PARTICIPATING ORGANISATIONS' CIRCULAR

Date : 17 DECEMBER 2009	No : R/R 21 of 2009

AMENDMENTS TO THE DIRECT MARKET ACCESS ("DMA") OPERATIONS DIRECTIVE AND DMA HANDBOOK

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1. INTRODUCTION

Reference is made to R/R 19 of 2009 ("R/R 19") in relation to the implementation of DMA on 9 December 2009. R/R 19 contained the issuance of amendments to the Rules of Bursa Malaysia Securities Bhd, the DMA Operations Directive and the DMA Handbook.

Kindly be advised that amendments have been made to the DMA's Operations Directive and DMA Handbook (the "Amendments") as explained under Items 2 and 3 below.

2. AMENDMENTS TO DMA OPERATIONS DIRECTIVE

The amended DMA Operations Directive is set out in **Annexure 1**. The amendments are as follows:

(a) Participating Organisations ("PO") must exercise reasonable care when engaging with an approved Independent Software Vendor ("ISV") in the installation of the DMA Infrastructure. This requirement is stated under Items 2.3 and 2.4 of **Annexure 1**; and

(b) The monthly access fee structure has been revised as set out in Item 5.6 of **Annexure 1**.

3. AMENDMENTS TO DMA HANDBOOK

The amended DMA Handbook is set out in **Annexure 2**. The amendments are as follows:

(a) To incorporate new Item 3 "Information Required for Production Access" under Section B; and

(b) To provide the explanation to Items 4.7, 4.8 and 4.9 of Section C.

4. DMA WEBSITE

The amended Operations Directive and Handbook are available on Bursa's corporate website at http://www.bursamalaysia.com/website/bm/trading/DMA/

5. EFFECTIVE DATE

Kindly be informed that the Amendments will be effective from **17 December 2009.**

6. CONTACT DETAILS

In the event of any queries in relation to the above captioned matter, kindly contact Bursa DMA Operations team at 603 2034 7226/7283 or email to DMA@bursamalaysia.com.

This Circular is available at:

http://www.bursamalaysia.com/website/bm/regulation/rules/bursa_rules/bm_securities.html

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REGULATORY POLICY & ADVISORY

ANNEXURE 1

BURSA MALAYSIA SECURITIES BERHAD

DIRECT MARKET ACCESS – OPERATIONS DIRECTIVE

VERSION 1.01
DATED 17th DECEMBER 2009

BURSA MALAYSIA SECURITIES BERHAD Private & Confidential

PARTICIPATING ORGANISATION
DIRECT MARKET ACCESS – OPERATIONS DIRECTIVE

Document Revision

Version	Author	Description of Change	Effective Date
1.00	Regulations – Participants Supervision	• Published to the Industry on 6th Nov. 2009	9th November 2009
1.01	Infrastructure Planning	• Incorporated Section 2.3 and 2.4 • Revised Section 5.6	17th December 2009 [tentative]

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PARTICIPATING ORGANISATION
DIRECT MARKET ACCESS – OPERATIONS DIRECTIVE

1 DEFINITIONS, ACRONYMS USED, SCOPE AND INTERPRETATION

1.1 Definitions and Acronyms used

Access	means authorised entry into the DMA Infrastructure as governed by the access privileges granted to the User or Administrator.
Access Device	means any form of device used to Access the DMA Infrastructure for the purpose of Order Creation and/or Modifications. The Access Device shall be deemed as the initiation point of Order Creation.
Administrator	means employee(s) of a PO who is(are) duly authorised by the PO, inter alia, to have Access to the DMA Infrastructure, and includes such other person(s) who is(are) authorised by the PO to operate any part of the DMA Infrastructure but excludes the Users described herein.
ATS	means automated trading system as defined in the Rules of Bursa Securities.
Automatic Matching	means matching of orders entered into the ATS as established / envisaged in the Rules of Bursa Securities.
Availability	means the time and duration in which the DMA Infrastructure becomes available for Access.
Client	means client referred to in the Rules of Bursa Securities.
DMA	means Direct Market Access as defined in the Rules of Bursa Securities.
DMA Infrastructure	means the infrastructure which facilitates DMA and shall comprise all components, both substance and form, which are governed by the provisions established herein. The connectivity envisaged between Users and the ATS via the DMA Infrastructure is described below: **User ⇄ Access Device ⇄ DMA Infrastructure ⇄ ATS**
DMA Order	means DMA Order as defined in the Rules of Bursa Securities.
electronic Order-routing	means the act of routing/relaying an electronic Order for DMA purposes.

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Exchange	means Bursa Malaysia Securities Berhad.
ESZ	means the Exchange's Secured Zone which is the zone designated by the Exchange, in accordance with such requirements as may be determined by the Exchange from time to time, to be where the Exchange's Group of Companies' Information Technology Infrastructure resides. The ATS shall be deemed to reside within the ESZ.
Modifications	means any change(s) made to a DMA Order.
Order Acceptance	means the acceptance of a DMA Order entered into the ATS in accordance with such procedures as established and envisaged by the Exchange and/or the Rules of Bursa Securities.
Order Creation	means the act of creating a DMA Order.
Order Entry	means the act of entering a DMA Order into the ATS for the purpose of Order Execution as envisaged in the Rules of Bursa Securities.
Order Execution	Order Execution is deemed to consist of all of the following chain of events: • Order Acceptance by the ATS; • Automatic matching of DMA Orders by the ATS; and • Order Match Confirmation by the ATS.
Order Match Confirmation	means the confirmation produced by the ATS subsequent to automatic matching.
Registered Representative	means a Registered Representative as defined in the Rules of Bursa Securities.
Rules of Bursa Securities	means the Rules of Bursa Malaysia Securities Berhad, as may be amended, varied, supplemented or substituted therefore from time to time.
PO	means Participating Organisation as defined in the Rules of Bursa Securities.
POSZ	means Participating Organisation's Secured Zone. The POSZ shall be the designated zone where the PO's physical and logical infrastructure resides for the purpose of connecting with the ESZ.

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Trading Session	means trading sessions as prescribed in the Rules of Bursa Securities.
User	means a person who uses an Access Device to Access the DMA infrastructure.
Validation	means the act of assessing an electronic Order, manually, automated or otherwise, against risk filter(s) assigned with pre-defined criteria and values for purposes, including but not limited to, managing the risks associated with each DMA Order prior to Order Entry.

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1.2 Scope

1.2.1 These directives shall regulate all the activities/processes of DMA, both in form and substance, from Order Creation to Order Entry into the ATS. It shall also include the process of notifying Users of the Order Match Confirmation from the instance Order Execution has been completed by the ATS.

1.2.2 Enclosed as **Appendix 1** is a diagram (Diagram on DMA) which describes the scope of these directives as indicated by the non-shaded areas.

1.3 Interpretation

1.3.1 Any reference made in the provisions established in this operation directives to a rule(s), code(s), guideline(s) and/or directive(s) shall be deemed to include all modifications, amendments, supplements and/or substitutions thereof from time to time.

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2. GENERAL REQUIREMENTS

2.1 All activities/processes in the DMA Infrastructure shall be established in accordance with the provisions established herein.

2.2 A PO shall define and document all the functional specifications for all the activities/processes and/or events of the DMA Infrastructure. In addition, a PO shall maintain an up-to-date indexed list of all the functional specifications for all the activities/processes and/or events of the DMA Infrastructure.

2.3 Notwithstanding that the DMA Infrastructure is obtained from an independent software vendor in accordance with 5.4, the PO must exercise reasonable care to ensure that the independent software vendor provides the front-end system according to the user requirements and this includes comprehensive testing by the PO to ensure successful end-to end (PO to Bursa Trading Engine – Clearing & Settlement) testing of connectivity to Bursa's development and production platforms. If there is any change in the DMA Infrastructure, the PO must:

2.3.1 inform and procure that the independent software vendor informs Bursa Securities of the said changes to enable Bursa Securities to carry out the necessary testing; and

2.3.2 obtain Bursa Securities' approval prior to effecting such change as required under Rule 701A.3(2) of the Rules of Bursa Securities.

2.4 For the avoidance of any doubt, Bursa Securities, Bursa Malaysia Berhad and their directors and officers shall not be liable for any losses arising from or in connection with:

2.4.1 the failure by the PO or the independent software vendor to carry out the necessary testing of connectivity to Bursa's development and production platforms; or

2.4.2 the non-compliance by the PO of any of these directives.

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3. FUNCTIONAL REQUIREMENTS

3.1 Users and Administrators

3.1.1 A PO shall issue to each User a unique User identity designation ("ID") which shall be used to sign-on via an Access Device for the purpose of Access to the DMA Infrastructure. A PO shall ensure that Users sign-off from the DMA Infrastructure accordingly, automatically or otherwise.

3.1.2 A PO shall maintain at all times, an up-to-date list of Users and ensure that each unique User ID is indexed to the User's name and relevant documentation in order to establish a clear association with the trading account.

3.1.3 POs are required to appoint Administrators whose responsibilities shall include but not limited to ensuring that the DMA Infrastructure is functioning according to its functional specifications.

3.1.4 A PO shall issue to each Administrator a unique Administrator ID which shall be used to sign-on for the purpose of Access to the DMA Infrastructure. A PO shall ensure that Administrators sign-off from the DMA Infrastructure accordingly, automatically or otherwise.

3.1.5 Administrator shall not be granted with any Access privileges to the DMA Infrastructure that are similar or normally granted to Users.

3.1.6 Further to 3.1.4, a PO shall also maintain the details of all Administrators on the same list.

3.1.7 A PO shall clearly define and document the Access privileges of User and Administrator in the following documents:-

3.1.7.1 A matrix detailing the relationship of Access privileges that can be granted to a User and Administrator.

3.1.7.2 An Access privilege profile/detail of each User and Administrator based on the ID issued.

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3.2 Validation

3.2.1 A PO shall **be responsible for defining, installing and documenting** a set of risk filters assigned with pre-defined criteria and values for the Validation of each and every Order created by the User for purposes of Order Entry in accordance with the provisions established herein.

3.2.2 The risk filters that a PO are required to install and activate are as prescribed below:

Type of Filter	Filter Name	Requirement
Cash Position	Daily Net Cash Position	Either one is mandatory
	Daily MAX Total Capital Engaged	
Order	Max Capital Engaged per Order	Mandatory
Manipulation	% Far from Market Spread	Either one is mandatory
	% Far from Last Traded Price	
	Small Order Quantity far from Last Traded Price	Optional
Authorization	Market Type Authorization	All are mandatory
	Instrument Type Authorization	
	Order Technical Origin Authorization	

3.2.3 Each Client having Access to the DMA Infrastructure shall be permanently assigned to at least one Registered Representative.

