Genium INET Commodities

Market Wide Acceptance Testing (MWAT) Plan

Version as of January 17, 2012

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MWAT – Market Wide Acceptance Testing

Purpose

The MWAT sessions are designed to ensure member and ISV readiness prior to the migration of all Commodities members to the Genium INET platform. The Genium INET central, front-end, back office, and surrounding systems will be tested under production like circumstances. All member/ISV applications are also tested.

Activities

- MWAT began with MWAT Log On during September, 2011

- The first MWAT was arranged on the 15th of December, 2011

- Three further MWATs are arranged on Thursday evenings January 19th, January 26th, February 9th Members are recommended to attend all sessions, as a minimum all members must participate in at least two sessions.

- ISVs are expected to support their customers, but do not need to participate, unless they are assigned by their customers

- It is expected that the members run test scenarios and cases based on their specific needs and business processes
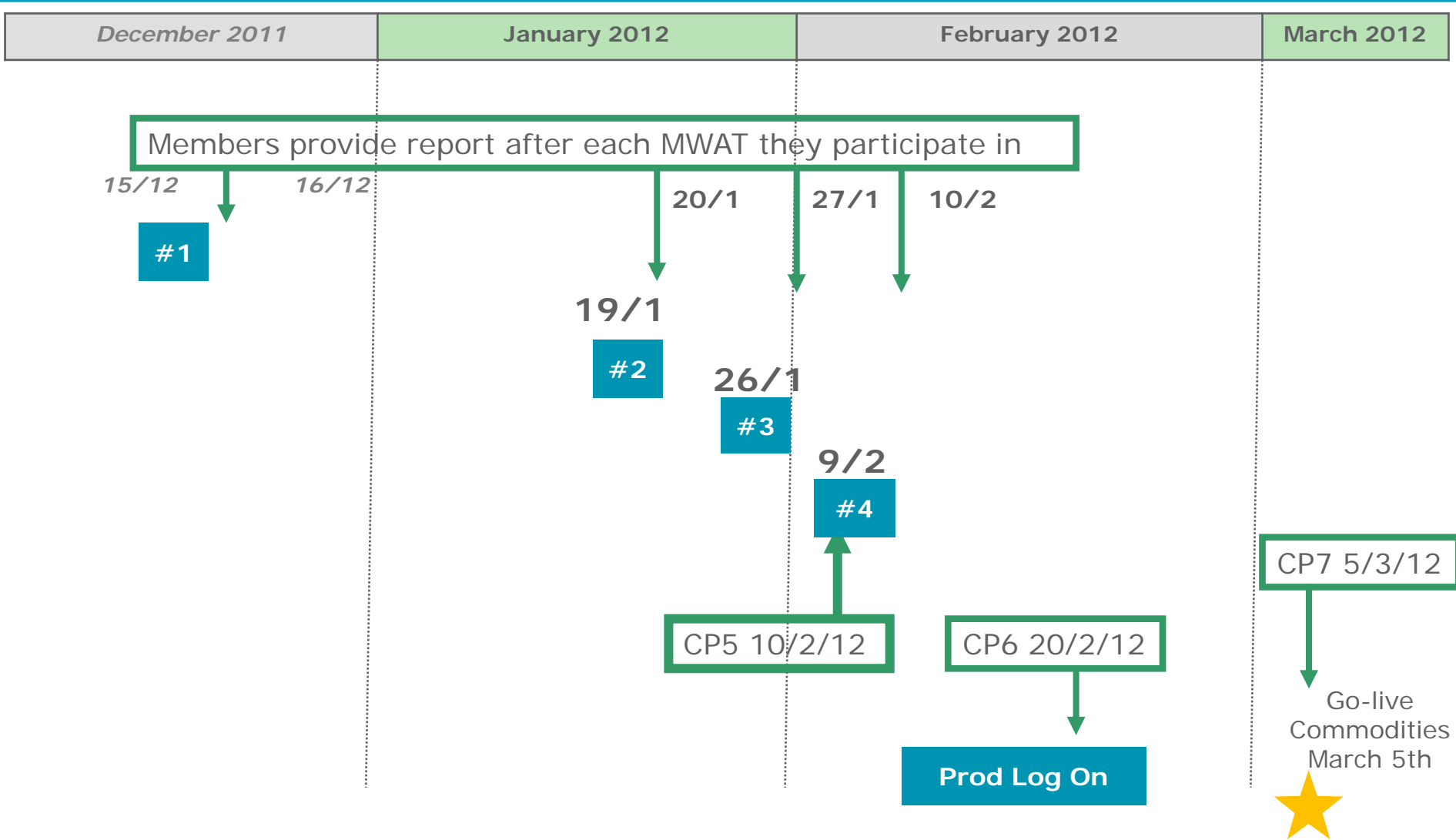
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Activities and Schedule

