



Straight on Through

Straight-through Processing is the Brass Ring in the Risk

Management Business, and many have claimed to reach it. But Triple Point Technology makes a pretty good case for achieving straight-through processing with the launch of its revved-up Version 6.0 of Commodity XL. Mike Ravo, TPT's vice president of industry solutions, says Commodity XL is a solution that's truly enterprise-wide, with the ability to dig down to a deep level of granularity. And this is all happening in real time. The company is heralding the new release as being able to improve performance five-fold.

We tried to get Ravo, the guy who has guided TPT's product set from the start, to say that Commodity XL 6.0 shows that technology has finally delivered on its promise. Technology finally has the speed and smarts to do what we want, right? He wasn't buying it. Good tech-head that he is, Ravo would only agree that the new system is better, not best. "You're never done with a system like this. The industry changes and the requirements change," he says. "The focus now is to get the trade in the system and process it through. The next step is how do I extend the boundaries to make sure I never have to manually put any trades into the system or manually reconcile my settlements or manually submit any schedules to the ISOs? You continue to expand the boundaries of what straight through processing means, and that's where we're headed."

Of course chips are faster and memory is larger and cheaper, he says. "But we're more interested in not being limited by requiring our customers to scale up their hardware, but rather scale out with low-cost hardware." There's

nothing bleeding-edge about the technology, he says, it's just that in this release of Commodity XL, "we made it a priority to put extra resources toward improving performance. We could have continued without these improvements, but we end up suffering because we're not able to deliver a true, best solution for performing sensitivity analysis and risk processes. Maybe even without these changes we're better than the rest in our industry, but with where we are now, no one comes close."

There may be a simple reason for that. TPT chief marketing officer Michael Schwartz reminds us that the company puts 25 percent of its revenue back into R&D efforts. "We don't see this as the high point," he says of the new release. "This is another stepping stone along the way."

Like any software, the original 2001 version of Commodity XL was based on what the initial customers needed: a solution for front-office physical and financial power in the US. "But from the get-go, our vision has always been for Commodity XL to be a full front-to-back-office energy trading risk management platform for all commodities, not just power," he says. Over the next several years and several customers, the solution evolved through the commodities, and performance has always been a consideration because the architecture allows scalability with hardware, both out and up. But in the newest version, the company really dug into this performance issue.

Things have gone truly multi-commodity. Utilities want to integrate their exposures and banks and hedge funds want to make money across the industries. "Companies such as UBS, Lehman Brothers, Bear Sterns, Glencore and others that have traded across many

businesses were very keen to be able to implement our system on a global basis," he says.

Part of the challenge of such an implementation is the number of transactions that have to be supported by an enterprise solution of that size. Ravo says Commodity XL could probably outperform any system in the industry, but it was apparent that the company needed to spend some time to seriously improve overall system performance to meet these global objectives. "It's not just a matter of providing functionality for supporting your transactional processing from front to back office for all of your different markets. It's that, now that you have that infrastructure in place and you're supporting the basics, I want to be able to do a lot more real-time, process-intensive calculations within the system."

Enter Commodity XL 6.0. The new version has jumped from processing thousands of trades "adequately," he says, to processing tens of thousands of trades in a superior way "in a manner that allows us to scale out even above 100,000 trades." Processing a trade really means processing many different position points – and processing them many times during the day. Say goodbye to overnight batch processing, the market moves too quickly for that. "For risk purposes, I need the ability to understand sensitivities to different shifts in market parameters," he says. That means revaluing the portfolio many times, so waiting around for five hours for the portfolio to revalue once just isn't going to cut it.

"So we set out to make improvements across the board."

TPT found that scaling out, up to say 20 CPUs, would still generate linear improvement in performance. "At some point that started leveling off, which

meant there were bottlenecks in the system that we needed to overcome so we could continue to scale out with hardware and not be confined by the fact there's only one database that all that processing had to end up writing to," he says. The solution was fine-tuning memory caching and optimizing memory data structures to bring data up quickly into memory and more efficiently write back data. An overall review of the system's general performance— even the logic for how computations were made – really started to free up the bottlenecks. It wasn't just the ability to process 10,000 trades in a minute instead of 100, he says, it was the ability to process 200,000 trades by putting 30 servers on the task. "Grid computing has always been there, but the bottlenecks that occurred in the data never really allowed us to truly scale it to the extent we can now scale it," Ravo says.

The release is chock full of new functionality as well, 300 of them in fact. We think the coolest one is a real-time reporting tool for P&L attribution. Ravo says most folks monitoring why they made or lost money want to dissect deals down to the market parameter and transactional change level. This level of granularity looks at everything from price shifts, market volatility, forward FX rates and interest rate changes to changes due to new trading activity or changes in existing trades, and on and on. "It's not just at a high-level view, but drilling down to a view of every single trade or component of a trade and how it contributed," he says. "Changes due to higher-order derivative sensitivities – an option portfolio that's very gamma sensitive – is a second-order change on price, but we'll still report a deemed profit or loss due to your gamma position."

Ravo says many a trader goes home at night thinking he made a pile of money, but the next morning's report shows the opposite. Much shouting and searching later, it turns out someone fat-fingered a forward curve price – and many hours of productivity have been lost. "The objective is not only to be able to observe and affirm where those changes occurred, but to be able to

troubleshoot and save that kind of time-cost. That's a huge asset," he says. "P&L attribution is a key module."

And oh yeah, it's real time and on demand. You can refresh the P&L attribution screen to see intra-day changes to your market data in a matter of seconds.

There's much more in terms of new functionality. The book can be reprocessed multiple times, based on changes in market forward price and vol curves – something that will be expanded on in future versions. Confirmations management capability has been improved to support basically all cleared products (i.e., ICE products) and expanded to allow more status points. Scheduling for power, gas and physops has seen significant improvements, and the new bookout wizard allows the system to quickly inform the user of his physical power hourly bookout candidates, basically matching up the shorts and longs with the same counterparties and alerting the user. Lots of additional automation for batching invoices and improved invoice management and tracking capabilities... some pretty wild cash management tools that can interface with a wire transfer system so that cash coming into the system can be allocated to open invoices... the list goes on.

The keywords here are straight-through processing and full auditability. At five times the speed. So we had to give them a hard time about it. "In general, in 6.0 we've completed the integration of our front-to-back gas scheduling with our accounting and front office system," Ravo says. "Our gas scheduling module was built to stand alone, apart from the rest of the system, and it's been integrated into 6.0. It is genuinely straight-through processing." Duplicate entry is out the window, the messaging infrastructure updates all modules at once, "there's no waiting, there's no pulling, there's no required batch processing until you want to snapshot your data at the end of the day," he says. "Everything else is dynamic and real time."

"I don't think we've lost a physical gas deal in a year, that we know of. So the straight-through processing is important to the product, and it's really playing out in the marketplace to be very important," adds TPT chief marketing officer Schwartz. Commodity XL was always meant to be a multicommodity solution, he says, but now the marketplace has really taken that concept and run with it. "Right now everyone is looking for a solution that crosses whatever they're trading, and they seem to be trading more. They want a solution that can aggregate the risk and they also get the efficiencies across the back office."