3.2.4 The tracking and utilisation of the risk filters and/or checkpoints established for the purpose of Validation shall be updated on real-time on-line basis.

3.2.5 In amplification of the Bursa Malaysia Securities Berhad's Rules on Regulated Short Selling ("RSS Rules"), POs shall ensure that all DMA orders falling within the definition envisaged by the provisions of RSS Rules are subjected to the same requirements. In this regard, POs shall ensure that the necessary controls for purposes of complying with RSS Rules are implemented.

3.3 DMA Queue

3.3.1 Each DMA Order shall be automatically assigned with a sequence number.

3.3.2 All DMA Orders in the DMA Infrastructure shall be chronologically prioritised by reference to date and time.

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3.3.3 All DMA Orders created via an Access Device shall be queued and attended to in accordance with the Rules of Bursa Securities.

3.4 DMA Infrastructure Activity Log

3.4.1 A DMA Infrastructure activity log ("Log") shall be established and maintained to record all the events/activities/processes of all Users and Administrators, including those produced by the DMA Infrastructure which shall include but not limited to the status of DMA Orders from Order Creation to the notification of Order Match Confirmation.

3.4.2 Access to the Log shall be restricted to Administrators and any other authorised person/(s) as may be designated by the PO. Any work carried out on this Log shall be recorded with full details.

3.4.3 The following shall be the minimum details (where appropriate and relevant) to be recorded in the Log with reference to the ID, date and time-stamp.

3.4.3.1 User/Administrator sign-on;

3.4.3.2 User/Administrator sign-off and the manner in which the sign-off was carried out i.e. manual or automated;

3.4.3.3 Order ID/sequence number;

3.4.3.4 The outcome/status of the Validation;

3.4.3.5 The outcome/status of the Order Entry;

3.4.3.6 Modifications; and

3.4.3.7 Order Match Confirmation received from the ATS and the notification of the same when it was made to the Users.

3.4.4 The date and time of the ATS shall be the sole reference, which all date and time references in the DMA infrastructure is based on.

3.4.5 A PO shall define and document appropriate archival policies to be implemented for the Log. Otherwise, the entire Log shall be archived for a period of not less than 5 years from the date of creation.

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3.5 Error and/or exception handling

3.5.1 A PO shall clearly establish a set of internal procedures on handling all errors and exceptions. In establishing the same, the procedures shall include at least the following:-

3.5.1.1 A list of errors and exceptions that have been identified with recommended solutions (if any), including records of action taken;

3.5.1.2 The risks associated with and the handling priority for each of the identified errors and/or exception; and

3.5.1.3 The escalation procedures for each of the handling priority.

3.5.2 Without derogation to any of the provisions contained herein, a PO shall establish sufficient monitoring and/or review procedures and the frequency thereof, for all activities in relation to DMA. The same shall include but is not limited to surveillance procedures in order to handle exceptions.

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4. CONNECTIVITY REQUIREMENTS

4.1 Connectivity between the DMA Infrastructure and the ATS

4.1.1 All physical and logical connections between the ESZ and the POSZ shall be solely performed by the Exchange or its appointed vendors/representatives.

5. APPLICATION FOR APPROVAL

5.1 Pursuant to Rule 701A.3 of the Rules of Bursa Securities, a PO shall obtain the Exchange's approval prior to the establishment of the DMA Infrastructure or effecting any change to the DMA Infrastructure.

5.2 The application for approval shall be made in the form specified in **Appendix 2** - APPLICATION FOR APPROVAL TO ESTABLISH DMA INFRASTRUCTURE.

5.2.1 In the application, the PO shall demonstrate that its DMA Infrastructure complies with the requirements set out in the following:-

5.2.1.1 IT Security Code;

5.2.1.2 Rules of Bursa Securities ; and

5.2.1.3 the Operations Directive.

5.3 POs must submit the application form (to be completed in type written form with original signatures included) along with the following supporting documentation and/or information (may include illustrations, technical or otherwise):-

5.3.1 A complete set of functional specifications of the DMA Infrastructure demonstrating compliance with the Functional Requirements as prescribed in section 3, including :-

5.3.1.1 details of the PO's DMA technical infrastructure architecture details of its hardware, software and connectivity solutions;

5.3.1.2 details on the operation of its risk filters;

5.3.1.3 details of maintenance of the Log;

5.3.1.4 details of access controls to DMA Infrastructure; and

5.3.1.5 any other information which the PO considers relevant to Bursa Securities in considering this application.

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In respect of changes to the DMA Infrastructure, a complete set of changes to the functional specifications including a list of changes indexed against the list previously approved;

5.3.2 Connectivity specifications demonstrating compliance with the Connectivity Requirements as prescribed in section 4; and

5.3.3 User acceptance certification of the functional specification(s) intended to be implemented.

5.4 If the DMA Infrastructure is obtained from an independent software vendor, the PO must ensure that the independent software vendor is one which has been approved by Bursa Securities.

5.5 Bursa Securities may request for additional information from the PO in relation to this application.

5.6 Upon approval of the DMA Infrastructure, the PO must:-

5.6.1 pay the following **monthly** access fee which shall be payable monthly in advance;

Cost Description	Monthly Access Fee
Direct Market Access fee	RM 6,000 for 15 orders per second

5.6.2 in case PO requires an upgrade to 30 orders per second for HQ, pay **one-off** set-up fee of RM4,000;

5.6.3 in case PO requires a dedicated 15 orders per second for a branch, pay **one-off** set-up fee of RM4,000; and

5.6.4 pay any other fees, levies or other charges imposed by Bursa Securities from time to time.

5.7 In approving the DMA Infrastructure or any change to the DMA Infrastructure, Bursa Securities may impose such conditions as it deems fit and the PO must comply with the conditions as if they form part of these directives.

5.8 Bursa Securities' approval of the DMA Infrastructure or any change to the DMA Infrastructure must not be construed that Bursa has verified :-

5.8.1 the PO's compliance with the IT Security Code, Rules of Bursa Securities and the Operations Directive above in relation to the establishment of the DMA Infrastructure ; and

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5.8.2 the quality and reliability of the DMA Infrastructure.

6. DECLARATION OF COMPLIANCE

6.1 The DECLARATION OF COMPLIANCE (**Appendix 3**) shall be submitted not less than 2 market days prior to the commencement of the operation of the DMA Infrastructure or prior to effecting any changes to the DMA Infrastructure.

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7. COMMUNICATIONS

7.1 All matters pertaining to the provisions contained herein, including all application forms and supporting documents, shall be directed to :-

DMA Market Operations
Exchange Operations
Bursa Malaysia Bhd
10th Floor, Exchange Square, Bukit Kewangan,
50200 Kuala Lumpur,
Malaysia.

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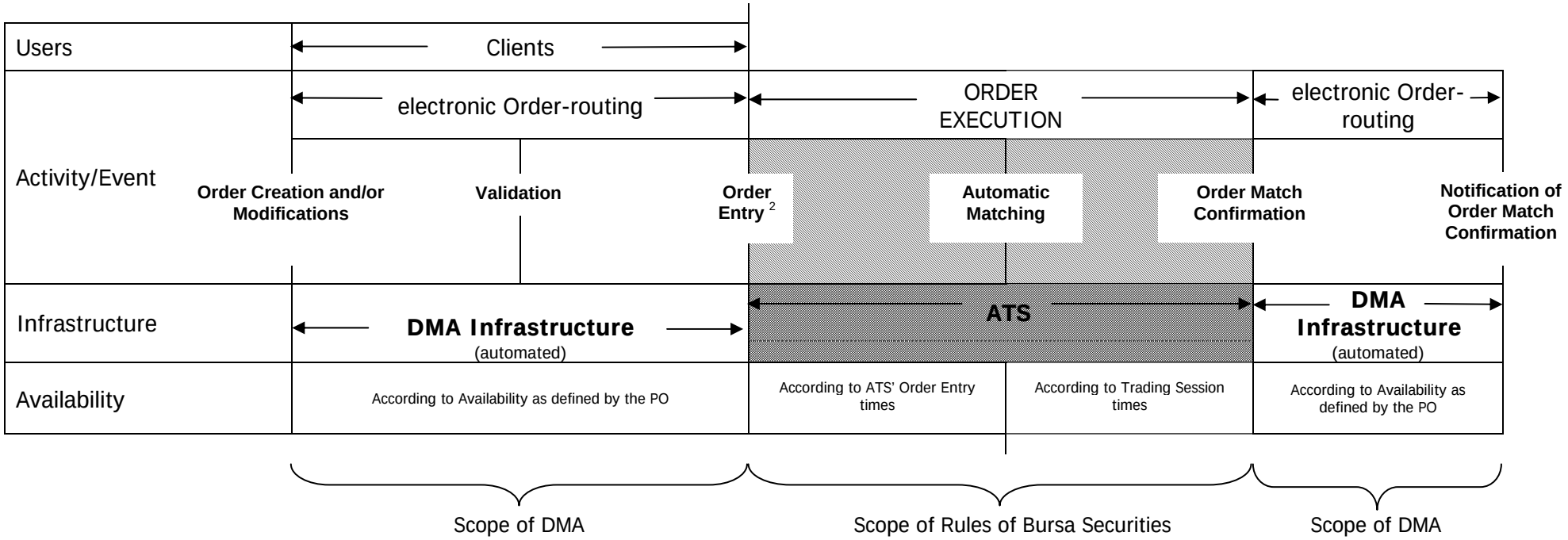
PARTICIPATING ORGANISATION
DIRECT MARKET ACCESS – OPERATIONS DIRECTIVES



[1] No manual intervention excluding exceptions.

