will continue to disseminate securities market data and index data from the OMD-C at backup site and MDF 3.8/MDF* at primary site.
Simulate disconnection from OMD-C that triggers Client’s fallback procedure to Original Source¹ MDS/3.8	
2:00pm – 4:00pm	<ul style="list-style-type: none"> <input type="checkbox"/> HKEx will simulate the disconnections of Clients’ feed handlers from OMD-C drop and Clients will not be able to reconnect to OMD-C. <input type="checkbox"/> Clients should pay attention to HKEx’s announcement of the simulated event via email <input type="checkbox"/> Existing MDF 3.8/MDF* clients to execute their fallback procedure to switch their data source to MDF 3.8/MDF* or its original data source, e.g. BSS OG, to resume their downstream data processing <input type="checkbox"/> Existing MDF 3.8/MDF* clients to ensure data integrity after the fallback <input type="checkbox"/> Non existing MDF 3.8/MDF* clients can also take this opportunity to rehearse their contingency procedure for such incidents where appropriate

¹ For BSS OG Clients who would like to have their OG device enabled to perform the fallback procedure during the MR2, please send your email request to IVSupport@hkex.com.hk no later than 12:00noon of 3 September 2013 Tuesday. Vendor Support team will liaise with Cash Trading for the corresponding arrangement.

Time	Activities
Exchange Intervention from 4:00pm to 4:05pm	
Day Close at 4:05pm	
By 5:00pm	<ul style="list-style-type: none"> <input type="checkbox"/> Client to perform any day-end processes to ensure database integrity where applicable <input type="checkbox"/> Clients to clean up the test data received during the test <input type="checkbox"/> <u>Clients to submit Test Result Form for the OMD-C Second Market Rehearsal (Appendix C.4)</u> (except clients who are required to participate in the HSN connectivity test via separate schedule on the same day)
Saturday (7 September 2013)	
<p>HSN Connectivity test for clients planning to use existing production HSN ports for OMD-C</p> <p>This test is <u>NOT</u> applicable to Clients using SDNet/2 circuits or new HSN ports solely for connection to OMD-C production host at OMD-C initial rollout</p>	
7:00pm – 8:00pm	<ul style="list-style-type: none"> <input type="checkbox"/> HKEx to bring up production systems as required <input type="checkbox"/> Clients to make connection via the HSN ports to all of the production systems currently being accessed via the HSN ports
By 8:00pm	<ul style="list-style-type: none"> <input type="checkbox"/> <u>Clients to submit Test Result Form for the OMD-C Second Market Rehearsal (Appendix C.4)</u>



Appendix B.1

**Test Participation Form of OMD-C First Shakedown Connectivity Test Session
 On 22 June 2013 (Already Completed)**

Notes:

1. Please complete and return this test participation form to HKEx-IS by email to IVSupport@hkex.com.hk on or before **14 June 2013**
2. For enquiry, please contact Vendor Support Team via email IVSupport@hkex.com.hk

Client Information		
Name of Client		
Name of Contact during the Test		
Tel. No.	Mobile Phone No.	Email Address

Client Confirmation (please tick appropriate boxes below)

We confirm our participation in the mandatory OMD-C First Shakedown Connectivity Test Session (SCT) on 22 June 2013.

We confirm our participation in the HSN Connectivity Test on 23 June 2013 in order to ensure that our connections to other HKEx production systems via the HSN ports remain healthy and in working order after First Shakedown Connectivity Test.

(Not applicable to Clients using SDNet/2 circuits or new HSN ports solely for connection to OMD-C production host at OMD-C initial rollout)

Submitted for and on behalf of the Client:

Company : _____
 Name : _____
 Title : _____
 Contact No. : _____
 Date : _____

Appendix B.2



*Test Participation Form of OMD-C Second Shakedown Connectivity Test Session
 On 29 June 2013 (Already Completed)*

Notes:

1. Please complete and return this test participation form to HKEx-IS by email to IVSupport@hkex.com.hk on or before 21 June 2013
2. For enquiry, please contact Vendor Support Team via email IVSupport@hkex.com.hk

<i>Client Information</i>		
<i>Name of Client</i>		
<i>Name of Contact during the Test</i>		
<i>Tel. No.</i>	<i>Mobile Phone No.</i>	<i>Email Address</i>

Client Confirmation (please tick appropriate boxes below)

We confirm our participation in the mandatory OMD-C Second Shakedown Connectivity Test Session (SCT) on 29 June 2013.

