

# VWS Westgarth refreshes its server landscape

*Cutting edge IT with IBM BladeCenter and Celerity*

## VWS WESTGARTH

---

### Overview

#### Business challenge

The UK-based designer of water treatment modules for offshore oil platforms VWS Westgarth (VWS) had a malfunctioning legacy system. VWS's 24/7 workflow process demanded a highly available IT platform for the smooth running of the business, but two days of IT downtime had cost the company a significant amount. The company wanted to refresh its server landscape to ensure high reliability, scalability, and performance.

#### Solution

VWS engaged IBM Premier Business Partner Celerity to create a new infrastructure. It implemented IBM® System x3650 and x3550 servers alongside a fully loaded IBM BladeCenter® HS22, linked to an IBM System Storage® DS3500. An IBM System x® server and IBM System Storage TS3200 tape library provide data backup, managed by CommVault software. Celerity also trained VWS on VMware, which the company chose to implement on two blades.

---

VWS Westgarth is a subsidiary of Veolia Water, itself a part of the Veolia Environmental Group, a leading environmental services provider employing more than 315,000 people around the globe. The Veolia Group is one of the world's major designers of technological solutions and constructor of facilities for water treatment, with operations in 57 countries. The VWS Westgarth office in East Kilbride (VWS) employs 164 staff, and is responsible for the design of desalination and sulphate removal modules for offshore oil platforms.

#### Chasing the sunset

Due to VWS's 'follow-the-sun' workflow process, a highly available IT platform was vital to the smooth running of the business. "When draughtsmen and engineers at our office in the UK have finished working for the day on a 3D CAD model, they save it to the company database, where the work is continued by staff in a different time zone," says Hunter Fairley, Project Services Manager at VWS.

"Our UK IT infrastructure includes a large file server, ERP system and a lot of CAD files, and we serve that data to offices in Brazil, the USA, Singapore, South Korea and China."

VWS's primary pain point arose when its five-year-old legacy hardware infrastructure began to break down. "The problems with our old HP server infrastructure started with switch failures causing performance bottlenecks, but the situation quickly deteriorated," says Hunter Fairley. "Eventually, we reached the point where one HP hard drive was failing every week. In total, we lost two business days as a result of the IT failures, which ended up costing the company a significant amount.

"In addition, the backup system for our standalone servers was on the same RAID drives as the live data and the off-site backup was unreliable, so it was absolutely critical that we found a way to address that infrastructural vulnerability."

VWS needed to protect its data and keep its mission-critical ERP and CAD software fully available. In order to achieve this, the company wanted to refresh its outdated HP server landscape with one that would ensure high reliability, scalability, and performance.



---

## Business Benefits

- IBM System Storage DS3500 allows the company's 38 TB of total storage to be fully utilised, with high-performance SAS disks for its applications and normal speed SATA drives for its files and backup.
  - VWS's servers are no longer overstretched, even under heavy load, reducing ERP IT support calls to zero and freeing staff to focus on more profitable activities.
  - BladeCenter technology warns administrators about component failures, maximising reliability and preventing costly downtime.
- 

## Scalable solution

VWS engaged IBM Premier Business Partner Celerity to deliver a new infrastructure. "A member of our team had worked with Celerity in the past, and recommended them based on his positive experience," says Hunter Fairley. "We called them up, gave them our specifications and requirements for future-proofing, and things moved forward quickly from there."

Celerity implemented IBM System x3650 and x3550 servers alongside an IBM BladeCenter HS22 linked to an IBM System Storage DS3500 SAN. An IBM System x server and IBM TS3200 tape library provides data backup, managed by CommVault software. Celerity trained VWS in VMware, which the company then chose to implement on two blades.

"VWS originally asked us to use HP products in the solution, as this was the infrastructure that dominated the whole estate," comments Edward Yates, Technical Consultant at Celerity. "However, we advised them that IBM System x and BladeCenter servers represented the best response to their reliability and productivity challenges."

"We were convinced chiefly by the versatility of IBM BladeCenter," adds Hunter Fairley. "We were able to have the blade servers configured according to the exact specification of memory and processors we wanted. I am confident that the amount of processing power and memory we decided to install will satisfy our requirements for the next five years. However, the blades are highly modular, so if we ever need extra capacity, scaling out won't be an issue."

Business data at VWS is now stored almost entirely on the DS3500, which is on a dedicated storage area network (SAN). "There were a lot of problems with the legacy SAN," explains Hunter Fairley. "The old switches caused bottlenecks that resulted in data collisions between the SAN and LAN, so we mostly used on-board storage. Now we use the DS3500 for everything, with high-performance SAS disks for our applications and normal speed SATA drives for files, data, and backup."

