

**Success Story of how Cloud Computing contributes to the  
Award Winning Solution of the HKICT Awards 2015**

3 JULY 2015

<b><u>Cloud Solution Type</u></b> SaaS
<b><u>Case Study Title</u></b> Infocast InvesTrade Agent Solution
<b><u>Basic Information</u></b> Company Name: Infocast Limited Client Name: Guotai Junan Securities Deployment Date: September 2014 Web Site: <a href="http://www.infocastfn.com">http://www.infocastfn.com</a> / <a href="http://www.infocasthk.com">http://www.infocasthk.com</a>
<b><u>Introduction</u></b> <b>InvesTrade Cloud SaaS</b> Infocast InvesTrade is a next-generation all-in-one trading solution for retail brokerages in Hong Kong. It combines Infocast's real-time financial information services, powerful trading engine and proven settlement system into a convenient and cost-efficient turn-key package.  InvesTrade is available via traditional on-premises deployment (licensed software) or as a zero-infrastructure investment Software-as-a-Service (SaaS). SaaS delivery is achieved through Infocast providing a managed Application Service Provider (ASP) service utilizing cloud computing.  All brokerage clients using this ASP service are assigned their own InvesTrade OMS (Order Management System) running on the cloud. The OMS includes everything required for a securities brokerage to operate, including:- <ul style="list-style-type: none"><li>• Exchange market data</li><li>• Front-office terminal interface software</li><li>• Middle-office trading engine</li><li>• Back-office settlement and support system</li><li>• Database with access control</li><li>• Mobile platform and web platform</li></ul> Each brokerage's InvesTrade OMS's exists on a centralized multi-tenant cloud platform, alongside those of other brokerages. Trade orders are processed on the OMS before being sent

directly to the stock exchange for execution.

Our current cloud platform utilizes Huawei's FusionCube converged infrastructure, and is hosted at HKT's SkyExchange VTA data centre in Sheung Wan. Our cloud capacity can be quickly and easily scaled to meet demand.

Effectively each brokerage only requires an internet-connected terminal to access complete InvesTrade solution. Our clients frequently purchase dedicated leased lines between Infocast's VTA data center.

The benefit of this method is that the client brokerages are not required to purchase, install and maintain cost infrastructure. Instead Infocast hosts their systems on the cloud and provides a managed service.

The result is it significantly reduces the capital investment on technical infrastructure and also reduces the long-term cost of maintenance. This cost-efficient solution is especially appealing for smaller brokerages, newly formed brokerages, and those seeking to replace ageing systems.

#### **Agent Solution**

Another benefit of utilizing a centralized multi-tenant cloud platform to host brokerage's InvesTrade OMS is that the OMS's can be permitted to interact with one another.

To take advantage of this, Infocast created an innovative Agent Solution for multi-market trading. This business model leverages an existing InvesTrade SaaS brokerage's multi-market connections to provide a zero-investment solution for other InvesTrade brokerages to access said markets.

For example, two brokerages have subscribed to Infocast InvesTrade SaaS; Brokerage A has an exchange license and connection for Hong Kong only, and Brokerage B has an exchange license and connection for both Hong Kong and Shanghai. InvesTrade enables Brokerage B to act as an agent-broker on behalf of Brokerage A to execute Shanghai trade orders. Therefore Brokerage A is not required to purchase a Shanghai exchange license and also is not required to procure a system to trade Shanghai stocks. Brokerage B, acting as an agent-broker, can charge Brokerage A a small commission fee for conducting these Shanghai stock trades.

The effect of the Agent Solution is it enables a smaller brokerage to leverage a larger brokerage's multi-market exchange connections for mutual benefit.

## **Experience Sharing**

### **Hooray Securities – InvesTrade ASP Client**

Hooray Securities is a securities brokerage in Hong Kong. With the introduction of the HKEx Orion Programme, it sought a new front-office trading system to offer more advanced trading features and also take advantage of the new Orion architecture (including Orion Central Gateway and Orion Market Data). However it required the new system to integrate with its existing back-office system, which would be retained.

Infocast InvesTrade ASP was selected for its high-performance trading features and low-cost cloud solution.

### **Guotai Junan Securities – InvesTrade ASP Agent**

Guotai Junan Securities is one of the leading securities brokerages in China and Hong Kong. It also has a large number of affiliations with small brokerages. GTJAS was intending to purchase a Shanghai-Hong Kong Stock Connect trading license and trading solution, in order to enable itself and its affiliates to conduct Shanghai A-Shares trading.

Infocast's InvesTrade Agent Solution was a perfect fit for GTJAS' needs, and it became the first InvesTrade agent for the Shanghai stock market. Consequently, GTJAS' affiliates and several other retail brokers subscribed to the InvesTrade ASP Agent Solution to use GTJAS as an agent brokerage. In early 2015 GTJAS extended its InvesTrade Agent Solution service to include US market trading for its underlying brokerages.

InvesTrade all-in-one was an ideal solution for them because it contained all the systems required for their nascent brokerage business. To avoid the cost of purchasing additional hardware and infrastructure, BC Financial subscribed to the InvesTrade ASP cloud solution. Finally, to gain quick and low-cost access to the Shanghai and US stock markets, they joined the InvesTrade Agent Solution as an underlying brokerage, leveraging off Guotai Junan Securities as execution broker.