*We confirm our participation in the HSN Connectivity Test on 30 June 2013 in order to ensure that our connections to other HKEx production systems via the HSN ports remain healthy and in working order after Second Shakedown Connectivity Test.
 (Not applicable to Clients using SDNet/2 circuits or new HSN ports solely for connection to OMD-C production host at OMD-C initial rollout)*

Submitted for and on behalf of the Client:

Company : _____

Name : _____

Title : _____

Contact No. : _____

Date : _____



Appendix B.3

**Test Participation Form of OMD-C First Market Rehearsal
on 24 August 2013 (Already Completed)**

Notes:

1. Please complete and return this booking form to HKEx-IS by email to IVSupport@hkex.com.hk **on or before 16 August 2013.**
2. For enquiry, please contact Vendor Support Team via email IVSupport@hkex.com.hk

Client Information		
Client Name		
Name of Contact during the MR		
Tel. No.	Mobile Phone No.	Email Address

Client Confirmation (please tick appropriate boxes below)

- We confirm our participation in the mandatory OMD-C First Market Rehearsal on 24 August 2013 for us to ensure our readiness for receiving market data before OMD-C system rollout.
- We confirm our participation in the HSN Connectivity Test on 24 August 2013 in order to ensure that our connections to other HKEx production systems via the HSN ports remain healthy and in working order after the First Market Rehearsal.
(Not applicable to Clients using SDNet/2 circuits or new HSN ports solely for connection to OMD-C production host at OMD-C initial rollout)

Submitted for and on behalf of the Client:

Company : _____
Name : _____
Title : _____
Contact No. : _____
Date : _____



Appendix B.4

**Test Participation Form of OMD-C Second Market Rehearsal
On 7 September 2013**

Notes:

1. Please complete and return this booking form to HKEx-IS by email to IVSupport@hkex.com.hk **on or before 30 August 2013.**
2. For enquiry, please contact Vendor Support Team via email IVSupport@hkex.com.hk.

Client Information

Client Name

Name of Contact during the MR

Tel. No.

Mobile Phone No.

Email Address

Client Confirmation (please tick appropriate boxes below)

- We confirm our participation in the mandatory OMD-C Second Market Rehearsal on 7 September 2013 for us to ensure our readiness for receiving market data before OMD-C system rollout.
- We confirm our participation in the HSN Connectivity Test on 7 September 2013 in order to ensure that our connections to other HKEx production systems via the HSN ports remain healthy and in working order after the Second Market Rehearsal.
(Not applicable to Clients using SDNet/2 circuits or new HSN ports solely for connection to OMD-C production host at OMD-C initial rollout)

Submitted for and on behalf of the Client:

Company : _____
Name : _____
Title : _____
Contact No. : _____
Date : _____



Appendix C.1

To : HKEx-IS – Vendor Support & Data Management, Market Data, Global Markets Divisions

Email : IVSupport@hkex.com.hk

**Test Result Form for OMD-C First Shakedown Connectivity Test Session (1st SCT)
held on 22 June 2013 (Already completed)**

Please complete Sections I to II and return the Test Result Form by email to HKEx-IS:

- Clients using SDNet/2 circuits or new HSN ports solely for OMD-C connection by 5:00pm on 22 June 2013
- Clients using existing HSN production ports for OMD-C connection by 11:00am on 23 Jun 2013

Section I Client Information

Client Name	
Contact Person	Contact Telephone No.

Section II Test Result Declaration (please tick the appropriate box)

<p>1. We have successfully completed the First Shakedown Connectivity Test</p> <p>Yes. <input type="checkbox"/></p> <p>No. <input type="checkbox"/> We have encountered the following unresolved issues</p> <p>Connectivity issues Details: _____</p> <p>System failure or interruption Details: _____</p> <p>Data loss or exceptional delay Details: _____</p> <p>Others: Details: _____</p>
<p>2. We have successfully completed the HSN connectivity test held on 23 June 2013 and verified that the connections to other HKEx production systems via the HSN ports participated in the First Shakedown Connectivity Test are in working order. (Not applicable to Clients using SDNet/2 circuits or new HSN ports solely for OMD-C connection)</p> <p>Yes. <input type="checkbox"/></p> <p>No. <input type="checkbox"/></p>

