

**Betfair** demands ultra-high reliability and performance from its IT infrastructure to ensure its customers are provided with the best possible user experience when placing wagers. A critical element of this high-availability IT infrastructure are Pure Storage all-flash arrays that Betfair relies upon to deliver exceptional performance, reliability and ease of management.

## PADDYPOWER. betfair

### BUSINESS TRANSFORMATION

Millions of customers every day have uninterrupted access to the most advanced on-line betting environment, while Betfair benefits from processing high volumes of transactions reliably, even at peaks reaching 3,000 transactions per second.

### GEO

United Kingdom

### INDUSTRY

Gaming

“Pure Storage beat the socks off everyone else in terms of performance.”

Andrew Cook, *principal engineer*

### BETFAIR PLACES A WINNING BET ON PURE STORAGE

For a business that is all about trying to beat the odds, Betfair is not a company that takes chances with its IT infrastructure. It demands consistently high performance, availability and reliability.

Betfair is one of the leading wagering sites in the United Kingdom, offering a variety of on-line casino and betting products to more than 1 million members. In addition to the UK, it serves customers in Italy, Australia, Bulgaria, South Africa and New Jersey in the United States.

The scale of Betfair’s IT infrastructure is staggering. It handles an average of more than 100 million transactions per day, which is more than the number of daily transactions conducted by all of the European stock exchanges combined. In the run-up to the British referendum on leaving the European Union in June 2016, Betfair was handling as many as 3,000 transactions per second.

Betfair’s core product is Exchange, which uses leading-edge technology to allow customers to bet against each other by placing a wager on a given result at a price they determine. In many ways, it is a classic online transaction processing (OLTP) system like those used by banks and credit-card companies, with very high I/O demands. It runs on a four-node Oracle database, with 72 cores per cluster.

### HIGH PERFORMANCE REQUIRED FOR CRITICAL APPLICATIONS

Given the scale at which Betfair operates, the underlying IT infrastructure must be extremely robust and reliable. When Andrew Cook joined Betfair in late 2013 as principal engineer for database and storage, his first task was to conduct a proof-of-concept trial to select a new storage system.

The existing storage system — consisting of three cabinets of 15K SAS drives — was up for renewal on its maintenance contract. The IT team was concerned about the amount of performance tuning, optimization and reporting required to manage the storage, so it took the opportunity to look at all options, paying particular attention to flash technology.

The POC lasted four months and subjected storage products from a number of all flash vendors to a broad range of tests. “In the end, we selected Pure Storage,” Cook said. “It beat the socks off everyone else in terms of performance. But the biggest selling point was the flat line of latency.”

**COMPANY:**

Betfair  
[www.betfair.com](http://www.betfair.com)

**USE CASE:**

- Database – Oracle®

**CHALLENGES:**

- Legacy storage system suffered from inconsistent latencies, and required excessive levels of system management.
- The highly competitive online betting market requires constant and timely development of new products/services with a consistently superior user experience.

**IT TRANSFORMATION:**

- All-flash arrays deliver consistently sub-millisecond latencies, ensuring the best possible user experience.
- The solution provides ultra-high reliability and performance, even at peak loads.
- Simplified management reduces demands on IT staff.

“What we loved about Pure Storage was the consistently low latencies. Pure Storage gives us the performance, stability and reliability that we have to have.”

Andrew Cook, *principal engineer*

“We got pretty decent performance from the old array, but on occasion some transactions might take 3 or 4 seconds to complete. And that’s not acceptable,” Cook said. “One of our key features is the ability for players to cash out their bets as a sporting event is in progress, and once they decide to cash out, they want that decision implemented immediately. So any transaction delay is potentially a bad user experience. What we loved about Pure Storage was the consistently low latencies.”

Once the Pure Storage FlashArray was installed, the IT team got an early indication of its impressive performance with the running of the annual Grand National. This is Great Britain’s most prominent horse race and the single largest betting experience of the year for Betfair. There were over 10 million bets placed on this year’s race (2016), with a peak load of 2500 TPS in the minutes leading up to the start of the race.

“Previously, it took a long time to process all the settlements at the end of the race,” Cook recalled, “but with Pure Storage, it produced just a small blip on the storage. It ran so quickly.”

**PURE DELIVERS ULTRA-HIGH RELIABILITY, SIMPLIFIED MANAGEMENT**

The size of the databases behind Exchange is not huge — a total of about 2.5TB for a reference database and the transaction-processing database — because data is archived daily. So the most important storage criteria for Betfair are ultra-high reliability and availability. “Exchange is a very demanding environment, and our worldwide customer base means we have to operate 24/7,” Cook noted. “Pure Storage gives us the performance, stability and reliability that we have to have. It never lets us down.”

Cook also appreciates the many features of Pure Storage arrays that make life easier for the IT staff, such as the ability to snapshot and clone databases in just minutes. He is also bullish about the replication capabilities of the arrays that are used for disaster-recovery purposes.

Based on the exceptional performance and reliability of the initial arrays, Betfair has made Pure Storage its strategic storage supplier. It now has nearly a dozen Pure Storage arrays in operation.

“Our Exchange platform has now been completely refreshed in both servers and storage,” Cook noted. “We’ve eliminated concerns about hitting any bottlenecks, even with our business growing 10-15% a year. That’s good for us, but more importantly it’s great for our customers.”



[info@purestorage.com](mailto:info@purestorage.com)  
[www.purestorage.com/customers](http://www.purestorage.com/customers)