WE GET IT

CDW FINANCIAL SERVICES

MAXIMIZE SPEED, EFFICIENCY AND RELIABILITY
WITH A HIGH PERFORMANCE COMPUTING (HPC) SOLUTION
FROM CDW FINANCIAL SERVICES

IN THE TIME IT TOOK YOU TO READ THIS, APPROXIMATELY 900,000 TRADES TOOK PLACE

DID YOURS MAKE IT IN TIME?

*
THE CHALLENGES:

The pressure is on in the marketplace, and capital markets firms are feeling the heat. As data volume and its complexity expand, the demand for powerful technology to harness the potential grows. While compliance regulations and reporting requirements grow more rigorous by the day, cost and profitability must be constantly top of mind. Creating a competitive advantage is critical for success.

When a millisecond can mean millions, there’s no room for error. How can you ensure that your firm’s IT infrastructure is up to the challenge, and in a cost-effective way?

COMPETITION

46% of financial firms claim network infrastructure is a top priority for budgets.

34% of financial firms say their primary driver for technology investments was to gain a competitive advantage.


*Cover source: Based on NASDAQ OMX INET Technology performance data that estimates a rate of up to 193,350 executions per second. NasdaqTrader.com, August 2014
86% of capital markets and other financial services CEOs believe that technological advances will transform their businesses over the next five years.

Source: 17th Annual Global CEO Survey, pwc, 2014

66% of data management, performance, risk, compliance and operations professionals believe the growing body of regulation will call for significant investment to ensure compliance.


41% are making technology investments to capitalize on transformational trends.

Source: 17th Annual Global CEO Survey, pwc, 2014

PODCAST
Hear how you can simplify your network with a software-defined networking (SDN) solution in our podcast series at CDW.COM/FINPODCASTS.
THE SOLUTION:

Standing out from the competition requires an IT infrastructure that can help you take control of the increasing complexity of marketplace demands with greater speed, efficiency and flexible scalability. CDW’s financial services experts, HPC solutions and supporting services can help your capital markets firm achieve these goals.

HIGH PERFORMANCE COMPUTING

GAIN A COMPETITIVE ADVANTAGE
- Speed up responses to client demands in real time, with greater accuracy
- Drive down transaction times and improve serviceability
- Perform rapid-fire, real-time market risk analysis and portfolio calculations for optimum risk reduction
- Tap cutting-edge technology to spark industry innovation

CAPITALIZE ON DATA VALUE
- Quickly respond to incoming market data with a flexible, scalable IT infrastructure
- Effortlessly manage the growing volume, variety and velocity of complex data
- Increase speed-to-market in launching new strategies
- Enable winning strategies and analytics

MASTER COMPLIANCE REGULATION AND REPORTING
- Ensure the integrity, accuracy and availability of critical data 24/7
- Easily address and manage compliance requirements

CONTAIN COSTS
- Maximize business opportunities and minimize costs
- Streamline operations and boost profitability
The universe of firms employing latency-critical technologies is also expanding. It is not just the high frequency trading community that considers low latency critical to their business, but also firms using algorithmic trading that is not necessarily high frequency.


42% of financial market participants say their IT spend on infrastructure will go up 1%–5%.

25% state it will grow by 5% or more.


HEAR WHY CUSTOMERS CHOOSE CDW FINANCIAL SERVICES

“We see opportunities on a daily basis. We have good relationships with the exchanges and many types of technically sophisticated customers. A disruptive technology can come out tomorrow. If it helps our clients, we will implement it.”

Sonny Baillargeon
Chief Technology Officer for Pico Quantitative Trading

CASE STUDY
Learn how Pico Quantitative Trading grew its business with HPC technology: CDW.COM/CASESTUDYHPC.
WE GET CAPITAL MARKETS

CDW supports more than 7500 U.S. capital markets firms with the industry’s broadest and deepest technology solutions and services. Your dedicated CDW Financial Services account team can help assess and create a powerful IT infrastructure that supports strategies focused on low latency, global market integration and visibility, customer service, competition and risk management.

CDW Financial Services is a proud sponsor of the Securities Industry and Financial Markets Association (SIFMA).
A COMPREHENSIVE HPC SOLUTION
CDW Financial Services can help you scale up with an HPC solution that enables you to optimize computation and server processing, maximize organizational performance and accommodate future data growth.
Whether you need to better leverage your data, improve speed of delivery, control costs or boost innovation for your capital markets firm, your dedicated CDW Financial Services account manager can recommend the right HPC solution or service for you.