Submitted for and on behalf of the Client:

Company : _____

Name : _____

Title : _____

Contact No. : _____

Date : _____



Appendix C.2

To : HKEx-IS – Vendor Support & Data Management, Market Data, Global Markets Divisions

Email : IVSupport@hkex.com.hk

Test Result Form for OMD-C Second Shakedown Connectivity Test Session (2nd SCT) held on 29 June 2013 (Already Completed)

Please complete Sections I to II and return the Test Result Form by email to HKEx-IS:

- Clients using SDNet/2 circuits or new HSN ports solely for OMD-C connection by 5:00pm on 29 June 2013
- Clients using existing HSN production ports for OMD-C connection by 11:00am on 30 Jun 2013

Section I Client Information

Client Name	
Contact Person	Contact Telephone No.

Section II Test Result Declaration (please tick the appropriate box)

3. We have successfully completed the Second Shakeown Connectivity Test

Yes.

No. We have encountered the following unresolved issues

Connectivity issues
Details: _____

System failure or interruption
Details: _____

Data loss or exceptional delay
Details: _____

Others:
Details: _____

4. We have successfully completed the HSN connectivity test held on 30 June 2013 and verified that the connections to other HKEx production systems via the HSN ports participated in the Second Shakedown Connectivity Test are in working order. (Not applicable to Clients using SDNet/2 circuits or new HSN ports solely for OMD-C connection)

Yes.

No.

Submitted for and on behalf of the Client:

Company : _____

Name : _____

Title : _____

Contact No. : _____

Date : _____



Appendix C.3

To : HKEx-IS – Vendor Support & Data Management, Market Data, Global Markets Divisions
 Email : IVSupport@hkex.com.hk

Test Result Form for OMD-C First Market Rehearsal held on 24 August 2013 (Already Completed)

Please complete Sections I to II and return the Test Result Form by email to HKEx-IS:

- Clients using SDNet/2 circuits or new HSN ports solely for OMD-C connection by 3:00pm on 24 August 2013
- Clients using existing HSN production ports for OMD-C connection by 6:00pm on 24 August 2013

Section I Client Information

Client Name	
Contact Person	Contact Telephone No.

Section II Test Result Declaration (please tick the appropriate box)

1. We have successfully completed the First Market Rehearsal.

Yes.
 No. We have encountered the following unresolved issues

Connectivity issues
 Details: _____

System failure or interruption
 Details: _____

Data loss or exceptional delay, especially during the Volume Test session
 Details (e.g. time and log) : _____

Others:
 Details: _____

2. We have successfully completed the HSN connectivity test held on 24 August 2013 and verified that the connections to other HKEx production systems via the HSN ports participated in the First Market Rehearsal are in working order. *(Not applicable to Clients using SDNet/2 circuits or new HSN ports solely for OMD-C connection)*

Yes.
 No.

Submitted for and on behalf of the Client:

Company : _____

Name : _____

Title : _____

Contact No. : _____

Date : _____



Appendix C.4

To : HKEx-IS – Vendor Support & Data Management, Market Data, Global Markets Divisions
 Email : IVSupport@hkex.com.hk

Test Result Form for OMD-C Second Market Rehearsal held on 7 September 2013

Please complete Sections I to II and return the Test Result Form by email to HKEx-IS:

- Clients using SDNet/2 circuits or new HSN ports solely for OMD-C connection by 5:00pm on 7 September 2013
- Clients using existing HSN production ports for OMD-C connection by 8:00pm on 7 September 2013

Section I Client Information

Client Name	
Contact Person	Contact Telephone No.

Section II Test Result Declaration (please tick the appropriate box)

1. We have successfully completed the Second Market Rehearsal.

Yes.

We successfully performed our procedure for OMD-C failover to the backup site. The time taken for completion is: () minutes

In the failover, our system resumed normal transmission with the OMD-C backup site through:

automated program logic based on the Sequence Reset message
 manual intervention upon HKEx’s announcement of service resumption in the OMD-C backup site
 Others, please specify _____

We successfully performed our fallback procedure for switching the data source to our original data source (checked below). The time taken for completion is: () minutes

MDF 3.8
 MDF*
 BSS OG
 Others, please specify _____

No. We have encountered the following unresolved issues

Problems encountered when performing the procedure for OMD-C backup site failover
 Details _____

Problems encountered when performing the fallback procedure for switching data source to the original source
 Details _____

Others:

Details: _____

2. We have successfully completed the HSN connectivity test held on 7 September 2013 and verified that the connections to other HKEx production systems via the HSN ports participated in the Second Market Rehearsal are in working order. *(Not applicable to Clients using SDNet/2 circuits or new HSN ports solely for OMD-C connection)*

Yes.

