



**INTELLECT OneMARKETS  
ORDER MANAGEMENT SYSTEM ON CLOUD –  
CHITTAGONG STOCK EXCHANGE MEMBERS**



## ABOUT INTELLECT

Intellect Design Arena Ltd, a specialist in applying true Digital Technologies, is the world's first full spectrum Banking and Insurance technology products company, across global consumer banking (iGCB), Central Banking, Global Transaction Banking (iGTB), Risk, Treasury and Markets (iRTM), and Insurance (Intellect SEEC). With over 25 years of deep domain expertise, Intellect is the brand, progressive financial institutions rely on for digital transformation initiatives.

iRTM comprises of three comprehensive solutions catering to the needs of financial institutions in Treasury, Liquidity Risk and Capital Markets domains. iRTM solutions are designed to deliver extreme performance, ensure regulatory compliance and provide an unmatched customer experience.

Intellect OneMARKETS offers a robust, scalable and comprehensive 360-degree digital platform that supports straight-through processing, direct market access and high speed execution across a variety of asset classes and market segments with seamless interfaces to local and international market infrastructure providers like exchanges, central counter-parties, custodians and central securities depositories. It minimizes pre-trade and post-trade operational risks and enables upwards of 15% operational efficiency by digitizing asset servicing functions across front, middle and back offices.

## ABOUT CHITTAGONG STOCK EXCHANGE

The Chittagong Stock Exchange is a stock exchange based in the port city of Chittagong, Bangladesh. It is one of the twin financial hubs of the country, alongside the Dhaka Stock Exchange. It has a combined market capitalization of US \$30 billion as of 2013.

The Chittagong Stock Exchange is responsible for:

- Listing of securities and ensuring compliance by the issuers
- Enabling Trading provisions for listed securities through an efficient trading platform
- Providing its traders with Over the Counter (OTC) and Internet based trading facilities
- Regular Monitoring and Compliance Inspection of trading operations
- Clearing and Settlement of executed trades
- Management of members

With the advent of new technologies and new markets, Chittagong Stock Exchange felt a strong need to provide wider access to its trading facilities and thereby achieving a multi-fold increase in its transaction volumes.

## THE CHALLENGE

Chittagong Stock Exchange decided to upgrade their legacy automated trading system to Next Gen Trading System (NGTS). As part of the new system, they want to provide multi channel access to trading (Dealer System, Internet Trading and Mobile Trading), first of its kind in Bangladesh. Adding to this, they also want to comply with future centric Risk Management Regulations mandated by SEC.

As part of this digitization initiative, they explored various options as independency of each broker of the exchange had to be maintained. Their original idea was to have broker level deployment as each broker will have the system implemented for them to help them in Client Acquisition, Risk Management, Dealer and Investor trading for their investors and preparing regulatory reports. This approach was already being taken by the other exchange in the country and was in the process of implementation. Intellect, having been chosen as a partner to implement the broker trading and RMS (Risk Management System), explained the maintenance and economic challenges involved in providing individual systems to each broker.

So, Intellect proposed a multi tenancy model that can be centrally hosted (not at individual Broker site) and still provide complete independence to brokers in terms of maintaining their own clients and their orders and Trades. It also provides independent risk management facilities for the brokers integrated into their respective trading. This idea was well received by Chittagong Stock Exchange Authorities as this straight away reduces the cost to a fraction of individual deployment costs for 200 brokers.

Intellect Cloud Ready offering is a shared, embedded and integrated infrastructure for brokers which could:

- enable them to provide their clients with access to all modern electronic delivery channels
- enable them to provide their dealers with desktop-based trading facilities
- enable them to empower their clients with a robust pre-trade and post-trade risk management functionality
- All these can be performed by brokers independent of other brokers.



### PRE IMPLEMENTATION SCENARIO

With the increase in volumes and projected growth of future, Chittagong Stock Exchange's legacy system became a challenge in terms of scalability and the new Risk Management regulations. The customers trading on the exchange lacked access to digital trading channels which impeded their day-to-day trading activities.

The existing infrastructure at the exchange did not provide any robust risk control and management support, which impacted the confidence of end-customers trading on the exchange. To support multiple modes of access, there was a need to drastically improve the levels of integrity and reliability of the underlying customer data.

