

LONDON STOCK EXCHANGE DELIVERS WORLD'S FASTEST REAL-TIME PRICE INFORMATION SYSTEM USING CISCO

The London Stock Exchange is using the Cisco Service-Oriented Network Architecture (SONA) framework and Cisco foundation technologies to deploy the world's fastest real-time trading information system which has increased competitive advantage for the Exchange and helped to foster more trading in the London market.



London Stock Exchange targets speed and competitive advantage

The London Stock Exchange is one of the world's oldest stock exchanges, tracing its history back more than 300 years when it started life in the coffee houses of 17th century London. The Exchange quickly grew to become the City's and one of the world's most important financial institutions. The London Stock Exchange is the most international of all stock exchanges. It has over 3,000 listed companies, 335 member firms and its real-time financial data reaches over 100,000 screens worldwide. The London Stock Exchange provides four main services: equity markets where businesses can raise capital, trading services, market information and derivatives.

In 2003 The London Stock Exchange launched a four-year technology roadmap programme designed to deliver greater agility, capability, scalability, and improved performance; and realise the aim of being the most efficient equities exchange in the world.

One of the most significant steps in the roadmap was the implementation of a new ticker plant – a system for disseminating real-time market prices and designed to support the anticipated 100% growth on the SETS market by FY2008. SETS is the London Stock Exchange's electronic trading service for UK blue chip securities.

EXECUTIVE SUMMARY

CUSTOMER NAME

- London Stock Exchange

INDUSTRY

- Financial Services

BUSINESS SIZE

- Enterprise

BUSINESS CHALLENGE

- Huge increase in trading volume requires high performance systems
- Deliver more pricing information to the London market faster
- Give the London Stock Exchange international competitive advantage

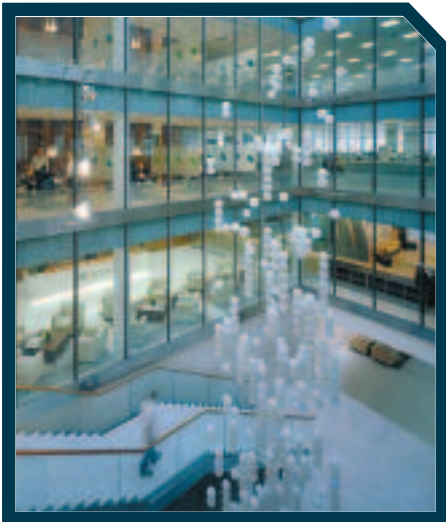
NETWORK SOLUTION

- Cisco SONA framework
- Cisco foundation technologies

BUSINESS VALUE

- Supports the fastest real-time information delivery system of any exchange world wide
- Cuts delivery of real time message dissemination from 30 to 2 milliseconds
- Increases order execution certainty
- Achieves double-digit percentage reduction in technology cost of ownership

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Cisco technology fundamental to the Exchange

Getting the core infrastructure right was crucial for The London Stock Exchange because its new ticker plant – called Infolect™ – is fundamental to the Exchange's business operations.

The London Stock Exchange's chief technology officer, Robin Paine, says, "There were a number of factors that were considered prior to selecting Cisco Systems as our strategic partner for the network infrastructure component of our Technology Roadmap. Being the market leader we wanted to benefit from the substantial investment that Cisco has made in developing leading edge resilient and high performance network technology. We also felt that Cisco's roadmap of transforming the network into an intelligent infrastructure could reduce latency, improve scalability and simplify application complexity and therefore add value to the London Stock Exchange and all market participants."

The London Stock Exchange has deployed a Cisco IP infrastructure for its own internal network and a separate Cisco-based network to provide connectivity between more than a 100 servers that make up the Infolect system. The two infrastructures are based on the Cisco Service-Oriented Network Architecture (SONA)—an architectural framework that enables organisations to maximise the value of their network services and resources.

Using infrastructure technologies over the Cisco SONA framework, The London Stock Exchange now has a resilient and robust platform to distribute real-time market data updates to client premises simultaneously and with ultra-low latency. The organisation's data centres are synchronised in real-time and at a very high speed over the SONA framework, thus enabling an 'Active-Active' application configuration that supports world-leading levels of system availability. The underlying Cisco infrastructure utilises the high performance capabilities of the Catalyst 6500 platform, specifically the IP multicast forwarding capabilities, for greater efficiency, performance and lower latency.

As well as Infolect, Cisco networking technology is used for The London Stock Exchange's own data and voice network which supports over 450 staff. One of the key benefits of the Cisco technology and the SONA framework is that many of the current services – such as voice communications and information systems for Exchange members – can be easily reused, extended or additional services, features and upgrades added to meet demand or changes in regulations.

The Cisco solution at The London Stock Exchange was implemented by Accenture, a Cisco Strategic Alliance partner.

Cisco fosters increase in trading volumes

Using a network infrastructure based on SONA, Infolect is delivering staggering performance and is now recognised as the fastest real-time trading system of any stock exchange in the world. Infolect takes only 2 milliseconds to send a price updates to a global network connecting around 100,000 terminals in over 100 countries world wide and it does this approximately 20 million times every day. The previous system took 30 milliseconds. In financial markets, low latency is essential because many trades are performed automatically by computers and these need to be able to respond extremely quickly in order to buy and sell shares at the best prices.

Cisco is also helping Infolect increase the volume and accuracy of London market trading. The number of orders submitted to The London Stock Exchange has increased substantially over the last five years and a high percentage of these orders are generated automatically. By reducing the realtime price dissemination latency, Exchange client systems are able to interact with prices that are a closer reflection of a price at which a trade can take place. This latency reduction increases order execution certainty by reducing order 'slippage' – caused by the time delay between setting and broadcasting a price.

"At The London Stock Exchange Cisco network technologies support the scalability that we require to support anticipated future market volumes and the performance needed for us to maintain business advantage. Cisco implementation has also contributed to a double digit cost of ownership reduction."

Robin Paine
Chief Technology Officer
The London Stock Exchange

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Paine says, "One of the measures we can make to determine the impact of Cisco technology, is the number of orders we take against the number of transactions or trades that get executed and since launching Infolect, we can see that that ratio has improved. This is one clear measure to show that Infolect is benefiting not just The London Stock Exchange but also the market as a whole."

The Cisco SONA framework also enables Cisco technologies to improve the agility of business application development and deployment. The London Stock Exchange is currently working on the next version of Infolect which will include even higher rates of information dissemination, customised for specific customer requirements and real-time access to a customer's own trading performance figures.

Paine says, "With the successful implementation of Infolect we've seen our business agility improve dramatically. The Cisco infrastructure, which is at the heart of our Technology Roadmap, enables The London Stock Exchange to develop, test and deploy new software logic much faster and more cost effectively than had previously been the case."

In addition, Paine says, "At The London Stock Exchange, Cisco network technologies support the scalability that we require to support anticipated future market volumes and the performance needed for us to maintain business advantage. Cisco implementation has also contributed to a double digit cost of ownership reduction."



Cisco technology has reduced our cost of ownership by a double digit percentage rate.



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