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PARTICIPATING ORGANISATION
DIRECT MARKET ACCESS – OPERATIONS DIRECTIVES

APPLICATION FOR APPROVAL OF PARTICIPATING ORGANISATION'S DMA INFRASTRUCTURE

To:

Bursa Malaysia Securities Berhad
Exchange Square
Bukit Kewangan
50200 Kuala Lumpur
Malaysia

We hereby apply for approval for our DMA Infrastructure/changes to our DMA Infrastructure* and submit the following documentation and/or information in support of our application:

[*please itemise the documentation and/or information as prescribed in Section 5.3 of the Operations Directive]*

Authorised signatory:	
Name:	
Designation:	
Date:	

* Delete accordingly

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PARTICIPATING ORGANISATION
DIRECT MARKET ACCESS – OPERATIONS DIRECTIVES

APPLICANT'S DETAILS

1.	Name of Applicant:	
2.	Address and telephone numbers of principal place of business	
3.	Name, designation and contact details of main contact person in relation to application for approval of DMA Infrastructure	
4.	Name, designation and contact details of DMA Manager	
5.	Name, designation and contact details of DMA Technical Contact	
6.	DMA Software and Version Number (i.e. IOS)	
7.	Location of DMA Server and Fix 4.4 Gateway	

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PARTICIPATING ORGANISATION
DIRECT MARKET ACCESS – OPERATIONS DIRECTIVES

DECLARATION OF COMPLIANCE

Bursa Malaysia Securities Berhad ("the Exchange")

COMPLIANCE WITH THE REQUIREMENTS OF THE EXCHANGE IN RELATION TO DIRECT MARKET ACCESS

Pursuant to the requirements of Rule 701A.3(3) of the Rules of the Exchange, we, [*insert name of the Participating Organisation*], hereby confirm that the DMA Infrastructure[2] and all the requirements in relation to the functionalities, connectivity, operation and security requirements of the DMA Infrastructure comply with the Rules of the Exchange including any schedules, guidelines, notices or circulars of general application issued by the Exchange.

Signed _____ Head of Operations
Date _____

Signed _____ Compliance Director / Officer*
Date _____

* delete accordingly

[2] Defined in the Rules of Bursa Securities to mean the infrastructure established and/or maintained by or for the Participating Organisation which facilitates Direct Market Access.

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BURSA MALAYSIA SECURITIES BERHAD

DIRECT MARKET ACCESS HANDBOOK

VERSION 1.01
DATED 17TH DECEMBER 2009

Document Revision

Version	Author	Description of Change	Effective Date
1.00	Infrastructure Planning	• Published to the Industry on 6th Nov. 2009	9th November 2009
1.01	Infrastructure Planning	• Explanation on Section C – 4.7, 4.8 and 4.9 • Incorporate Section B – 3, 3.1 and 3.2	17th December 2009

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BACKGROUND

The introduction of Direct Market Access ("DMA") by Bursa Malaysia Securities Bhd ("Bursa Securities") will enable direct electronic access by clients to Bursa Trade, which is the Bursa Securities' Automated Trading System. Connectivity to Bursa Trade via Open Application Programming Interface ("API") will provide users with flexibility and choice of front-end systems and interface solutions.

The DMA regulatory framework encompasses the Rules of Bursa Securities, the DMA Operations Directive and the Participating Organisation Information Technology Security Code ("PO IT Security Code" G 240 of 1999, 17.03.1999).

KEY OBJECTIVES

Bursa Securities is issuing herein the "Direct Market Access Handbook" ("DMA Handbook") with the following objectives:

1. To highlight key obligations of Participating Organisations ("POs") under the Rules and Operations Directive in relation to DMA.

2. To provide guidance to POs in respect of practices recommended to be observed in relation to the discharge of their obligations under some of the Rules and the Operations Directive. Whilst not mandatory, these recommended practices are instructive of the minimum standards required to be observed by POs, which may adopt additional controls as deemed fit in relation to their DMA business.

3. To provide crucial information about the Bursa Securities DMA architecture, the technical and connectivity requirements.

4. To provide other relevant information, namely :-

   (a) the DMA Directory ;
   (b) the various application forms ; and
   (c) terms and conditions for Independent Software Vendors ("ISVs").

DEFINITIONS

Unless otherwise stated, words or expressions defined in the Rules of Bursa Securities and/or the DMA Operations Directive shall when used in the DMA Handbook, carry the same definition.

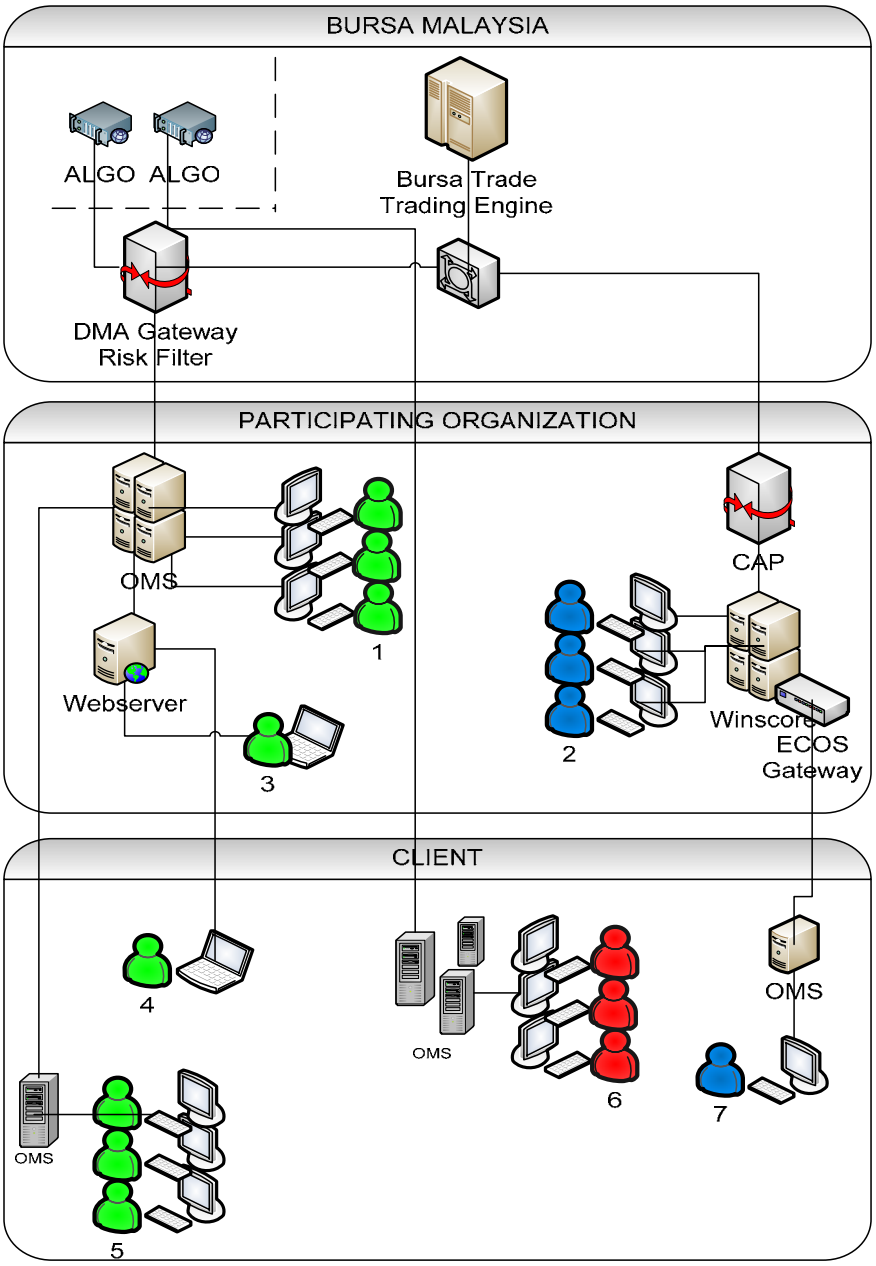
"Direct Market Access" or "DMA"	Rule 101.1(1) defines DMA as the process by which orders to buy or sell contracts including any modifications and cancellations thereof are submitted into a DMA Infrastructure for execution in the ATS by

	persons referred to in Rule 701A without any intervention by a Dealer Representative or being entered or re-entered by a Dealer Representative.
"DMA Participant"	POs offering DMA.
"DMA Client"	Clients accessing Bursa Trade via DMA.

SECTION A: OVERVIEW OF THE BURSA SECURITIES DMA ARCHITECTURE

1. Bursa Securities DMA Technical Architecture

1.1. Description of Technical Architecture

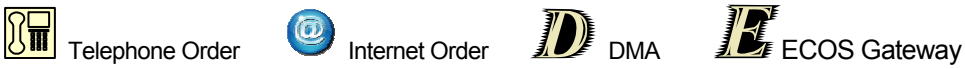


1.2. DMA Participants Technical Architecture Options

With reference to the illustration of the DMA technical architecture in Section A.1.1 above, the DMA technical architecture options available to DMA Participants are summarized as follows:

Architecture Option Code	Order Entry	User Ref.	Activity*	Description
1. Blue	DRs, Electronic Trading Client	2,7		Winscore infrastructure. Order Entry by Dealer's Representatives ("DRs") and some clients using ECOS Gateway
2. Green	DRs/ DMA Client	1, 3, 4, 5		• DMA infrastructure at the DMA Participant's premises, connected to DMAG. • The hosting of a Web server by the DMA Participant enables internet trading.
3. Red	DMA Client	6		• Bursa Hosted DMA Gateway infrastructure only. • Does not facilitate internet trading because there are no Web servers hosted by DMA Participant.

* Key to Table above:



2. General Description of Provision of DMA by POs

Rule 701A.2 (1) highlights that in order to offer DMA, PO has to ensure its DMA is effected through a DMA Infrastructure which complies with the terms stipulated by Bursa Securities and to be provided to DMA Clients and persons who has knowledge of the process for the submission of orders through the DMA Infrastructure, Laws and Rules in relation to trading on the Equities Market as outlined in Section C.1.1.1 and Section C1.3.

Rule 701A.2 (2) further provides that all requirements in the Rules of Bursa Securities shall remain applicable. DMA must only be made available for execution of market transactions and not Direct Business Transactions under Rule 701A.2 (3).

3. DMA Infrastructure[1] Options

Based on the Bursa Securities DMA Infrastructure Options outlined in Section A.1.2 above, the DMA Participant may choose from any of the following solutions to offer connectivity by DMA Client's Access Device (front-end access solutions).

3.1. Proprietary DMA Infrastructure Solution

DMA Participants may develop their own proprietary DMA Infrastructure for their DMA clients, subject to obtaining the necessary approval from Bursa Securities.

The DMA Participant is required to also obtain approval from Bursa Securities when changes are made to its proprietary DMA Infrastructure. This solution requires the DMA Participant to host a DMA Order Management System ("OMS") server.

This option will be utilising the Technical Architecture Option No.2 set out in Section A.1.2 above.

3.2. Third Party Software

[1] In the Rules of Bursa Securities, the term "DMA Infrastructure" is defined as the infrastructure established and/or maintained by or for the PO which facilitates DMA.