### **Challenges and Opportunities**

Our client's main challenge was high costs and long implementation times. Traditional trading systems are both expensive to purchase and time consuming to implement. An estimated cost for acquiring and hosting a trading solution is capital expenses of at least HK\$500,000 per market, and operational expenses of at least \$25,000 per market per month. Implementation time is between 6-8 months. Additional expenses shall be incurred over time as equipment needs to be updated or replaced.

InvesTrade ASP with Agent Solution significantly reduces costs and time required. BC Financial subscribed to a complete InvesTrade solution, including front, middle and back office systems, as well as Hong Kong, Shanghai and US stock trading. In total, the upfront cost is only HK\$100,000 with HK\$50,000 monthly charge. Implementation was completed in less than 4 weeks.

## **Practical Tips**

### **Overcoming Barriers to Cloud Computing**

The financial services industry has two key issues with cloud computing. The first issue is strict regulations on data protection and data ownership, which prevent banks from utilizing cloud solutions for their back-office systems. The second issue is a lack of trust in cloud computing, most notably in terms of stability, resilience, robustness and security.

The regulatory issue has been gradually changing over the past few years, and financial firms are beginning to adopt cloud computing to replace low-risk systems. In particular, banks are increasingly using cloud solutions for their front-office systems. However in Hong Kong the rules regarding data privacy, data protection and data ownership prevent banks from using cloud solutions for their back-office systems.

On the other hand, securities brokerages are not under the same regulations as banks, and are therefore able to avoid this regulatory hurdle. Therefore securities brokerages are able to adopt a complete end-to-end cloud solution.

However, the second issue of trust is still prevalent. In order to reassure brokerages of the trustworthiness of Infocast InvesTrade ASP solution, Infocast has partnered with industry-leading cloud infrastructure providers. InvesTrade uses Huawei's FusionCube infrastructure, and is hosted at HKT's SkyExchange data centre. Oracle provides the database software.

Furthermore, Infocast took an additional step of requesting KPMG to conduct a thorough analysis of InvesTrade's data migration and data segregation controls and procedures. In particular, KPMG inspected the employed method of migrating data onto and off the cloud server, and the method of preventing the unauthorized access of data on the cloud server. The resultant KPMG Control Report was then made known and available to InvesTrade clients. This played a significant role in allaying any fears regarding an ASP cloud solution.

Diagram 1 – InvesTrade Agent Solution



Diagram 2 – InvesTrade Screenshot

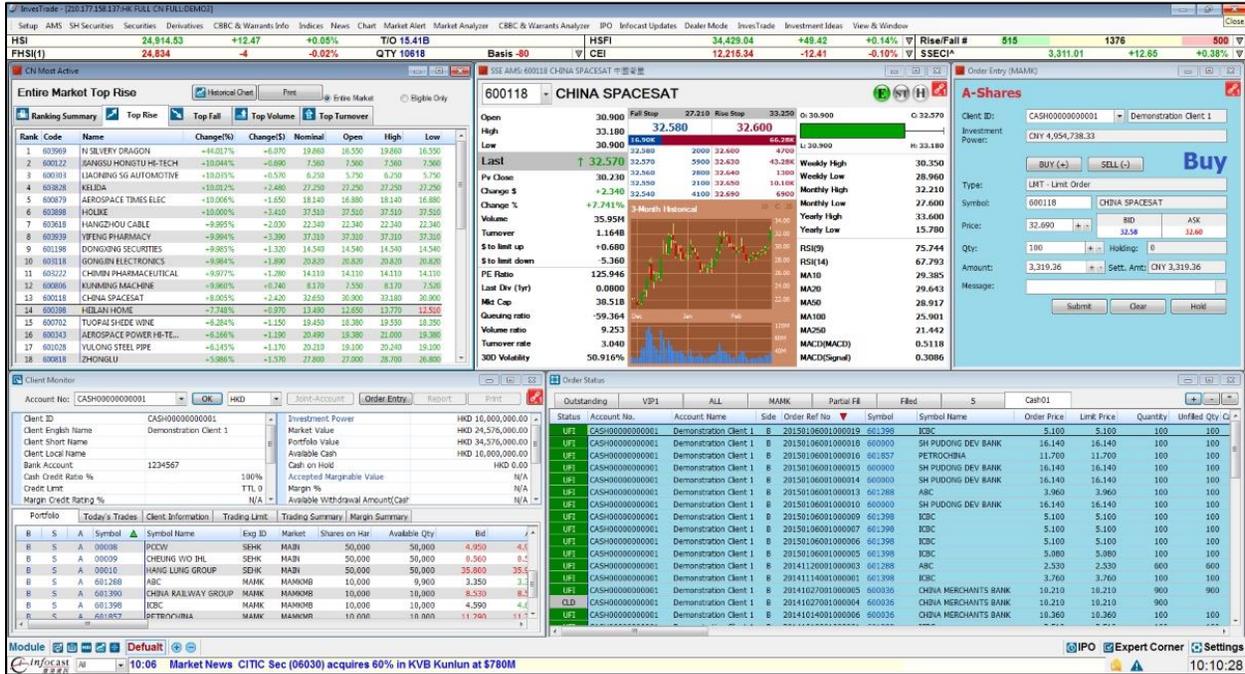


Diagram 3 – InvesTrade Cloud