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MWAT Schedule

December 2011	January 2012	February 2012	March 2012

Members provide report after each MWAT they participate in

15/12 *16/12*

20/1 **27/1** **10/2**

#1

19/1

#2

26/1

#3

9/2

#4

CP5 10/2/12

CP6 20/2/12

CP7 5/3/12

Prod Log On

Go-live
Commodities
March 5th

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Checkpoints – Genium INET Migration

	Checkpoint	Date	Description
1	*Connectivity*	*18/5 – 12/8*	*Verified connectivity to test environments*
2	*Test logon*	*3/6*	*ISVs and Member developed software verified logon to test environments*
3a	*Conformance start*	*22/8*	*Mandatory for ISV and Member with internally developed software connecting to the OMNet API or FIX: Request made for participation conformance test.*
3b	*Conformance end*	*21/10*	*Mandatory for ISVs and Member with internally developed software connecting to the OMNet API or FIX: Requested conformance tests finalized.*
4	*MWAT Log on*	*29/9*	*All members and ISVs have confirmed log on to MWAT environment.*
VPN	*VPN Replacement deadline*	*14/10*	*All Members on VPN connections need to have moved over to extranet VPN based connections. See separate commodities exchange information (31/2011) Members are required to have ordered and installed new VPN connectivitity by the 14 October.*
VPN	*Termination of old VPN connectivity*	*30/11*	*Physical termination of old VPN connections.*
5	MWAT	10/2 2012	All Commodities members have verified successful participation of at least two out of four MWAT sessions. DM/Fixed Income members are also invited to participate.
6	Production connectivity	20/2 2012	All Commodities members have verified connectivity between member production and Nasdaq OMX production.
7	Launch with confidence test	5/3 2012	Verify that all members have logged on and retrieved reference data during the launch weekend

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MWAT Participation

- In the MWAT Registration, each member has appointed a main migration contact. This person has been contacted with a direct email with a link to a webform on the member extranet asking which MWATs the member intends to take part of in

- All Commodities members need to participate in **at least two MWATs** and send a report on the following day

- All members are strongly recommended to participate in all MWATs, in particular MWAT #1

- MWATs are also open for Market data vendors and Equity Derivatives members

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MWAT preparations

Please, ensure:

- Client environment and infrastructure installed and configured

- Latest versions of applications
  - Trading Workstation, Clearing Workstation 2
  - Web Trade users, ensure you can access WebTrade URL
  - Third party solutions

- Connectivity to the test environment infrastructure tested prior to MWAT

- Necessary accounts and permissions set

- Prepare own test cases for customer specific processes and tests

- Engage personnel to be active in tests including traders and backoffice personnell

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MWAT day schedules

- Please see separate detailed document
- Systems are open from 09:00 for login tests. Actual MWAT starts at 13:30 and ends at 16:30 CET

T	09:00-13:30	Login tests
	13:30	MWAT starts
	14:00-16:30	Functional testing
	15:30-15:35	Disturbances
	16:30	MWAT ends

T+1	10:00	SRM reports are available
	14:00	Member sends in test report

* Times are CET

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Important information for VPN users

- Please see exchange information: https://newsclient.omxgroup.com/cdsPublic/viewDisclosure.action?disclosureId=455784&lang=en

- The old VPN gateways will be closed down physically post Nov 30, 2011. There will be no possibility to use old connections after this.

- During MWAT (15 Dec onwards), members on VPN extranet solutions will exclusively use new extranet connectivity for accessing the test environment.

- **Please note that members that have leased/fixed lines are unaffected in every aspect by this change**

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Important information for Web Trade users

- If you have recently moved over to use Web Trade, please ensure you have connectivity to the the external test system using Web Trade asap

- Web Trade
  - Internet Based
  - Deployment using ClickOnce technology
  - Admin tools and Pre-trade limits
  - Designed to match the needs of the majority of users

- New release for Genium INET
  - No changes in interface or functionality
  - Available in external test

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Important information for Trayport GW users

- Trayport Global Vision
  - New adapter application is available for download
  - Adapter must be upgraded during launch weekend
  - Reg files needs to be updated. This will be included in installation kit
  - No changes to XML config files

- Trayport Broker Services
  - No changes in interface
  - IP adresses and ports are changed

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Important Information for Clearing Representatives

- Clearing Clients are by default not part of testing scope

- If you wish to give CW2 access to your clearing client please contact memberservices@nasdaqomx.com

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Test environments

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Test environments

- Only one test environment is used during MWAT, the EXT4 environment

- All connectivity details can be found in the following document on the member extranet:

http://nordic.nasdaqomxtrader.com/digitalAssets/77/77576_genium_inet_commodities_connectivity_testsept28_giwt.pdf

User Id and Passwords EXTEST4

- CLICK/SECUR Production environment passwords and users have been migrated to EXTEST4

- If you cannot log in to the test environment, please send an email to memberservices@nasdaqomx.com

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Delivery schedule – Frontends

Delivery	RC	Description
TW*	30 Nov	TW published on memberweb, non mandatory upgrade for Financials and Fixed Income.
CW1*	30 Nov	CW1 published on memberweb, non mandatory upgrade for SE members
CW2*	30 Nov	CW2 link to EXT4 available through member web

Other releases will be due to bug fix or enhancemnet depending on feedback and outcome from MWAT

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Delivery schedule - Backend

- From November 30 the system has all existing production functionality. Upgrades will be based on member feedback from MWAT's and other testing.

