



PcoIP Technology Transforms Trading Floor Into More Agile, Secure, Collaborative Workspaces.

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Vice president, Technology
Amulet Hotkey Inc.
(Bank's technology partner)

AT A GLANCE

Situation

- U.S. division of a major global bank (anonymous)
- New York City, New York
- 2,500 – 5,000 employees

Challenges

- Safely relocate traders to a new building without disruptions, in a cost-effective and timely manner
- Maximize productivity (boost compute power, and drive up to four displays per desktop)
- Improve security, redundancy, and overall protection of business continuity

Solution

- Amulet Hotkey DXM520 PCoIP Blade Workstations with four or eight video heads
- Teradici® PCoIP® Zero Clients, with Amulet Hotkey quad-display innovations

Results

- Seamless user experience: the new zero clients, with up to four displays, deliver the same performance as multiple under-the-desk PCs.
- Improved security and availability: only pixels are transmitted to the desktops (nothing to intercept); data resides on redundant hardware, with strict security and protection from failures.
- Flexible, scalable architecture: new hosts and desktops position the bank to introduce VDI, boost compute power on the servers, and leverage other innovations.
- Agile operations: ability to rapidly undertake moves, add to, or change the trading floors (including relocations).
- Business continuity & compliance: rapid recovery from loss; access controls for fail-over or remote location.



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John Beglan
Chief Operating Officer
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Even one second of down time constitutes a potential disaster in the financial world. When a major global bank needed to move hundreds of market traders into a new building, a smooth overnight transition was top priority. This wasn’t the first such move, and the physical relocation wasn’t the only challenge faced by the bank’s technology team. The bank was in the middle of a multi-phased, multi-year project to address several challenges with the traders’ desktop systems:

- Space constraints. Traditional under-the-desk PCs took up too much room, and made it difficult for traders to set up on-the-fly group collaborations. Traders’ desks were custom-built to accommodate PC cabling and multiple displays, and required a lot of floor space. PCs also had to be located within 1,000 feet of the application servers.
- High costs for relocations. A few years earlier, moving costs in the New York City metropolitan area had risen to as much as \$1,800 per person, which included labour union costs (movers, carpenters, etc.), IT staff time (disconnecting and reconnecting systems), and project management time. A typical move of a few hundred employees took a week or more.
- Competitive pressures. IT had to continually trim operating costs and lower risks. At the same time, IT needed to keep desktop systems up to date, refresh hardware every three years, and find new ways to boost trader productivity including enabling more flexible, collaborative work environments.

The bank asked for proposals from its technology partners. The bank had previously introduced PCoIP, and had great appreciation for its remote extension capabilities that shattered the previous 1,000-foot limitation provided by legacy back-racking technologies. The next step was to consider PC alternatives at the desktop.

Amulet Hotkey, a solution provider in financial services, defence, and commercial sectors, had helped the bank with other compute projects and the data centre design for the new building. “In partnership with Dell, we had been working on the first quad-screen zero client for our markets,” said John Beglan, Amulet Hotkey’s Chief Operating Officer. “We proposed an end-to-end PCoIP solution and showed the bank how this new ‘back-racking’ design could leverage their existing blades.”

After the Amulet Hotkey and Teradici solution won a competitive bake-off between the finalists, the bank moved forward with more testing and then a proposal to management. “With PCoIP, the hosts send pixels – and not data – to the endpoints,” said Beglan. “This becomes an important distinction in light of Dodd/Frank and all of the other financial compliance requirements. Extending pixels makes a desktop more secure – it avoids sending packets that could be intercepted. The bank staff really appreciated this, and it helped the stakeholders get permission to move ahead with the new zero clients.”

For IT, the replacement of PCs with zero clients at the desktop meant that compute power could be centralized and therefore more efficiently managed. Zero clients were easier to set up – and move. This flexibility was put to the test when the first 250 traders were moved to their new location. The first phase of converting traders’ desktops took place on a Friday afternoon. David Rule, Vice President of Technology, Amulet Hotkey, explained, “When it came to the relocation of the trading floor, the fundamental architecture of our end-to-end PCoIP solution meant that we could move 250 users to a new building in one evening with zero risk. The data and compute power sit securely in the computer centre; we simply moved the zero clients.”

The ease of deployment and ease of management were important, but user experience was critical. PCoIP technology made it possible to give traders the same experience compared to having a PC under their desk. "It was critical that the end-to-end PCoIP solution could deliver the performance necessary to support remote analytics applications. The bank has developed many custom algorithmic applications that are CPU-intensive, and they also rely on many multimedia applications. Traders constantly monitor news and streaming information to make decisions. In most cases they are using from one to four displays to take in all this information or work on spreadsheets that cross multiple screens. The expectation was for uncompromised performance, and with Teradici PCoIP technology they get it," said Rule.

In addition, the zero clients make it easy for traders to roam – they can work on the trading floor or back in an office. "The flexibility for traders to sit anywhere is great," said Beglan. "Without compromising performance, they can access their remote resources from any desktop client."

Since the first of the bank's traders moved into the new building, there have been more moves. While every move is a major effort, the introduction and moves of PCoIP Zero Clients have gone "flawlessly." Day to day, the desktop support team can now work more efficiently and respond to change requests more rapidly. As a result, the zero clients have helped the bank achieve much more flexibility in the workplace.

"The events of 9-11 are still in the minds of New York businesses," said Beglan. "Data security is definitely a major criteria and therefore the security aspects of the desktop transformation were carefully considered. PCoIP made it possible to address all of management's concerns."

"And the end users' reactions have also been very positive. The traders enjoy the 'really cool technology' – we hear that a lot. At first, some people were nervous about the change. When they click the mouse on their desktop, they expect a certain cadence in terms of the response. If a trader senses the slightest delay compared to their previous local PC solution, they will reject the new technology in an instant. That didn't happen here. What they saw with the end-to-end PCoIP technology was absolutely no difference and for trading applications, in some cases, was far better."

The nature of the bank's business and the demands of the trading floor will always mean a very dynamic technology environment. The combination of PCoIP Zero Clients, the Amulet Hotkey design for back-racked blade workstations, and embedded server-grade management and diagnostic tools has extended the life of the banks computing hardware – from three to five years.

This frees up more time for IT to work on testing and deploying the next-generation blades, grid computing approaches, and other innovations that can help traders work more productively.

"By switching out PCs for PCoIP Zero Clients, the bank is now on a path towards further reductions in total cost of ownership. We are helping them evaluate virtual desktop sessions for the trading floor, and they are also testing more efficient client-server ratios for the desktops. All of this is now possible because the PCoIP technology can deliver the performance, graphics, security, workplace flexibility, and high availability that the banking business demands," said Beglan.

Products used

Embedded PCoIP Tera2 technology
(Amulet Hotkey Blade Workstations)

Amulet Hotkey PCoIP Zero Clients

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