WINTERFLOOD SECURITIES

Europe’s leading market maker handles growing data volumes in a flash with Dell EMC XtremIO

London-based Winterflood Securities is a leading liquidity provider in Europe. The firm offers retail brokers, asset managers, and institutional investors an extensive range of tradable instruments including UK, European, and North American equities together with investment trusts, exchange-traded products, gilts, and bonds. Winterflood takes pride in being able to provide buy and sell quotations even in adverse market conditions on the most unpredictable trading days.

For many years, innovative technology and an excellent team of people have driven Winterflood’s success. A Dell EMC customer since 2006, the firm provides its clients access to Winterflood’s market-making capabilities through two cutting-edge electronic trading platforms: Winner, a real-time dealing service for equities and fixed income trading; and Win-X, an intelligent order-routing system with direct market access to leading exchanges, multilateral trading facilities (MTFs), and Dark Pools within 17 countries.

THE CHALLENGE: STAYING AHEAD OF THE DATA

The securities industry is fueled by information. And in recent years, the sheer volume of market data available to investors from exchanges worldwide has exploded. High-performance systems are needed to ensure that investors have access to accurate, up-to-the-instant stock prices and access to the latest news and other company fundamentals before making their trading decisions.

Volume gains in Europe have been further magnified by the implementation of the Markets in Financial Instruments Directive (MiFID) in 2007. While MiFID brought welcome transparency and clarity to the markets, it also placed a burden on IT systems to scale easily, efficiently, and nearly limitless to stay ahead of data growth and the growing number of new market entrants.

For example, prior to MiFID, on a busy trading day Winterflood handled three to four million messages. Today, daily message volumes have increased 100-fold. These enormous flows of market data and transaction records are a challenge for any IT system, so it was absolutely imperative that Winterflood always stay ahead of this ever-increasing trend.

“We could see that with the arrival of flash storage, the days of spinning-disk systems in the enterprise data center were numbered. We embarked on a lengthy process of research and trialing of various flash solutions to replace our existing EMC hybrid arrays.”

THE SOLUTION: DELL EMC XTREMIO

After a thorough review, Winterflood chose Dell EMC XtremIO to deliver predictable and consistent low latency across the firm’s entire IT infrastructure. The XtremIO arrays
enable Winterflood to consolidate mixed workloads by providing scale-out consistency and reliability. This benefits not only the trading floor, but also the firm’s back-end infrastructure consisting of virtual desktops and virtual servers running a mix of workloads such as Progress OpenEdge databases, SQL, File applications, and trading applications.

Working with both Dell EMC and MTI, a global provider of IT solutions and services, Winterflood installed two 20TB XtremIO X-Bricks in each of its two data centers.

While Winterflood’s previous storage solution was thick-provisioned and running low on usable space, the migration of the estate to XtremIO arrays has left plenty of room for expansion, a figure that’s changed little over 18 months of growth. Contributing to this is XtremIO’s highly integrated, always-on, in-line, data optimization architecture that delivers efficient deduplication, compression, and thin provisioning. This ensures that the firm’s traders and customers always have the market and transaction data they need at their fingertips—from pre-trade to settlement.

THE RESULTS: REQUIRED PERFORMANCE AND SCALABILITY

Since their installation in 2015, XtremIO arrays have provided Winterflood with highly responsive, all-flash performance and superior scalability to stay ahead in the fast-paced financial markets.

In initial proof-of-concept tests comparing all-flash storage arrays from the three finalists, XtremIO consistently showed the best performance by a significant margin. These tests included database administration, dumps, reloads, and re-indexes—plus desktop power-on and hardware failure simulations. Among the notable results were:

- **Withstanding Boot Storms**: Booted 50 Windows virtual PCs in 6 seconds while copying one 3 GB file and generating another 2 GB file—with an average read/write latency improvement of 10x
- **Restoring Databases**: Restored a 200 GB database—with a latency improvement of up to 30x

“In a trading-floor environment, it’s key to have optimum performance of the infrastructure to minimize delays to internal traders and clients. Since installing XtremIO arrays and other infrastructure upgrades, system performance has improved significantly—even on the heaviest trading days.”

Wayne Davies
Head of Networks and Infrastructure, Winterflood Securities

Since their deployment, the XtremIO arrays have continued to prove their value under real-world conditions, even on the most volatile and unpredictable trading days such as at the peak of the European credit crisis in 2015 (which saw record in-bound market data), and more recently during 2016’s Brexit vote (which recorded the highest ever trading volumes).

- The time required to compile code for a new .net application created by Winterflood’s developers has been slashed nearly 90 percent—from 18 minutes to
just two minutes—improving the firm’s efficiency and responsiveness on service requests

- When performing destructive testing or hot backups on development environments, cloning those datasets now take seconds instead of a half hour or more

- Restarting the entire estate after a “power-down” is completed in a fraction of the time as compared to the old array. This is largely because Winterflood no longer suffers from the effects of “boot storms” that are so common and well-documented with spinning-disk-based arrays

- Power, cooling, and space costs have decreased for the entire IT infrastructure, including storage

“In a trading-floor environment, it’s key to have optimum performance of the infrastructure to minimize delays to internal traders and clients,” Davies remarked. “Since installing XtremIO arrays and our other infrastructure upgrades, system performance has improved significantly—even on the heaviest trading days, a recent example being the EU referendum result.”

“We’re a trading business—predictable performance, reliability, and a scalable infrastructure are absolutely key. With XtremIO we have an all-flash storage solution that ticks all of these boxes.”

Wayne Davies
Head of Networks and Infrastructure, Winterflood Securities