

Concurrent Linux® Solution

High-Performance Financial Trading

Global financial services organization Cantor Fitzgerald depends upon Concurrent for a true competitive advantage. Headquartered in New York, Cantor Fitzgerald L.P. is a financial services firm specializing in bond trading, investment banking, banking, asset management, market data and brokerage services. It is one of only eighteen brokers of U.S. government securities that trade directly with the Federal Reserve Bank of New York.

Challenges: Low latency, cost control and support for a new business initiative

In 2010, Cantor Fitzgerald made a business decision to upgrade its core low-latency data feed and pricing system. The data feed system and corresponding pricing engines are used by traders to evaluate trading opportunities in a number of electronic markets.

Latency must be kept to an absolute guaranteed minimum and the hardware and software need to work in concert to provide a seamless experience for the brokerage and its customers in over 30 locations, including major financial centers in the Americas, Europe, Asia/Pacific and the Middle East.

Cantor Fitzgerald needed a hard real-time Linux® solution, expertise to support it and an experienced partner that it could trust with the new time-critical trading systems it was preparing to deploy. The right solution would help Cantor Fitzgerald establish a distinctive competitive advantage.

Solution: Industry proven RedHawk Linux from Concurrent

After thoroughly searching for its mission critical solution, Cantor Fitzgerald contacted real-time Linux provider Concurrent Computer Corporation. Concurrent followed up with a webinar and then a presentation in New York for Cantor's software engineers and business decision makers.

Based on Concurrent's presentation and experience, Cantor Fitzgerald decided it found the ideal partner for its real-time solution for high-frequency trading. It evaluated and then procured Concurrent's RedHawk™ Linux real-time operating system and NightStar™ debugging and analysis tool kit. NightStar includes NightTrace™, an event analyzer that enables Cantor engineers to graphically display application behavior and performance to better understand how threads interact on a sub-microsecond time line.



Concurrent's RedHawk Linux is an industry-standard, real-time version of the open source Linux operating system for x86-based systems. It provides the performance needed in time-critical and hard real-time environments – guaranteeing that a user-level application can respond to an external event in less than 15 microseconds on certified platforms.

Cantor Fitzgerald was quickly able to utilize Concurrent's world-class support and engineering services because of their extensive experience in providing solutions for financial services organizations. Concurrent's real-time, low-latency solutions are currently in use by leading investment banks, hedge funds and a global stock exchange.

Why Concurrent?

RedHawk real-time Linux and NightStar tools are field-proven in thousands of global deployments in financial services, automotive, aerospace and defense, energy, and industrial automation applications. RedHawk Linux provides the determinism and guaranteed response needed in time-critical solutions.

"Concurrent has helped us accomplish our goals from both a business and technology standpoint. Their solutions and expertise are the best on the market. We consider them a partner in our business success, not just a vendor." - Jacob Loveless, Senior VP, Cantor Fitzgerald.



Results

Cantor Fitzgerald successfully completed the first stage of the Concurrent RedHawk deployment with predictable results: RedHawk rolled out quickly and is providing extremely low latency and high reliability.

"It is important for Cantor Fitzgerald to achieve real-time transactions with low latency," said Ken Jackson, Concurrent VP Real-Time. "Our RedHawk Linux offers them the real-time performance they need for their high-frequency, algorithmic trading systems. In addition, our NightTrace tool gives them graphical view of system events to see what is going on and diagnose any issues. No one offers anything like this for Linux."

ABOUT CONCURRENT

Concurrent Computer Corporation's

Real-Time business is one of the industry's foremost providers of high-performance real-time computer systems, solutions, and software for commercial and government markets.

The company's 45-year-old real-time business focuses on areas that include hardware-in-the-loop and man-in-the-loop simulation, data acquisition, industrial systems and software.

Operating worldwide, Concurrent provides sales and support from offices throughout North America, Europe, Asia and Australia.

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