- The regular maintenance window on Wednesdays will be used throughout the project

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Testing

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Market data

- Market info for commodities is available in GCF3 environment with TIP version 2.4.
  - GCF3 is connected to Ext test 4

- All information from NASDAQ OMX Global Data Products (GDP) is distributed through our newsletter you can subscribe to:

http://www.nasdaqomxnordic.com/News/marketnotices/Subscribe

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SPAN® parameter File

- Members and ISVs using the SPAN® parameter file are recommended to verify that the file can be imported and read by their interfaces

- There will be a limited amount of changes to the SPAN file due to the Genium INET migration.

- SPAN® parameter file users are encouraged to see the following documents:

  - Overview description of SPAN® Risk Parameter File available at:

    http://nordic.nasdaqomxtrader.com/digitalAssets/75/75701_spanchanges.pdf

  - Removal of electricity cash margin:

    http://nordic.nasdaqomxtrader.com/digitalAssets/75/75707_cashmargin.pdf

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MWAT functional testing

- There are no specific test case scripts; members are encouraged to create their own test cases. Below there are some general suggestions on functionalities to test, e.g. limit orders etc.

- Please use realistic prices and volumes

- Please trade the instrument series you normally would trade on

- Production ids should be used and normal trading software should be used for market making etc.

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MWAT disturbance testing

- Between 15:30-15:35 some member connections will be disconnected to verify reconnections

- FIX failover test will be performed

- For GCF some member connections will be disconnected to verify reconnections

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Test Report

- It is important that you use the support channels as specified towards the end of this presentation during the MWAT

- After the MWAT, all Commodities members shall complete and send in a test report to NASDAQ OMX to confirm that their applications affected by the introduction of Genium INET have been tested in accordance with industry practices

- Market data vendors and Derivatives members are also recommended to complete and send in a test report to NASDAQ OMX.

- Please use the member extranet form under Commodities for Genium INET > MWAT Feedback and send us a report by 14:00 CET on Friday after MWAT

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Checkpoint 5, 10 February-2012

- All members, data centers and market data vendors have participated in minimum two MWATs and provided a report confirming readiness for launch

- Market data vendors which get the data from GCF - recommended to participate in MWATs but is optional

- Trading applications affected by the introduction of Genium INET Commodities have been tested in accordance with industry practices

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Market Schedule

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Market Schedule

- All Commodities markets in Genium INET will be open

- Detailed information regarding the schedule is found in the MWAT schedule document published on the member web under > Testing/MWAT

Market	Trading	Closed
Nordic Power Market	13:30 - 16:30	16:30
German Power Market	13:30 - 16:30	16:30
Dutch Power market	13:30 - 16:30	16:30
UK Power market	13:30 - 16:30	16:30
Carbon market	13:30 - 16:30	16:30

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MWAT Support structure, Genium INET Commodities

Whilst members can always contact their respective key account managers with questions the below support table outlines specific contact points during MWAT.

Support Area	Detail	Phone	Email
Trading and Trader Support	- General Queries on front end functionality	+47 6752 8037	desken@nasdaqomx.com
Clearing Support	-Support for clearing related queries such as clearing reports etc	+47 6710 8418	Clearing.Market@nasdaqomx.com
Member Services	-Test login credentials (user id & passwords) & participant configuration - FIX Configuration	+46 8 405 6492	MemberServices@nasdaqomx.com
Technical Support	-Technical integration issues: Trading and clearing OMNet API, FIX - General Disturbances & Issues	+46 8 405 6400	Technicalsupport@nasdaqomx.com
ISV Support	- General queries for ISV and ISV alike providers	+46 8 405 6400	Technicalsupport@nasdaqomx.com
Genium Consolidated Feed (GCF)	- GCF/TIP accounts and Commodities filtering	+45 33 93 33 66	DataProducts@nasdaqomx.com
Genium Consolidated Feed (GCF)	- GCF technical questions	+46 8 405 6580	operator@nasdaqomx.com

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MWAT Support structure, Genium INET Commodities 2

Whilst members can always contact their respective key account managers with questions the below support table outlines specific contact points during MWAT.

Support Area	Detail	Phone	Email

Risk Management	-Risk reports in SRM:
	    -"Margin Data"
	    -"Positions"
	    - "Margin & Collateral
	    Summary"
	
	-SPAN®[1] parameter file content
			MWAT.CommoditiesRM@nasdaqomx.com

Member Readiness Team	- General questions on member readiness process - Management Contact - Escalation - IT Forum Registration - Meeting Requests -MWAT test reports		commodities.geniuminet@nasdaqomx.com

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Thank You!

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