No.

Submitted for and on behalf of the Client:

Company : _____
Name : _____
Title : _____
Contact No. : _____
Date : _____



Appendix D

To : HKEx-IS – Vendor Support & Data Management, Market Data, Global Markets Divisions

Email : IVSupport@hkex.com.hk

OMD-C READINESS STATUS CONFIRMATION FORM

(Please complete Sections I, II and III and return the Feedback Form by email to HKEx-IS before 12:00 noon of 9 September 2013, HKT.)

Session I : All Real-time Clients of OMD-C (Securities Market Data)

- We are ready for the rollout of the following OMD datafeed(s) via Batch 1
 - Securities Standard (SS)
 - Securities Premium (SP)
 - Securities FullTick (SF)
 - Index Feed (Index)
 - Conflated Broker Queue (CBQ)
 - Odd Lot Feed (OLO)

- all of our feed handlers except those of which the circuit ID stated below:
 - circuit IDs: _____
 - will be modified and fully tested by _____ (date)

- all of our other applications concerned including downstream and client-end applications
 - already completed
 - to be completed by _____ (date)

- all required hardware upgrades, including those for the feed handler, downstream and client-end systems
 - already completed
 - to be completed by _____ (date)

- all internal and distribution network
 - already upgraded
 - to be upgraded by _____ (date)

- We will have the existing data source (e.g. MDF3.8/MDF*/BSS OG) running in parallel:
 - for 2 weeks
 - for 4 weeks
 - until the end of free parallel run period
 - until _____ (date)
- We plan to adopt OMD-C as the source of our production data for all our services at Day One of OMD-C rollout:
 - Yes
 - No, subject to our internal readiness
 - No, but target to change to OMD-C as the production data source in [] week(s).
(please specify)

We are **NOT** ready for the rollout of OMD-C via the first batch and we understand that we will notify HKEx of our revised schedule:

Session II: For Feed Providing Information Vendors Only

We have provided sufficient support to our indirect connection vendor clients (“the clients”) for their migration to OMD-C as

- We have informed each of the clients of our choice of feed under OMD-C

Yes No N/A - because _____

- We have checked with all of the clients their choice of feed under OMD-C

Yes No N/A - because _____

- We have already informed the clients whose choice of OMD-C feed is not provided by us

Yes No No such clients

Those clients are:

- We have planned and scheduled distribution network upgrade as necessary to enable the clients to continue receiving data properly at the OMD-C rollout

Yes No N/A - because _____

- We have planned and scheduled system tests to be conducted with the clients to help them ascertain their readiness

Yes No N/A - because _____

- We have checked the readiness of each of the clients for their OMD-C rollout

Yes No

Our indirect clients will be migrated to receive OMD-C market data on : _____
(please specify the date)

- We have fallback plan in place to support the clients in case HKEx declared OMD-C contingency and revert to MDF3.8 as the sole market data source during the 4-week mandatory parallel-run period

Yes No N/A - because _____

Submitted for and on behalf of the Client:

Company : _____
 Name : _____
 Title : _____
 Contact No. : _____
 Date : _____

Appendix E - Typhoon and/or Rainstorm Arrangements:

Clients are requested to note the following arrangements should typhoon or rainstorm is encountered on the day of SCT, MR or PRT (“the test day”)

1. In case Typhoon Signal No. 8 or above and/or Black Rainstorm Warning is issued or continues to be issued between 7:30am to 9:00am on the test day, the activity of the day will be cancelled and will not be resumed for the rest of the day.
2. In case Typhoon Signal No. 8 or above is issued after 9:00am on the test day, the activity of the day will be terminated 15 minutes thereafter.
3. In case Black Rainstorm Warning is issued after 9:00am on the test day, the activity of the day will continue until completion.
4. In any case, all participating clients should complete the appropriate day-end works including file / database backup and restore, system restoration / fallback and so on to ensure there will not be interruption on the next trading day.