The Operations Directives defines DMA Infrastructure as the infrastructure which facilitates DMA and shall comprise all components, both substance and form, which are governed by the provisions established herein. The connectivity envisaged between Users and the ATS via the DMA Infrastructure is described below:

User ⇄ Access Device ⇄ DMA Infrastructure ⇄ ATS

DMA Participants may also choose to use Third Party Software from Approved DMA ISVs. The list of Approved ISVs is available on Bursa Malaysia's website. This solution requires the DMA Participant to host a DMA Infrastructure server. The requirements for ISVs are set out in the "*Guidelines on Certification for Independent Software Vendors (ISVs)"* set out in Section D.

This option will be utilising the Technical Architecture Option No.2 set out in Section A.1.2 above.

3.3. Bursa Malaysia Hosted DMA Gateway ("Gateway")

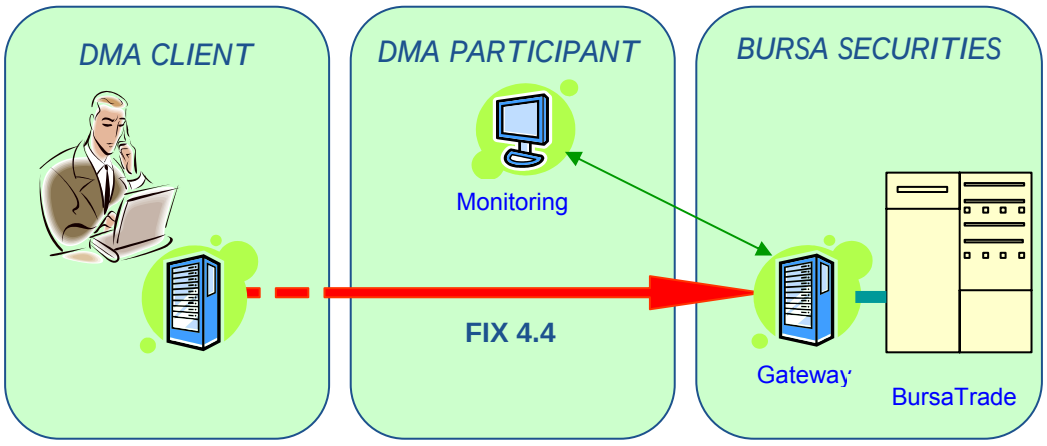
DMA Participants may choose to connect to the Gateway, which has the following features:

3.3.1 DMA Client is connected directly to the Exchange DMA Server located physically next to the Bursa Trade matching engine at the Exchange.

3.3.2 Each DMA Participant has a risk monitoring screen remotely connected to the Gateway.

3.3.3 The Gateway caters to DMA Participants focusing on offering FIX 4.4 access points to their DMA Clients and Algorithmic Trading. However, it is possible to use the Gateway to offer Proprietary DMA front-end solutions and web interface.

3.3.4 The architecture of the Gateway is illustrated below:



3.3.5 In the instance where the DMA Participant uses the Gateway as the only means of offering DMA Infrastructure to their DMA Clients, this

option will be utilising the Technical Architecture Option No.3 set out in Section A.1.2 above.

3.3.6 In the instance where the DMA Participant uses the Gateway as well as hosting additional OMS and/or Web servers, it will be utilising the Technical Architecture Option No.2 set out in Section A.1.2 above. The OMS server hosted at the DMA Participant's premises may support internally developed Proprietary DMA Infrastructure Solution or Third Party Software.

3.4. Approval of DMA Infrastructure

Rule 701A.3 (2) requires the DMA Participant to obtain the approval of Bursa Securities prior to the establishment or before effecting any changes to the DMA Participant's DMA Infrastructure. Rule 701A.3 (3) further provides that DMA Participants must provide written confirmation that the DMA Infrastructure and all the requirements in relation to the functionalities, connectivity, operation and security requirement of the DMA Infrastructure comply with the Rules at least two (2) market days prior to the commencement of the operation of the DMA Infrastructure or before effecting any changes to the DMA Participant's DMA Infrastructure. It is thus inevitable that the DMA Participant must assume full responsibility for the use of its DMA Infrastructure under Rule 701A.3 (5)

Please refer to Section 5 of the DMA Operations Directive for details on application procedures.

4. Access by DMA Clients

Bursa Trade can be accessed directly via POs that are DMA Participants and DMA Clients are given the flexibility to select from a number of front-end access solutions from Approved DMA ISVs. The lists of DMA Participants and Approved DMA ISVs, which may be reviewed by Bursa Securities from time to time, can be found on Bursa Malaysia's website[2].

[2] http://www.bursamalaysia.com/website/bm/trading/DMA/

SECTION B: GUIDELINES ON TECHNICAL AND CONNECTIVITY REQUIREMENTS

1. General Description of Connectivity Requirements

Sections B.1, B.2 and B.3 are only applicable to the DMA Participant that hosts its own OMS and/or Web server (either Technical Architecture Options No.1, 3 4 and 5).

2. Bursa Trade Access via FIX 4.4

The DMA Participant's own OMS must connect the Bursa DMAG, which is the Bursa Trade access point using the protocol FIX 4.4.

2.1. Documentation

The FIX protocol documentation can be requested by emailing us at DMA@bursamalaysia.com

3. Information Required for Production Access

The DMA Participant requires the relevant information from Bursa before going live with DMA Equities.

3.1. Branch Code

Trading via DMA Equities require new branch setting to identify the orders by your back office. DMA Participants need not do any configuration with this new branch code for the OMS connected to the Bursa DMAG. The new branch code can be requested by submitting an official request letter indicating the broker type name as "DMAE" with branch address, telephone number and fax number.

Please address the request letter to:-

Head, Participants Affairs
Participants Supervision Division
Regulation
Bursa Malaysia Berhad
12th Floor, Exchange Square
Bukit Kewangan
50200 Kuala Lumpur

3.2. Terminal ID and System Access ID and Password

The DMA Participant's own OMS connecting to the Bursa DMAG requires new Terminal ID, FIX Connection and Web Access IDs and passwords. Refer to Section E for the request for this information.

4. Network Connectivity Requirements

4.1. Requirements for DMA Participants

4.1.1 DMA Participants must use a lease line to gain access to Bursa Trade's production environment.

4.1.2 DMA Participants must use an ISDN line and set up the ISDN router to gain access to the Bursa Trade DMA testing environment.

4.1.3 The ISDN router is recommended to have the following configuration:

NO.	PRODUCT CODE	DESCRIPTION
	Router & Module	
1.	CISCO 1721, or CISCO 1841	Modular Router w/1xFE, 2 WAN slots, 16 FL/64 DR, or Modular Router w/2xFE, 2 WAN slots, 32 FL/128 DR
2.	CAB-ACU	Power Cord UK
3.	WIC-1B-S/T	Port ISDN WAN Interface Card (dial and leased line) **Note: If 1800 series router is used, the product code of this module is "WIC-1B-S/T-V3".
	Cables	
4.	UTP CABLE	UTP Cable, 10 feet (**x 2)
	Optional item	
5.	Switch/hub	Switch/hub to connect the router & application server. **Note: The UTP crossover cable can be used to connect the ISDN router & application server. This will not require to have switch/hub installed.

4.1.4 Section 4.1 of the DMA Operations Directive requires all physical and logical connections between the ESZ[3] and the POSZ[4] to be solely performed by the Exchange or its appointed vendors/representatives.

[3] ESZ refers to the Exchange's Secured Zone where the Exchange's IT Infrastructure resides. The Automated Trading System (Bursa Trade) shall be deemed to reside within the ESZ.

[4] POSZ refers to the PO's Secured Zone. The POSZ shall be the designated zone where the PO's physical and logical infrastructure resides for the purpose of connecting with the ESZ.

4.2. Requirements for DMA Clients

4.2.1 DMA Clients may use leased lines, private network or solutions offered by connectivity vendors to connect to the DMA Participant's DMA Infrastructure. The minimum bandwidth requirement for connectivity by DMA Clients is 64 kbps. DMA Participants should recommend the appropriate bandwidth to be met by their DMA Clients with regard to the trading activity undertaken.

5. Compliance with the IT Security Standards

In setting up its DMA Infrastructure, and overseeing the connectivity of its DMA Clients to its DMA Infrastructure, the DMA Participant must comply with the PO IT Security Code. Detailed IT Security Procedures must be implemented to achieve the standards in the PO IT Security Code, and it is the responsibility of the DMA Participant to develop and document procedures in line with their operations, including those relating to their DMA Infrastructure.

6. DMA Testing Information and Requirements

6.1. Technical and Connectivity Requirements for Testing

6.1.1 DMA Participants may opt for either the CISCO 1721 or CISCO 1841 model. Please note that CISCO has announced the end of life for the CISCO 1721 model but will continue to support it. Bursa recommends DMA testing participant to opt for CISCO 1841 if it is a new procurement.

6.1.2 The IP address information and the sample configuration of ISDN router will be provided later and the ISDN dial-up speed will be limited to 128Kbps if it is equipped with one unit of 'WIC-1B-S/T-V3' module and one ISDN line.

6.2. Testing Facilities

6.2.1 The testing platform will be made available from 9:00 am to 5:00 pm Malaysian time, Mondays to Fridays (Bursa Malaysia working days only). From time to time, Bursa Securities may have to interrupt testing during the day for maintenance. In the event of such a need, all test users will be duly informed.

6.3. Testing on DMA Participant's Infrastructure (Non-Gateway)

6.3.1 DMA Participants

The DMA Participant and the ISV (if any) should ensure that testing is done for each message and possible values on the different fields contained in the FIX 4.4 Message Specifications.

6.3.2 DMA Clients

For DMA Clients testing on a DMA Participant's Infrastructure, other than the Gateway, the DMA Participant and the ISV (if any) should ensure that testing is done for each message and possible values on the different fields contained in the FIX 4.4 Specifications.

6.4. DMA Clients Testing on the Gateway

Procedures and Forms relating to DMA Clients' testing on the Gateway are set out in the following appendices:

- Appendix A: Bursa DMA Gateway – Testing and Creation of ID
- Appendix B: GL TRADE DMA Gateway – Testing and Creation of ID

6.5. DMA Clients Testing on DMA Participant's Infrastructure

For DMA Clients testing on a DMA Participant's Infrastructure, other than the Gateway, the DMA Participant and the ISV (if any) should ensure that testing is done for each message and possible values on the different fields contained in the Private Messages (SLE) Specifications.