Our industry-leading technology partnerships allow us to bring you the brands you recognize and trust to create the most reliable and cost-effective IT solution to fit your firm’s needs.

Asset management chief executives expect to increase technology spend:

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>2014</td>
<td>74%</td>
</tr>
<tr>
<td>2013</td>
<td>46%</td>
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Source: “CEO Snapshot 2014: Compliance and Communications Drive Technology Spend Higher”
**Cisco® Nexus 3548 48-port Switch**
CDW 3040340
Call for pricing

- 10 Gigabit Ethernet switch
- Provides line-rate layer 2 and 3 switching at ultra-low latency
- Contains no physical layer chips, allowing low latency and low power consumption
- Supports both forward and reversed airflow schemes and both AC and DC power inputs

**Fusion-io ioDrive2**
CDW 2534369
Call for pricing

- Minimize latency and maximize bandwidth and IOPS
- Improve application performance
- Accelerate database performance up to 10x
- Improve response times up to 40x
- Deliver the performance of thousands of disk drives in a single server
- Increase capacities from 365GB to 2.4TB

**Intel® 2-port Ethernet Server Adapter X520-SR2**
CDW 1818390
Call for pricing

- Provides advanced unified networking capabilities
- Support for iSCSI, NFS and FCoE
- Facilitates greater network infrastructure consolidation and I/O virtualization

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MAXIMIZE YOUR RETURN
WITH OUR SERVICES AND SUPPORT

Not only will CDW Financial Services help you find the latest HPC technology to support your IT infrastructure, we can also help your capital markets firm with services that span:

- **Assessment/planning/design.** Up-front consulting and collaboration to assess your current IT infrastructure, and then map out a customized HPC strategy.
- **Configuration.** CDW experts can pre-assemble hardware and software components to ensure your HPC solution is ready to deploy upon arrival.
- **Installation/deployment.** Our expert engineering and implementation support team can help you get your technology up and running — fast.
- **Product lifecycle support.** Whether you need assistance with staffing and training, break/fix maintenance agreements, extended warranties or more to protect your IT investment over time, CDW is with you every step of the way.
- **Network assessment.** Our CDW team of experts can provide a network audit to determine the best strategy to meet your HPC goals.

CDW's engineers, solutions architects and product specialists have performed:

+ **5000** HP NETWORKING DESIGNS
+ **2215** WARRANTY ENGAGEMENTS
+ **870** OUTSIDE ENGAGEMENTS

WHITE PAPER
Download our white paper, “Ultra–Low Latency Networking,” and learn how to achieve your HPC goals. [CDW.COM/LOWLATENCYWP](http://CDW.COM/LOWLATENCYWP)
Q & A

with TIM HAGWELL
EXECUTIVE ACCOUNT MANAGER, CDW FINANCIAL SERVICES

Q: What low latency technology trends are you seeing in today’s marketplace?

A: From a low latency perspective, the market demand has definitely slowed. While lower latency is still desired, we’re talking differences of nanoseconds. Still, the hardware advantages are continuing to drive forward. New companies are constantly developing unique solutions to solve universal problems.

In capital markets, firms traditionally had to develop their own solutions to these problems — but now they need to think smarter, not harder. It makes more sense to leverage expertise from companies that have already solved these issues and tweak, rather than wasting cycles reinventing the wheel.

Q: How are capital markets firms getting that cutting-edge technology advantage?

A: In addition to constantly tweaking software code, some firms are leveraging FPGAs (field-programmable gate arrays) to take things to the next level. Firms are designing applications on the network card or switch to reduce overall latency, and leveraging alternatives to traditional Intel servers like IBM’s Power8 or even consumer gaming hardware and systems with liquid cooled chassis. Customizing the firmware and factory BIO settings to optimize system performance has become a must in order to compete.

THREE TIPS FOR SUPPORTING YOUR CUSTOMERS’ HPC NEEDS

There are three key areas where I can really help our capital markets customers:

1. Awareness. CDW Financial Services has strong strategic partnerships with the industry’s leading technology companies. We have the inside track to what that new innovation is and when it’s coming, so we can quickly bring it to our customers.

2. Engineering. CDW Financial Services leverages our strategic partnerships and internal engineering expertise to take the extra steps needed to ensure the equipment is optimized for peak performance. Small changes often yield huge results.

3. Delivery. To give customers a leg up, we help streamline processes — from product awareness to fulfillment — in the most cost- and time-efficient way possible. Time is money. The faster we deliver, the faster they see results.