

Inside the Technology Driving the New Shanghai-Hong Kong Trading Link

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By Magaly Olivero

With the introduction of the Shanghai-Hong Kong Stock Connect, Asian investors now have a high-speed, reliable one-stop securities trading platform that processes large volumes of real-time transactions in seconds.

Launched on Nov. 17, the trading link marks the first time that individual investors in Mainland China and Hong Kong have mutual access to each other's stock markets. Financial experts say the link gives global investors a route into China, the world's second largest economy, and expect to see billions of dollars in cross-border transactions.

These opportunities are made possible by the InvesTrade platform, an integrated trading and market data system that handles thousands of transactions per second with virtually no delays. It is a joint effort between China-based Huawei, a leading global Information and Communication Technology (ICT) company, and Hong Kong's Infocast, a major supplier of financial information, trading, and settlement solutions.



InvesTrade employs Huawei's "all-in-one, cloud-based FusionCube information technology system that fully integrates computing, storage, and networking with an automated virtualization and management system," said Zhang Jianhua, Vice President of Huawei's Cloud Computing product line. FusionCube allows Infocast to quickly deploy applications, middleware, and database on a single platform, eliminating the complicated deployment, testing procedures, and lengthy delivery time of traditional hardware architectures, as in IP-SAN environments.

Executives at Huawei and Infocast said that the new platform significantly enhances the efficiency of stock trading in an industry that operates in a fast-paced, high-risk environment. The platform is reliable, flexible, user-friendly, and is configured to meet specific customer requirements.

"The market requires a dynamic stock trading platform that is high-speed, stable, and one that enables diversified financial services," said Cecily Ho, President of Infocast. "The InvesTrade platform includes multi-market and multi-currency capabilities by default, helping subscribing brokerages to capitalize on the market opportunities of the Shanghai-Hong Kong Stock Connect."

Integrated options

FusionCube offers "a superior all-in-one experience by providing total infrastructure convergence and integration in both hardware and software," Jianhua said. FusionCube fully integrates computing, storage, and network equipment in combination with a distributed storage engine, visualization platform, and cloud management software system. The technology supports on-demand resource allocation and low-latency scaling to meet a broad range of application needs to serve the requirements of the financial service industry.

"FusionCube pre-integrates a set of applications required for daily operation, while fine-tuning the end-to-end performance during the design phase," said Jianhua. Computer bottlenecks are avoided by using DSWare, Huawei's distributed storage engine, which enhances performance, minimizes cost, and improves operation and maintenance efficiencies," he said.

Kicking off the trading link meant that industry experts had to overcome a number of hurdles. "The Shanghai-Hong Kong Stock Connect was a step into unknown territory with mutual market access, the opening of China's capital market, and the internationalizing of renminbi," said Ho. "The whole industry faced market, business, and technical challenges."

One challenge was meeting trading performance requirements, including the industry standard of 200 millisecond latencies for individual transactions, said Jianhua. The InvesTrade platform exceeds industry expectations with a round-trip latency of less than 100 milliseconds per order,

system processing speed of 1,000 transactions per second, and zero downtime for service availability.

Another challenge was to meet the tight six-month launch schedule for Stock Connect. “The entire industry had to act quickly,” said Ho. “Fortunately, the Infocast core system was already prepared to meet the new requirements.”

An anticipated increase in cross-border transactions also raised questions about uncertain demand and market volatility. “Brokerages wanted low-cost solutions to reduce risk and a system with scalable capacity that would handle market fluctuations,” said Ho.

Other factors included differences in market operations, settlement cycles, and investor and stock eligibility between Hong Kong and Shanghai. The platform was also configured to handle a daily quota and aggregate cap limit for trades in both directions.

InvesTrade addressed many of these concerns by “providing an all-in-one, solution-as-a-service for retail brokerages that reduced cost (relative to Inforcast’s existing high-capacity systems),” said Ho.

Jianhua noted that installation of the platform was easy and affordable as the hardware and software arrive pre-integrated, pre-installed, and pre-commissioned, reducing deployment time from days to hours. Pre-integrated activity templates help shorten launch-cycle times while dramatically reducing operation and maintenance workloads.

“Our goal was to ensure fast and stable service that would enable investors to catch market opportunities,” said Ho.

Removing barriers to trading

The platform allows the entire Hong Kong market to participate in Stock Connect A-shares trading without obtaining a license and with zero capital investment. According to Ho, the InvesTrade agent solution focuses on “lowering the barrier to entry” to Shanghai-Hong Kong Stock Connect for all eligible participants, “regardless of size, enabling them to leverage execution brokers to access the new market.”

Infocast envisions using Huawei’s FusionCube in a many ways, including the continued capturing of China’s capital outflow via Hong Kong and eventual global market coverage in the United States and Asia-Pacific region. Future plans include providing a comprehensive full-service trading solution by adding wealth management and post-trade settlement services. Ho also foresees an end-to-end agent solution from execution broker through to end-user, including mobile devices.

But, as Jianhua noted, FusionCube’s application goes beyond the financial industry by offering operators, Internet service providers, and companies around the world and from diverse sectors a combined single system that can be used to easily get started with cloud computing.

In the retail industry, FusionCube helped Unicomm S.R.L. — an Italian company that distributes and retails food and non-food products — reduce latency from two hours to five minutes. In the high-tech industry, FusionCube effectively supported research and innovation at SAP Labs China, a software company in Shanghai, by providing a large-capacity HANA cluster. One multinational manufacturing company used FusionCube to improve the performance of its e-finance and supply chain management system by reducing complex query time from one to two days to 30 minutes.

In the future, Jinhua expects executives from a wide spectrum of industries will continue to benefit from Huawei’s cloud computing innovations that provide high performance, simple management, and an optimized user experience. “We want to provide powerful products and solutions that make a difference to our customers,” he said.

Learn more about Huawei FusionCube, click [here](#).

For FusionCube demonstration, click [here](#).

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