6.6. DMA Testing Results

Further to the conduct of DMA Testing, the DMA Participant should be assured of the following:

- That the DMA Client has conducted the testing properly; and
- That it is satisfied that the system connectivity of the DMA Client to the DMA Infrastructure will not have any impact on the integrity and efficiency of Bursa Securities' trading facilities.

SECTION C: GUIDELINE ON RISK MANAGEMENT REQUIREMENTS

1. Conditions for Connectivity of DMA Clients

1.1. Clients' knowledge of the process for the submission of orders through the DMA Infrastructure, Laws and Rules in relation to Trading on the Malaysian Securities Market

1.1.1 Rule 701A.4 (1) provides that DMA Participants shall take reasonable steps to ensure that a DMA Client and persons authorised by the DMA Client have :

- knowledge of the process of entering DMA orders through the DMA Infrastructure;
- knowledge of the requirements in the Rules in relation to trading on the market; and
- knowledge of the relevant laws pertaining to trading on the Market

1.1.2 For the purpose of discharging its obligations under Rule 701A.4 (1), we recommend DMA Participants to have procedures in place to ensure that the DMA Client demonstrates that it has knowledge of the matters set out in Rule 701A.4 (1) (refer to Section C.1.1.1 above). For example, the level of knowledge of DMA Clients can be assessed by asking relevant questions on the matters set out in Rule 701A.4 (1). The DMA Participant should also implement review procedures, such as discussions with DMA Clients and updates, to ensure that the DMA Client's required level of knowledge remains satisfactory.

In this respect, we recommend that the DMA Participant should provide its DMA Clients with information, guidance and training[5] on the following areas:

- Bursa Trade features and functionalities i.e. trading phases, market timing, matching mechanism, order types, execution conditions and instrument state[6];
- Contract specifications of products listed on Bursa Securities; and

[5] The requirements for the DMA Participant to train the DMA Client in the requirements of the Exchange Rules in relation to the entry of orders and trading and other applicable requirements, and to ensure that revisions and updates to the Laws, Exchange Rules are promptly communicated to the DMA Client should be incorporated in the Agreement between DMA Participant and DMA Client. Refer Section C.1.3.1 on Recommended Terms of Agreement.

[6] Refer to the "Participating Organisation's Manual" in Bursa Malaysia's website at http://www.bursamalaysia.com/website/bm/regulation/rules/bursa_rules/downloads/bm_cir_rr10_121108.pdf under R/R 10 of 2008.

- Prohibited trading practices and trading offences.

1.1.3 In relation to DMA Clients accessing Bursa Trade via Internet (refer to Section C.1.2.2 below), a DMA Participant may rely on a confirmation from the DMA Client that the Client and the persons authorised by the Client have knowledge of the matters set out in Rule 701A.4 (1).

1.2. DMA Client – Criteria and Requirements

The DMA regulatory framework encompasses the Rules of Bursa Securities and the DMA Operations Directive, and regulates all forms of access to Bursa Trade where there is no intervention by a PO. This includes direct connectivity to the DMA Participant's OMS Server or the Gateway to facilitate order routing and algorithmic trading by buy-side institutions (sometimes referred to as "direct access"), and internet trading to facilitate retail participation in the equities market.

1.2.1 DMA Clients Accessing Bursa Trade via an Access Device connected to a DMA Participant's OMS Server or Gateway

The DMA Participant should limit access to Bursa Trade via an Access Device connected to a DMA Participant's OMS server or the Gateway, to DMA Clients which are subjected to Client Due Diligence ("CDD").

There are two (2) types of CDD – simplified and enhanced. Clients of regulated nature of business may be subjected to simplified CDD whilst Clients of unregulated nature of business may be allowed to connect "directly" to the DMA Participant's OMS server or Gateway only if enhanced CDD measures (refer Section C.1.2.3 below) and careful consideration of the client risk profile have been carried out.

1.2.2 DMA Clients Accessing Bursa Trade via Internet

Bursa Securities envisages that Clients that access the market via internet ("Internet Clients") will comprise primarily retail clients and should be subject to enhanced CDD measures (refer Section C.1.2.3 below), unless there are special mitigating circumstances e.g. where reliable information on the Client can be obtained publicly, or where the Client has a good track record.

Internet Clients must be connected via an additional Web server, which is connected to an OMS server or Gateway. The Web server may contain enhanced security features and added risk management controls/filters.

1.2.3 DMA Client Due Diligence – Know Your Client ("KYC") Requirements

Rule 404.4 (1) requires a PO to exercise due diligence in learning the essential facts as to the Client and its or his investment objectives and financial situation prior to the commencement of trading. The requirements to monitor and report suspicious transactions are also set out under the Anti-Money Laundering Act 2001 [7] and the Guidelines on Prevention of Money Laundering and Terrorism Financing for Capital Market Intermediaries[8] issued by the Securities Commission. In this respect, the DMA Participant must ensure that all reasonable steps are taken to ensure adherence to these KYC requirements.

We recommend that all reasonable steps should be taken to accurately establish the DMA Client's business and financial background, and its' investment objectives. The DMA Participant should be assured of the financial probity of the DMA Client and that it has sufficient financial resources to meet its obligations.

Enhanced CDD should be undertaken for clients with higher risk profiles, whilst simplified CDD may be conducted for clients with lower risk profiles e.g. regulated entities. The KYC measures undertaken in relation to eligibility requirements for DMA Clients should be reviewed regularly, at least on an annual basis. Suggested and recommended data to be obtained for simplified or enhanced CDD are as follows:

Client Type	Simplified CDD	Enhanced CDD
Individual	• IC or passport • Address – residential and permanent address, if different	• IC or passport • Address – residential and permanent address, if different • Occupation • Latest 3 months' payslip or latest income tax statement or bank statement

[7] http://www.parlimen.gov.my/actindexbi/pdf/ACT-613.pdf

[8] Revised edition issued in January 2007 http://www.sc.com.my/eng/html/resources/guidelines/2007%20AMLA-GL%20Final_1.pdf

Client Type	Simplified CDD	Enhanced CDD
Corporation	• Certification of Incorporation • Memorandum & Articles of Association • Board Resolution on opening of account • Specimen signature of authorised signatories	• Certification of Incorporation • Memorandum & Articles of Association • Board Resolution on opening of account • Specimen signature of authorised signatories • Information on the nature of business and its corporate structure • Latest audited financial statement and/or management financial statements • Latest 3 month bank statement • Power of Attorney (if applicable)

In carrying out the above, the PO should exercise due diligence and be aware of any suspicious client behaviour(s) that warrant further enquiry or probe (herein referred to as "Red Flag"). Some of the situations of Red Flag are as follows:-

- a series of transactions or activities which are senseless or irrational in nature (e.g. constantly buying and selling securities at a loss)
- the client requests to pay third parties or receives funding from third parties
- the client is reluctant to co-operate in verifying his/her identity
- the client frequently makes last minute changes to payment instructions
- orders are received from persons other than the account holder.

POs should properly monitor other doubtful circumstances where clients' accounts may be subjected to abuse, including but not limited to cases where a few clients' accounts carry identical correspondence addresses.

Any unexplained information should always be investigated.

Assessments of the expected pattern of the activity of the client on a continuous basis throughout the business relationship with the client should also be considered.

1.2.4 Record of DMA Clients

Refer to Rule 404.4(2).

1.3. Agreement between DMA Participant and DMA Client

Rule 701A.5 (1) stipulates that DMA Participants is deemed to be the principal in relation to all trades effected through DMA and the Exchange will not recognise the interest of any third party and that all DMA Orders are deemed as orders submitted for execution in the ATS by a Dealer's Representative on behalf of a client.

Rule 701A.4 (2) requires the DMA Participant to execute a written agreement with DMA Clients to address the following areas:

- The duties, obligations and rights of the DMA Participant and its Clients in relation to DMA; and
- The Clients' compliance with the Rules.

1.3.1 Recommended Terms of Agreement

The following terms are recommended to be incorporated in the written agreement between the DMA Participant and the DMA Client to ensure that crucial provisions are agreed to prior to trading, to mitigate disputes, and to empower DMA Participants to take immediate preventive and corrective measures with respect to fair and orderly trading.

- The DMA Client shall enter orders and trade in compliance with the Rules of the Exchange and other applicable regulatory requirements;
- Specific parameters defining the orders that may be entered by the DMA Client are stated, including restriction to specific instruments or size of orders, and the DMA Participant shall have the right to reject orders that do not fall within the designated parameters of authorised orders;
- The DMA Participant has the right to reject an order for any reason;
- The DMA Participant has the right to change or remove an order in the Order Book and has the right to cancel any trade by the DMA Client for any reason;
- The DMA Participant has the right to discontinue accepting orders from the DMA Client at any time without notice;

- The DMA Participant agrees to train the DMA Client in the requirements of the Exchange Rules in relation to the entry and trading of orders and other applicable requirements;
- The DMA Participant agrees to ensure that revisions and updates to Laws and Rules are promptly communicated to the DMA Client.

2. System Security and Access Controls

2.1. DMA Infrastructure Users & Administrators

The DMA Participant must ensure security of access to the DMA Infrastructure at all times to ensure that unauthorised persons are denied access to the DMA Infrastructure. Please refer to:

- Section 3.1 of the DMA Operations Directive for the requirements in relation to the Users and Administrators of the DMA Infrastructure
- The PO IT Security Code – Baseline Procedures for ITSS 3: Logical Access Controls.

3. DMA Participant Internal Control Requirements

The DMA Participant shall have written policies and procedures and comply with the following internal control requirements in relation to the provision of connectivity of its DMA Infrastructure to DMA Clients.

3.1. Internal Controls: Areas of Focus for DMA Participants

Whilst the fundamental requirements of effective internal control as set out in the "Compliance Guidelines for Equities Brokers" ("Compliance Guidelines") (**dated 23.07.1998 and the implementation date was 1.10.98)** remain relevant for all POs regardless of the medium of communication or delivery, there are a few critical internal control areas in relation to DMA trading that the DMA Participant should focus on:

3.1.1 Segregation of Duties

It is stated in the Compliance Guidelines that there must be strict separation between the credit control function, and the trading, dealing and marketing functions to ensure independence, and mitigate the risk and consequences of conflicts of interests.

It is recommended for DMA Participants to segregate the DMA direct execution desk from other Agency desks to ensure confidentiality of

DMA Client Orders. Anonymity, along with increased control and speed of execution are the key benefits of trading via DMA, and the DMA Participant should endeavour to maximise these features.

