



## Under Armour builds a strong infrastructure for SAP software with IBM

### Overview

#### ■ The Challenge

Performance apparel and footwear maker Under Armour has seen sales growth of over 30 per cent annually. Increasing data volumes and demand for business information were straining the infrastructure supporting existing SAP software, and costs from the hosting provider were increasing. The company wished to implement new infrastructure capable of carrying it through the next phase of its growth.

#### ■ The Solution

Moved from hosted services for SAP ERP, SAP NetWeaver Business Intelligence and SAP NetWeaver Exchange Infrastructure software to an in-house infrastructure. Implemented Intel Xeon dual-core processor-based IBM System x3850 and IBM System x3650 servers, a new storage area network based on IBM System Storage N7600 storage servers, and IBM System Storage N series SnapShot and SnapMirror data duplication software.

#### ■ The Benefits

The powerful, robust, high-performance infrastructure is able to manage greatly increased data volumes with minimal additional operational cost. Batch job times have decreased by a factor of ten or more – in one case from 12 hours to 30 minutes. Under Armour is better positioned operationally to execute its long-term growth strategy.

#### ■ Key Solution Components

Industry: Consumer goods

Applications: SAP® ERP 5.0, SAP NetWeaver® Business Intelligence, SAP NetWeaver Exchange Infrastructure

Hardware: IBM System x™3650 and x3850 servers with Intel® Xeon® dual-core processors, IBM System Storage™ N7600

Software: Microsoft® Windows®, Microsoft SQL Server™, IBM Tivoli® Storage Manager

Services: Mainline Information Systems, an IBM Premier Business Partner

Under Armour's mission is to provide the world with technically advanced clothing products engineered with superior fabric construction, exclusive moisture management, and proven innovation. Founded in 1996 by former University of Maryland football player Kevin Plank, this Baltimore-based company is a leading developer, marketer, and distributor of branded performance apparel, footwear, and accessories. The company is branching out beyond the North American geography, with new operations in Europe established in 2006.

The executive team chose to implement SAP software at an early stage. Mike Chumley, Director, Technical Infrastructure, says: "To help achieve our growth strategies, we needed big bets with big partners, and selected SAP to help us put in place a 'ready for tomorrow' infrastructure.

"We chose to outsource the hosting of the SAP applications, to keep us free to focus on implementing and developing the SAP applications. One of the components we introduced was SAP NetWeaver Business Intelligence, and as executives came to understand



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Mike Chumley  
Director, Technical Infrastructure  
Under Armour

the power and depth of the reporting tools, so the workload and demand for data storage rose dramatically.”

#### **Choosing the right size**

As total workload and data requirements grew, the hosting service fees increased. Mike Chumley looked at the economic case for bringing the services in-house at Under Armour. The aim was to embed an infrastructure that would be capable of growing with the company, offer reduced operational costs, and introduce greater flexibility.

The existing hosted hardware – which consisted of a number of aging HP machines – was causing some processing jobs to fail due to a lack of memory in the servers. Running on a 32-bit Windows operating system, it was not possible to allocate more memory and resources – a limitation that would not apply to a 64-bit operating system.

Under Armour therefore chose to implement a 64-bit Windows operating system, and turned to IBM for the IT infrastructure, selecting the IBM System x platform, powered by Intel

Xeon processors and IBM's X3 Architecture.



“Under Armour uses System x3850 servers with dual-core Intel Xeon 7040 processors for all its production systems, and System x3650 servers with dual-core Intel Xeon 5160 processors for development and quality assurance. The combination gives us very high performance and reliability,” says Mike Chumley.

The x3850s are powered by the IBM X3 chipset. IBM developed this chipset to bring sophisticated high-end technology to the System x platform. Because of memory breakthroughs, the x3850 with the X3 chipset delivers the performance and availability usually found in much more expensive architectures. This makes the x3850 an ideal choice for Under Armour's production environment.

“The consequence is that batch jobs that previously ran between 10 and 12 hours now complete in less than an hour. For business users, we are able to deliver reports on time, every time; even where the batch fails, we have sufficient headroom to correct the error, re-run the job, and still deliver on time.”

Prior to the changeover, Mike Chumley insisted on checking that all the SAP and other applications were capable both of running on and taking advantage of the 64-bit operating system environment.

He reports, “Running a 64-bit Windows operating system and Microsoft SQL Server database, the SAP applications are all able to take



advantage of the 64-bit environment. The SAP, IBM and Intel combination has a direct, positive impact on service to the business – and in a company as fast-moving as Under Armour, this is essential.”

#### **Extra workload, no sweat**

Under Armour has more than 200 SAP users, accessing over 1TB of data. The company runs a wide selection of SAP applications, including the core functionality found in SAP ERP 5.0, SAP NetWeaver Business Intelligence and SAP NetWeaver Exchange Infrastructure applications.

To manage the growing data volumes, Under Armour has moved away from internal storage and implemented a storage area network (SAN), based on two IBM System Storage N7600s.

Data for production SAP NetWeaver Business Intelligence and SAP ERP applications is stored on the local N7600 storage server. Using SnapShot and SnapMirror optional software for IBM N series storage systems, data is continuously replicated offsite to the second N7600, delivering a state-of-the-art disaster recovery solution. SnapShot helps perform consistent backups from IBM System Storage N series storage systems while applications are running, with little performance impact; while SnapMirror provides fast data replication and failover, and can help reduce downtime in case of a failure at the primary site.

“The IBM N7600s with the embedded SnapShot and SnapMirror software were very simple to deploy and offer immense scalability. With the Intel Xeon processor-based IBM System x servers and the power of the SAP applications, Under Armour is better positioned for continued growth in business volumes,” says Mike Chumley.

Under Armour also uses IBM Tivoli Storage Manager for Databases to manage backups. The software supports incremental backups: instead of copying the entire production data volume to tape every day, it only backs up the changes that have made to business data – making backups considerably quicker. The software even enables administrators to perform backups of the Microsoft SQL Server databases without taking them offline – helping Under Armour improve the availability of its systems.

#### **Fast out of the blocks**

Working with Mainline Information Systems, an IBM Premier Business Partner, the transition to the new infrastructure took less than a weekend, with every application fully live by late on a Friday evening. As Mike Chumley comments, “The beauty of it was that on Monday morning no-one noticed the changeover, except that a screen that had formerly taken a few seconds to load now appeared with sub-second response times.

“It is very hard to measure the value of improved response or the ability to deliver report data at 8.00am rather than 10.00am. However, we can say that the in-house SAP infrastructure costs are now more predictable and can be planned with business growth, with minimal increases as data volumes rise. By keeping costs stable in the face of business growth, the IBM solution is playing an important part in the company’s expansion.

Mike Chumley concludes, “SAP, IBM and Intel are helping us answer the question of how our company can handle our year-on-year growth. By migrating to this robust, high-performance IBM and Intel infrastructure, we are better positioned to execute our long-term growth strategy.”

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