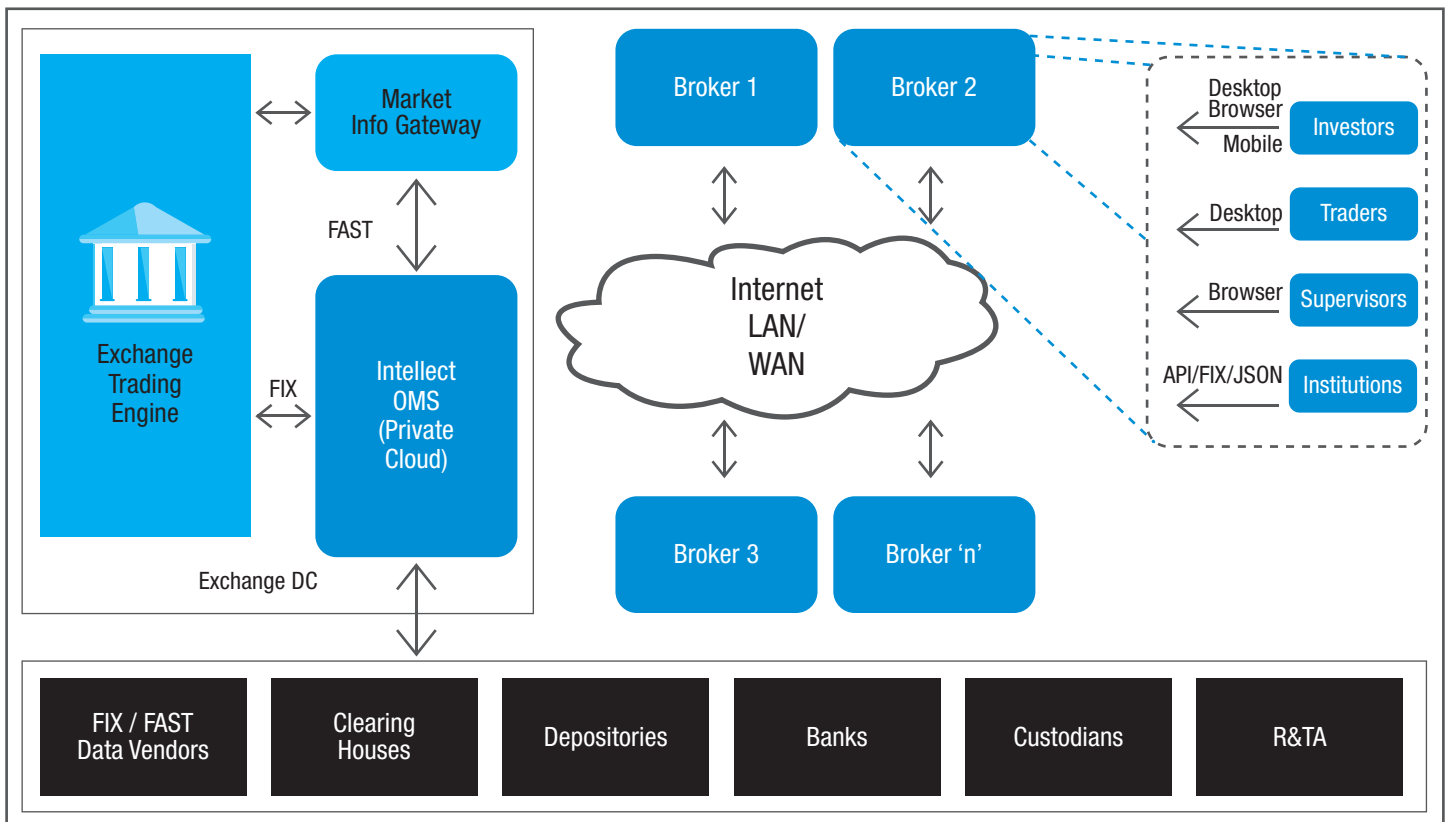
### THE SOLUTION

Intellect Order Management is an offering which comes under the capital markets solution suite, OneMARKETS, from the Risk, Treasury & Markets (iRTM) arm of Intellect. Intellect Order Management has

the capability to be deployed on cloud as a Broker front end for Exchange Trading System., It is a multi-broker end-to-end integrated broking solution that can be hosted by the Exchange and is accessible by the investing, broking and the Exchange community on an online, real-time basis. Intellect deployed the solution on a private cloud of the Exchange in their Data Center (DC)

Intellect integrated its technological solution with other financial agencies to affect clearing and settlement of investor trades for their brokers. The implementation radically enhanced the client risk management capabilities of brokers trading on the exchange. To achieve the buy-in of the broking community catered to by the stock exchange, Intellect had to customize the solution to the local regulatory environment.

The system is delivered with fully functional DR deployment with real time replication of data





## VALUE DELIVERED TO CHITTAGONG STOCK EXCHANGE

### Immediate benefits delivered to Chittagong Stock Exchange:

- Centrally hosted private cloud solution that is Centrally managed and yet decentralized for brokers:
  - All Releases and Parametric changes are done Centrally and no need for individual releases to brokers
  - Central control to manage the brokers limits with special privilege called Super Admin
  - Decentralized access to Brokers to independently perform their Client Management (New Client / Update of clients), Trading and Risk Management.
- As a centrally hosted solution (private cloud), implementing the BCP was much easier compared to individual Broker deployment. This system has a fully functional DR system that can handle the equal volumes as that of Primary Site.
- Compliance with their SEC regulations on Risk Management (Which was not available prior to that) with parameterized provision for handling future regulation changes like settlement cycle changes, minimum or maximum threshold for orders / brokers.
- Introduction of Internet Trading for all the investors from across 200 Brokers
- Integrated Risk Management for all the clients based on their holdings and cash balance with the respective broker
- Enabled listing of 200 stocks and handling of peak volumes of 60K trades per day on an average
- Provided support for varying types / periods of settlement based on category of stocks ranging from T+2 to T+9 settlement
- Resolved the performance issue in the legacy system related to the last hour of trading enabling an increase in trading volumes by 20%

## OTHER IMPORTANT BENEFITS DELIVERED TO CHITTAGONG STOCK EXCHANGE:

- Saving on System Cost – Both Initial implementation and subsequent maintenance cost reduced to fraction compared to original idea of individual deployment of OMS at broker level
- Rollout of regulatory changes are made easy with Central deployment
- The legacy system was phased out, and the entire trading experience was enhanced radically enabling end-clients to trade conveniently from web and mobile interfaces
- The cloud based nature of the solution provided a uniform trading experience across Internet Trading, Mobile Trading, Operations, Risk Management and Dealer terminals
- Automation greatly enhanced the operational efficiency of the trading activities carried out across the exchange, which resulted in significant cost-savings
- The solution enabled the exchange to achieve a quantum leap in providing accessibility of trading facilities to the investor community
- The member on-boarding process was drastically simplified and automated through the introduction of a 'Member Master File'
- The multi-tenancy feature enabled the exchange to designate users with specific roles (like Super Admin)

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**iRTM™** | **RISK, TREASURY  
& MARKETS**