3.1.2 Credit Controls

It is stated in the Compliance Guidelines that POs must ensure that suitable credit limits are set for their clients. It is recommended that the CDD assessment of DMA Client's financial probity must be decided independently of the trading, dealing or marketing functions.

We recommend for DMA Participants to consider enforcing stricter credit control for clients requiring enhanced CDD requirements, especially in relation to overseas accounts. These may include the collection of deposits and/or collateral as guarantee of performance, restriction on total open positions.

It is recommended that credit limits and any subsequent variation of credit limits are authorised by a senior management officer of the DMA Participant who is independent of trading, dealing and marketing functions, and is not associated with the DMA Client in question.

It is stated in the Compliance Guidelines that POs must ensure that proper systems and control procedures are implemented to ensure that their clients do not trade beyond the credit limits imposed. Further, the Operations Directive states that risk filters (automated pre-execution checks) must be undertaken for all DMA Clients' orders. The risk filters are covered in greater detail under Section C.3.2 below.

3.1.3 Post-Trade Review

DMA Participants should also ensure that proper and adequate post trade risk management monitoring systems and procedures are set in place to monitor risk exposure of DMA Clients' trades with respect to daily net cash position, daily maximum total capital engaged, etc. DMA Participants should ensure that account activity is monitored at least on a daily basis.

3.2. Risk Filters

Section 3.2.1 of the DMA Operations Directive requires DMA Participants to define, install and document a set of filters and/or checkpoints with pre-defined criteria and values responsible for the Validation[9] of each and every Order.

[9] The DMA Operations Directive defines Validation as "means the act of assessing a DMA Order, manually, automated or otherwise, against risk filter(s) assigned with pre-defined criteria and values for purposes, including but not limited to, managing the risks associated with each DMA Order prior to Order Entry".

Filter and filter parameters provide the principal means in the validation of each Order to ensure compliance with Rules in relation to trading on the market. Filters are intended to establish points at which Orders are tested and passed to the market only when pre-set conditions are met.

3.2.1 Mandatory Risk Filters

DMA Participants must install the filters set out in Section 3.2.2 of the Operations Directive and as stated below. Examples of how risk filters are calculated are set out in Section C.4.

Type of Filter	Filter Name	Requirement
Cash Position	Daily Net Cash Position	Either one is mandatory
	Daily MAX Total Capital Engaged	
Order	Max Capital Engaged per Order	Mandatory
Manipulation	% Far from Market Spread	Either one is mandatory
	% Far from Last Traded Price	
	Small Order Quantity far from Last Traded Price	Optional
Authorization	Market Type Authorization	All are mandatory
	Instrument Type Authorization	
	Order Technical Origin Authorization	

3.2.2 Filter Parameters

Filter parameters are variables within filters that can be changed to modify the effectiveness of the filters without changing the nature of the rule to which the filter applies. Any changes, including intra-day changes to filter parameters must be controlled, monitored, authorized and recorded properly.

3.2.3 Section 3.2.4 of the Operations Directive requires the tracking and utilisation of the filters established for the purpose of Validation to be updated on real-time on-line basis.

3.2.4 In the event that an order is rejected by a risk filter, it is recommended that both the DMA Client and the Dealer's Representative ("DR") should each receive a rejection notice. The DR will normally contact the DMA Client to assess how to handle the rejection. Any actions taken to manage an exception must be in accordance with the DMA Participant's internal control policies and procedures, and logged and appropriately

documented. Refer Section C. 3.4 below on "Error and/or Exception Handling".

3.3. Maintenance of DMA Infrastructure Activity Log

Section 3.4 of the DMA Operations Directive requires DMA Participants to establish and maintain a DMA Infrastructure activity log ("Log") to record all the events/activities/processes of all Users and Administrators, encompassing the full order flow. Access to the Log shall be restricted to Administrators and any other authorised person/(s) as may be designated by the DMA Participant. Any work carried out on this Log shall be recorded with full details. The date and time references in the Log shall be that of the ATS. In relation to the above directive, the following applies :-

3.3.1 Minimum Details to be Recorded in the Log

Refer to Section 3.4.3 of the DMA Operations Directive.

3.3.2 Recommended Practices in Storage of DMA Log and Records

The DMA Participant should ensure that DMA records can be easily retrievable by authorised personnel, stored securely and that proper back-up controls are kept. The DMA Participant must be able to produce a complete audit trail of transactions, from receipt of an order to its settlement upon request by the Exchange.

The DMA Participant should also ensure that appropriate backup of DMA records are kept with reference to recommendations of PO IT Security Code – Baseline Procedures for ITSS 6: Computer Operations, Section 6.4 "Backup Storage Media Protection".

3.4. Error and/or Exception Handling

Refer to Section 3.5 of the DMA Operations Directive for the requirements on error and/or exception handling. We recommend that any errors, rejections and exceptions be monitored and investigated/resolved on a daily basis, and a review of the actions taken in relation to errors and/or exceptions should be undertaken by the Compliance Officer on a regular basis.

4. Examples of How Risk Filters Are Calculated

4.1. Daily Net Cash Position

The DMA Participant ABC initializes the DNCP for the Client XYZ before the start of Trading Day [Tues, Dec 16, 2008]

Order Entry & Execution

Order	Price	Qt	Side	New DNCP	Event
				MYR 1,000.000	
1	MYR 10.000	10	Buy	MYR 900.000	Order Entry
1	MYR 10.000	10	Buy	unchanged	Order Exec
2	MYR 12.000	5	Sell	unchanged	Order Entry
3	MYR 14.000	5	Sell	unchanged	Order Entry
2	MYR 12.000	5	Sell	MYR 960.000	Order Exec
3	MYR 14.000	3	Sell	MYR 1,002.000	Order Exec
4	USD 2.00	10	Buy	MYR 930.751	Order Entry

Order Modification & Matching @ book price

5	MYR 10.000	10	Buy	MYR 830.751	Order Entry
5	MYR 11.000	10	Buy	MYR 820.751	Order Modif
5	MYR 10.500	10	Buy	MYR 825.751	Order Exec

Partial Matching & Order Cancellation

6	MYR 5.000	20	Buy	MYR 725.751	Order Entry
6	MYR 5.000	5	Buy	MYR 725.751	Part Exec.
6	MYR 5.000	15	Buy	MYR 800.751	Order Cancel

4.2. Daily MAX Total Capital Engaged

Examples: The DMA Participant ABC initializes the DMTCE for the Client XYZ before the start of Trading Day [Tues, Dec 16, 2008] based on his MYR 1,000 Cash + 30% of his collaterals (MYR 1,500 Equities marked to market).
Equities: MYR 1,500 / Warrant: MYR 900

Instrument	Order	Price	Qt	Side	Client Pos/DMTCE	Event	Instr. Type
					MYR 0 / MYR1,500		
Bursa	1	MYR 10.000	10	Buy	MYR 100.000	Order Entry	Share
TM	2	MYR 15.000	20	Buy	MYR 400.000	Order Entry	Share
Bursa Warrant	3	MYR 1.000	1000	Buy	**REJECTED**	Order Entry	Warrant
Bursa Warrant	4	MYR 1.000	500	Buy	MYR 500.000	Order Entry	Warrant
Tenaga	5	MYR 6.500	150	Buy	MYR 1,375.000	Order Entry	Share
Bursa	6	MYR 14.000	10	Sell	unchanged	Order Entry	Share
Bursa	6	MYR 14.000	10	Sell	MYR 1,235.000	Order Exec	Share

4.3. Max Capital Engaged per Order

Examples: The DMA Participant ABC initializes the MCEO for his client MYR 200

Instrument	Order	Price	Qt	Side	Order Value	Event
Example 1					**MCEO = 200**	
Bursa	1	MYR 10.000	10	Buy	MYR 100.000	Order Entry
TM	2	MYR 15.000	20	Buy	MYR 300.000	**REJECTED**
Bursa	3	MYR 20.000	11	Sell	MYR 220.000	**REJECTED**

Example 2 **MCEO = 0.001%**

					with MYR 100,000,000	
Genting	3	MYR 27.000	5000	Buy	MYR 135,000.000	**REJECTED**

4.4. % Far from Market Spread

Examples: The DMA Participant ABC set the FMS for the Client XYZ to 15% for the groups 01, 02 and 03. All the other groups are set to 20%.

Bursa	**Bid**	5.35
	Ask	5.45

Genting	**Bid**	20
	Ask	21

Instrument	**Grp**	**Order**	**Price**	**Qt**	**Side**	**FMS Check**	**Accepted?**
Bursa	01	1	MYR 5.400	10	Buy	Price ?>Ask+15%	OK
Bursa	01	2	MYR 5.450	10	Buy	Price ?>Ask+15%	OK
Bursa	01	3	MYR 5.700	10	Buy	Price ?>Ask+15%	OK
Bursa	01	4	MYR 6.300	5	Buy	Price ?>Ask+15%	6.30 > 6.267
Bursa	01	5	MYR 5.000	5	Sell	Price ?<Bid-15%	OK
Bursa	01	6	MYR 4.540	3	Sell	Price ?<Bid-15%	4.54 < 4.548
Genting	05	7	MYR 16.500	8	Sell	Price ?<Bid-20%	OK
Genting	05	8	MYR 15.800	3	Sell	Price ?<Bid-20%	15.80 < 16

4.5. % Far from Last Traded Price

Examples: The DMA Participant ABC set the FLTP for the Client XYZ to 15%

LTP= 5.5	Bid	Ask
	5.35	5.45

Order	Price	Qt	Side	Check	Accepted?
1	MYR 5.400	10	Buy	Price ?>LTP+15%	OK
2	MYR 5.450	10	Buy	Price ?>LTP+15%	OK
3	MYR 5.700	10	Buy	Price ?>LTP+15%	OK
4	MYR 6.300	5	Buy	Price ?>LTP+15%	OK
5	MYR 6.350	5	Buy	Price ?<LTP+15%	6.35 > 6.325
6	MYR 4.540	3	Sell	Price ?<LTP-15%	4.54 < 4.675

4.6. Small Order Quantity far from Last Traded Price

Examples: The DMA Participant ABC set the FLTP for the Client XYZ to 20% and 80 shares.

LTP= 5.5	Bid	Ask	Qt=80
	5.35	5.45	20%

Order	Price	Qt	Side	Qt triggered	Accepted?
1	MYR 7.000	100	Buy	No (100 > 80)	Not checked
2	MYR 3.000	100	Buy	No (100 > 80)	Not checked
3	MYR 7.000	80	Sell	Yes (80 = 80)	Yes
4	MYR 3.000	80	Sell	Yes (80 = 80)	No (3 < 5.5 - 20%)
5	MYR 5.900	50	Buy	Yes (50 < 80)	Yes
6	MYR 5.000	50	Sell	Yes (50 < 80)	Yes
7	MYR 7.000	10	Buy	Yes (10 < 80)	No (7 > 5.5 + 20%)
8	MYR 3.000	10	Buy	Yes (10 < 80)	Yes
9	MYR 6.100	10	Sell	Yes (10 < 80)	Yes
10	MYR 9.000	10	Sell	Yes (10 < 80)	Yes

4.7. Market Type Authorization

By default, all the market types are authorized for all “sponsored access” clients. If the DMA Participant wants to restrict the access for a given client, all the authorized market types have to be listed using this risk filter.

The market codes are the following:

N : Normal Market
B : Buying-in Market
O : Odd-lot Market

They should be listed separated by comma.
Example: N,B
In this case the client is not authorized to trade on Odd-lot.

Examples: The DMA Participant ABC authorizes the Client XYZ trade on Normal Market only "N"

	ISIN Code	Name	Market	Status
Order on	MYO1818OR---	Bursa	Odd lot	Rejected
Order on	MYI1818-----	Bursa	Buying in	Rejected
Order on	MYN1818-----	Bursa	Normal	Accepted

4.8. Instrument Type Authorization

By default, all the instrument types are authorized for all “sponsored access” clients.
If the DMA Participant wants to restrict the access for a given client, all the authorized instrument types have to be listed using this risk filter.

The instrument codes are the following:

O : Ordinary share
P : Preference
T : Property Trust
F : Close End Fund
W : Warrants/TSR
C : Call Warrants
L : Loan Stocks
N : Loan Notes
D : Debentures
B : Bonds
E : ETF

They should be listed separated by comma. Example: O,P,T,F,L,N,D,B,E
This client is not authorized to trade on Warrants and Call Warrants.

Examples: The DMA Participant ABC authorizes the Client XYZ to trade on : N, D, B, E, O, P, T, F

			Market	Status
	ISIN Code	**Name**	Odd lot	Rejected
Order on	MYN2003WB---	Kulim (M)		

4.9. Order Technical Origin Authorization

This risk filter is set by the DMA Participant according to the agreement it has with its client.
If this risk filter is not set, all the activities are authorized for a client.
This risk filter must be set correctly before authorizing a client to trade via DMA.

The activities are listed below:

A	:	Other Front-end than Winscore
R	:	RSS sell order
P	:	PDT sell order
I	:	Internet Trading
J	:	Internet Trading RSS sell order
K	:	Internet Trading PDT sell order
T	:	Algorithmic Trading
V	:	Algorithmic Trading RSS sell order
W	:	Algorithmic Trading PDT sell order
D	:	Direct Market Access – Sponsored Access
E	:	Direct Market Access – Sponsored Access – RSS sell order
F	:	Direct Market Access – Sponsored Access – PDT sell order

Notes:
a) A client should not be given P.
b) A dealer should not be given D, E, F.

If you setup D for a DMA client, he won't be able to send RSS order.

Examples: The DMA Participant ABC has a DMA Client XYZ, who is a PDT. Therefore, the authorized values are: W, F.
If the Client XYZ tries to send an order with the tag 9941 set to D, his order will be rejected.

SECTION D: GUIDELINES ON CERTIFICATION FOR INDEPENDENT SOFTWARE VENDORS (ISVs)

1. ISV Eligibility Requirements

1.1. The following ISVs may apply to become Approved Vendors:

1.1.1 ISVs who already have trading solutions implemented and running in several financial markets, with references from their clients currently using their Software Product;

1.1.2 ISVs who are able to provide customer assistance on Bursa Malaysia working days from 7:00am to 9:00pm, Malaysia time; and

1.1.3 ISVs who are not insolvent and do not have any judgment against them that remains unsatisfied or outstanding. In the event there is any litigation pending against the vendor, the vendor shall disclose to Bursa Malaysia the nature of the legal suit.

2. ISV Software Product Requirements

2.1. The Software Product must fulfil ALL the following requirements:

2.1.1 Properly receive and display all critical information about the market, particularly if a particular product or the entire market is reserved or suspended during regular market hours.

2.1.2 Handle connectivity to Bursa Malaysia and manage trading sessions in the protocols provided (MMTP or FIX 4.4). This includes proper logon, message sequencing as well as the smooth handling of disconnects and reconnects.

2.1.3 Capable of proper order entry and cancellation, as well as receipt of both order acknowledgement and fill information.

2.1.4 Be designed and developed to ensure that it does not adversely impact the Bursa Malaysia electronic markets at large. (for example, even though the system is designed to minimise such possibilities, there may exist scenarios that could flood the Bursa Malaysia network and/or processors, causing latency for other market participants)

2.1.5 Comprise features and functionalities that support compliance with Exchange Rules dealing with the entry and trading of orders as set out in the “Participating Organisation’s Manual”.

2.1.6 Be designed to accommodate new products and new initiatives developed by Bursa Malaysia (e.g., implied spread functionality, market-making).

2.1.7 Be designed to quickly and easily adapt to any configuration changes, such as changes in trading hours, matching algorithms or size of market depth, without the need to make software changes.

2.1.8 Integrate pre-trade credit check features.

2.1.9 Pass the tests specified in the test plan.

3. Approval of DMA Approved ISVs

Approval of DMA Approved ISVs shall be at the sole discretion of Bursa Malaysia. In granting such approvals, Bursa Malaysia will consider, among other factors, the fulfilment of the ISV Eligibility Requirements and the ISV Software Product Requirements. The decision of Bursa Malaysia is final and no appeal will be entertained.

All communication and queries in relation to applications to become an Approved DMA ISV, or in relation to the DMA project shall be directed to the following:

Attention to: DMA Operations Department, Bursa Malaysia

Subject: Approved ISV

Email Address: DMA@bursamalaysia.com

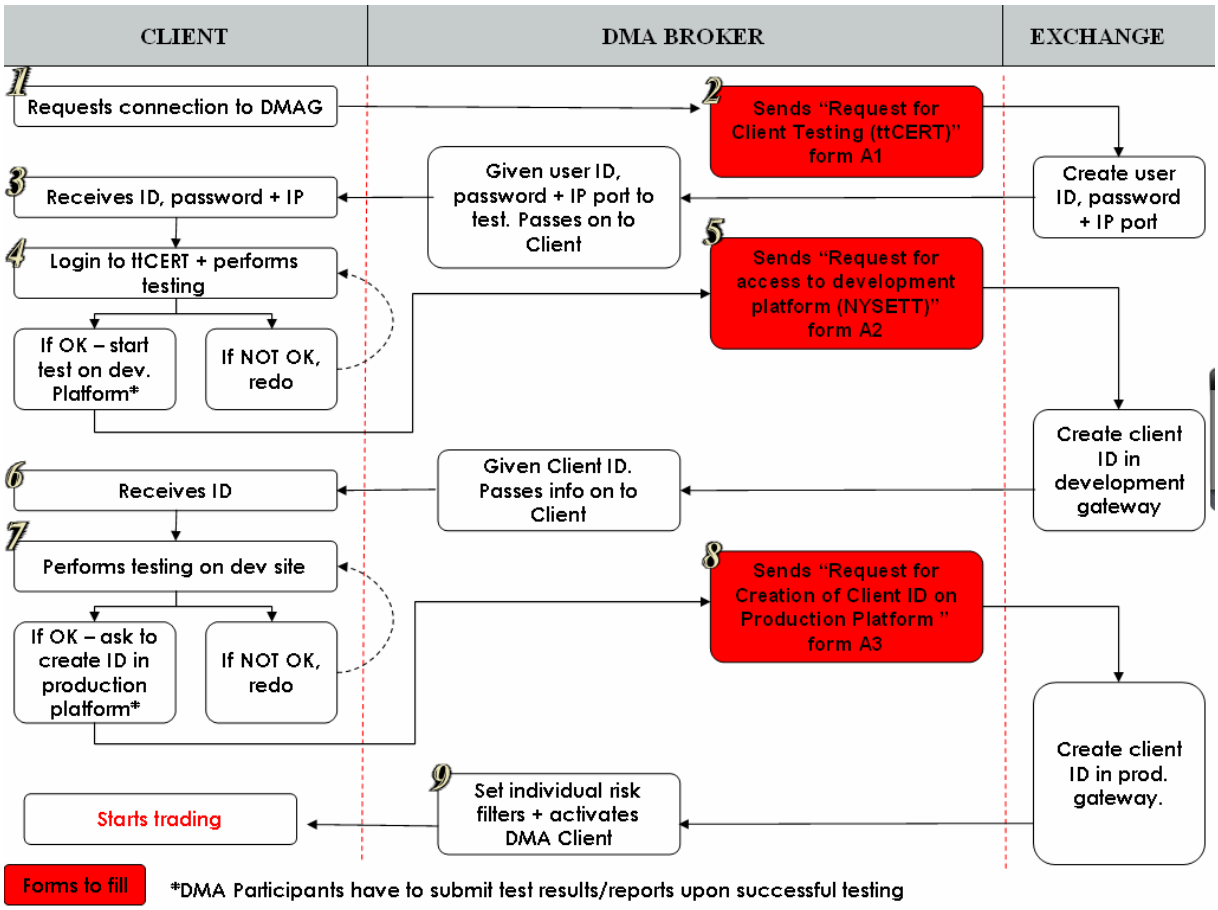
SECTION E: APPENDICES

- Appendix A: Bursa DMA Gateway – Testing & Creation of ID
- Appendix B: Creation of DMA Subscription ID
- Appendix C: Application to Become an Approved Vendor
- Appendix D: DMA Directory

APPENDIX A

BURSA DMA GATEWAY: TESTING AND CREATION OF ID

1. Description of Client Onboarding Process for Bursa DMA Gateway



2. Bursa DMA Gateway Forms to be Submitted to DMA Operations Department

- Form A1: Request for Client Testing - ttCERT
- Form A2: Request for Access to Development Platform
- Form A3: Request for Creation of Client ID on Production Platform

FORM A1 (BURSA DMA GATEWAY)

REQUEST FOR CLIENT TESTING – ttCERT

Instructions: Please fill up the form in full and return via fax/e-mail to:

Bursa Malaysia Berhad
10th Floor Exchange Square
Bukit Kewangan
50200 Kuala Lumpur
Attention: DMA Market Operations Department

Fax: +603 2070 2397 E-mail: dma@bursamalaysia.com

Name of Participating Organisation or ISV:

……

Participating Organisation or ISV DMA Contact Person (Name + Contact Details):

……

Name of DMA Client (i.e. DMA Client intending to test with ttCERT):

……

DMA Client Contact Person (Name + Contact Details):

……

Name of Person(s) Conducting Tests on ttCERT (Name + Contact Details (e-mail address required))

……

Authorised Signature +
Company Stamp of Participating Organisation/ISV

……

FORM A2 (BURSA DMA GATEWAY)

REQUEST FOR ACCESS TO DEVELOPMENT PLATFORM

Instructions: Please fill up the form in full and return via fax/e-mail to:

Bursa Malaysia Berhad
10th Floor Exchange Square
Bukit Kewangan
50200 Kuala Lumpur
Attention: DMA Market Operations Department

Fax: +603 2070 2397 E-mail: dma@bursamalaysia.com

Name of Participating Organisation:

……

Participating Organisation DMA Contact Person (Name + Contact Details):

……

Name of DMA Client (i.e. DMA Client who has already tested with ttCERT):

……

DMA Client Contact Person (Name + Contact Details):

……

This serves to confirm that the DMA Client has tested against the ttCERT site successfully. We are submitting the following for Bursa Securities' further action:

Item	**Remarks/Additional comments**
ttCERT Test scripts	
Any other documents	

We would like to request for access to the development server (Bursa DMA Securities Gateway) to conduct further testing.

Authorised Signature +
Company Stamp of Participating Organisation

……

FORM A3 (BURSA DMA GATEWAY)

REQUEST FOR CREATION OF CLIENT ID ON PRODUCTION PLATFORM

Instructions: Please fill up the form in full and return via fax/e-mail to:

Bursa Malaysia Berhad
10th Floor Exchange Square
Bukit Kewangan
50200 Kuala Lumpur
Attention: DMA Market Operations Department

Fax: +603 2070 2397 E-mail: dma@bursamalaysia.com

Name of Participating Organisation:

……

Participating Organisation DMA Contact Person (Name + Contact Details):

……

Name of DMA Client (i.e. DMA Client who has already tested with ttCERT):

……

DMA Client Contact Person (Name + Contact Details):

……

This serves to confirm that the DMA Client has tested against the ttCERT AND development sites successfully. We are submitting the following for Bursa Securities' further action:

Item	**Remarks/Additional comments**
Development site test scripts	
Any other documents	

We would like to request for the creation of a Client ID for our DMA Client on the production platform.

Authorised Signature +
Company Stamp of Participating Organisation

……

APPENDIX B

REQUEST FOR CREATION OF DMA SUBSCRIPTION ID

To:

Bursa Malaysia Berhad
10th Floor Exchange Square
Bukit Kewangan
50200 Kuala Lumpur
Attention: DMA Market Operations Department

Fax: +603 2070 2397 E-mail: dma@bursamalaysia.com

A. To be filled by Participating Organisation

Platform (please tick ✓):

☐ Bursa DMA Equities Gateway ☐ GL Trade DMA Equities Gateway

Subscriber Type (sender, receiver or both): .....

Name of Participating Organisation: ……

Participating Organisation DMA Contact Person (Name + Contact Details):

……

Signature: …… Date: ……..…….

B. To be filled by Bursa Malaysia Berhad

HUB ID created for the above-mentioned PO: ……..……...

Creation date (dd/mm/yyyy) and time (hh:mm): ……...….

Processed by: …… Signature: ……...……..

Designation: …….. Date/time: ……...…….

Checklist:
☐ Notify PO of successful creation
☐ Complete requirement list (attached)
☐ CAP subscriber within limits

Remarks: ……..
……

APPENDIX C

APPLICATION TO BECOME AN APPROVED VENDOR

To:

Bursa Malaysia Berhad
10th Floor Exchange Square
Bukit Kewangan
50200 Kuala Lumpur
Malaysia
Attention: DMA Market Operations Department

We hereby apply to become an Approved Vendor to market our Software Product for the DMA facility offered by Bursa Malaysia. We have read and understood the Terms and Conditions for DMA Approved Vendors ("Terms and Conditions") attached herein and are agreeable to be bound by the said Terms and Conditions.

The contact person that is authorised by us to receive notices is _____ and may be reached at the e-mail address _____. We agree to inform you of any change of the contact person and/or e-mail address.

Please find enclose herewith the following:

□ A profile of our company detailing the business and financial standing of the company

□ A description of the Software Product.

□ A detailed test plan to be carried out for testing connectivity and functionalities of the Software Product.

Name of company:	
Authorised signatory:	
Name:	
Designation:	
Date:	

TERMS AND CONDITIONS FOR DMA APPROVED VENDORS

1 Introduction

1.1 Bursa Malaysia Berhad ("Bursa Malaysia") will be offering a new facility which allows direct electronic access by market participants to Bursa Malaysia's new trading platform, Bursa Trade. This new facility shall be known as Direct Market Access ("DMA").

1.2 To access Bursa Trade, market participants must use software developed and marketed by vendors which have been approved by Bursa Malaysia as "Approved Vendors" for DMA (hereinafter the software to be used by market participants for DMA shall be referred to as "Software Product").

1.3 These terms and conditions shall apply to all vendors who wish to become Approved Vendors and to the Software Product marketed by them for use by market participants for DMA.

2 Eligibility

2.1 The following may apply to become Approved Vendors:

2.1.1 Vendors who already have trading solutions implemented and running in several financial markets with references from its clients currently using its Software Product.

2.1.2 Vendors who are able to provide customer assistance on Bursa Malaysia working days from 7:00am to 9:00pm, Kuala Lumpur time.

2.1.3 Vendors who are not insolvent and do not have any judgment against them that remains unsatisfied or outstanding. In the event there is any litigation pending against the vendor, the vendor shall disclose to Bursa Malaysia the nature of the legal suit.

2.2 Bursa Malaysia, at its sole discretion, reserves the right to refuse approval of any company or persons as an Approved Vendor. The decision of Bursa Malaysia is final and no appeals will be entertained.

3 Application to become an Approved Vendor

3.1 Any vendors applying to become an Approved Vendor must use the application form attached to these terms and conditions as Appendix C.

3.2 All applications must be accompanied by the following:

3.2.1 A profile of the company detailing financial standing and business of the company.

3.2.2 A description of the Software Product.

3.2.3 A detailed test plan to be carried out for the testing of connectivity and functionalities of the Software Product.

3.2.4 Vendors who are also applying to participate in the "early bird" testing programme must, in addition to the above, provide a marketing plan for their Software Product.

4 Requirements of Software Product

The Software Product must:

- Properly receive and display all critical information about the market, particularly if a particular product or the entire market is reserved or suspended during regular market hours.
- Handle connectivity to Bursa Malaysia and manage trading sessions in the protocols provided (FIX 4.4). This includes proper logon, message sequencing as well as the smooth handling of disconnects and reconnects.
- Be capable of proper order entry and cancellation, as well as receipt of both order acknowledgement and fill information.
- Be designed and developed to ensure that it does not adversely impact the Bursa Malaysia electronic markets at large. (for example, even though the system is designed to minimize any such possibility, there do exist scenarios that could flood the Bursa Malaysia network and/or processors, causing latencies for other market participants)
- Be designed to support features and functionalities critical to Bursa Malaysia's market.
- Be designed to accommodate new products and new initiatives developed by Bursa Malaysia (e.g., implied spread functionality, market-making).
- Be designed to quickly and easily adapt to any configuration changes, such as changes in trading hours, matching algorithms or size of market depth, without the need to make software changes.
- Integrate pre-trade credit check features.
- Pass the tests specified in the test plan.

5 Contact Persons

5.1 All communication in respect of the application to become an Approved Vendor or in respect of the DMA project shall be directed to the following:

Attention to: DMA Operations Department, Bursa Malaysia
Subject: Approved ISV
Email Address: DMA@bursamalaysia.com

6 Confidentiality

In these Terms and Conditions, "**Confidential Information**" refers to any and all information, in any form, that is marked confidential or where not so marked, which is by its nature confidential or not generally available to the public or which the recipient knows or ought to know is confidential. All applicants applying to become Approved Vendors shall keep any Confidential Information strictly confidential and shall not disclose the Confidential Information to any other party(s) without Bursa Malaysia's prior consent in writing. For the purposes of clarity, all activities in relation to and in connection with the development and implementation of the DMA, including testing by "early bird" Approved Vendors, prior to the official launch of DMA shall be confidential.

7 Disclaimer

7.1 Bursa Malaysia (including its related companies, directors, agents and/or employees) makes no representation and/or warranty, express or implied, in respect of, or in connection with any of the following and shall not be held liable to any person in respect of, or in connection with any of the following:

7.1.1 The selection or rejection of any Approved Vendor;

7.1.2 The marketing of any Software Product;

7.1.3 The quality of any Software Product;

7.1.4 Any direct, special, punitive, indirect or consequential damages (including loss of profits) even when notified of the possibility of such damages); and

7.1.5 Any breach of any intellectual property rights of third parties in the development, marketing and use of the Software Product.

8 Indemnity

8.1 All persons applying to become Approved Vendors and Approved Vendors shall at all times indemnify and keep Bursa Malaysia (including its related companies, directors, agents and/or employees) indemnified against any and all claims, liabilities, losses and damages howsoever caused or incurred as a consequence of or arising in any way from their participation in the DMA project or in developing, testing or marketing their Software Product.

9 Changes / Modifications to this document

9.1 Bursa Malaysia shall have the right to impose additional requirements or to vary or modify any terms and conditions herein contained, as it deems fit.

10 Governing law

10.1 The terms and conditions set out in this document shall be governed by and construed in accordance with the laws of Malaysia.

APPENDIX D

DMA DIRECTORY

1. Bursa Malaysia DMA Market Operations

Correspondence Address:

DMA Market Operations
Exchange Operations
Bursa Malaysia Berhad
10th Floor, Exchange Square
Bukit Kewangan
50200 Kuala Lumpur, Malaysia

Telephone Number:

+603 2034 7226 / +603 2034 7283

Facsimile Number:

+603 2070 2397

Instant Messaging:

DMA Gateway Control Center: skype DMA.BursaMalaysia

General Enquiries:

General enquiries and request for information about DMA should be addressed to the following email DMA@BursaMalaysia.com

2. Approved DMA ISV

The list of DMA ISVs can be found at www.bursamalaysia.com

3. DMA Participants

The list of DMA Participants can be found at www.bursamalaysia.com