"Celerity worked closely with our IT team, and also with Virgin, who were carrying out a network refresh at the time," says Hunter Fairley. "I think the success of the implementation was due to the clarity of our communication. With a project such as this, it's easy for small mistakes – for example, buying the wrong kind of interface cables – to add up to thousands of pounds in extra costs, but there were no slip-ups at all. Celerity was the unifying party that helped the whole process to run smoothly."

## Seeing the benefit

After implementing its IBM solution, VWS began to experience the benefits of virtualisation on the IBM BladeCenter platform. "We'd only dabbled with virtualisation in the past, so the IBM solution was really the first time we saw the true extent of the improvements it could offer," says Hunter Fairley.

---

## Solution Components

### Servers

- IBM® BladeCenter® HS22
- IBM System x3650 and x3550
- IBM System Storage® DS3500

### IBM Business Partner

- Celerity
- 

*“Even with all our file servers and databases running, we still have seven blades of spare capacity. Thanks to IBM and Celerity, we’ve gained the confidence to meet our IT challenges for the foreseeable future.”*

— Hunter Fairley, Project Services Manager,  
VWS Westgarth East Kilbride

---

VWS installed VMware on two blades and clustered them with VMware vCenter. The blades were then paired for redundancy and performance. Each blade has two six-core Intel Xeon processors and 48 GB of RAM, capable of running the whole VM environment if one of the blades fails.

Using VMware greatly reduced the time, cost and complexity of the server migration. The VWS IT team simply pointed VMware to its running physical servers and let the VMware migration tools perform the process in the background, with no interruption to end users.

“Due to the complexities of some of our legacy servers and the mammoth task of reinstalling the software and migrating the data, we took the decision to migrate twelve of our servers into the virtual environment,” says Hunter Fairley. “We had planned to spend around two days per server reinstalling the software and migrating the data, which would have had to be done out of hours. In fact, we were able to migrate all the servers over one week during normal working hours.”

Replacing VWS’s old and inefficient SAN storage with IBM System Storage DS3500 has optimised the company’s 38 TB of total storage, with SAS drives providing fast access to critical application data and SATA drives for regular file storage. The company is now able to ensure it avoids overspending on unwanted expensive storage capacity, without compromising on performance where it is needed.

Since VWS has gained extra processing capacity, the experience for the system administrators has improved as much as it has for the end users.

“With the legacy system, we had to fix things 24 hours a day. At times of peak demand, such as Friday mornings when everyone in the office would concurrently open the ERP application to fill in their timesheets, the system would slow down to a crawl. Needless to say, our IT helpdesk received a lot of complaints,” explains Hunter Fairley.

“Today, using the monitoring tools bundled with the BladeCenter chassis, I can see that the system is not taxed at all. The system is able to process ERP traffic instantly even under load, and we’ve had no calls about it since.”

VWS’s BladeCenter solution has delivered the guarantee of high reliability that the company needs to run its mission-critical CAD applications. “The BladeCenter chassis has already shown its value in terms of reliability,” continues Hunter Fairley. “When one of the BladeCenter cooling fans broke, the chassis sent an automatic repair email to me and to IBM, who arrived and fitted the replacement within four hours. To my mind, that shows both the high standard of IBM technology and their committed attitude to customer service.”

Since installing the solution, Celerity's technicians have returned to perform a full IT health check. "Once again, Celerity exceeded my expectations by tuning the IBM system to give the servers and applications a 20-fold increase in performance throughout the network," says Hunter Fairley. "It's been a very long time since I've been impressed by computer hardware, but I must admit, the performance and throughput of the blades is extraordinary."

### Looking to the future

The IBM solution has enabled VWS to begin upgrading its mission-critical applications. "We're in the process of an ERP upgrade now, and a CAD upgrade is planned next," concludes Hunter Fairley. "Even with all our file servers and databases running, we still have seven blades of spare capacity. Thanks to IBM and Celerity, we've gained the confidence to meet our IT challenges for the foreseeable future."

### For more information

To learn more about IBM software, contact your IBM sales representative or visit: [ibm.com](http://ibm.com)

To learn more about products, services and solutions from Celerity, visit: [celerity-uk.com](http://celerity-uk.com)



---

© Copyright IBM Corporation 2011

IBM United Kingdom Limited  
PO Box 41  
North Harbour  
Portsmouth  
Hampshire  
PO6 3AU

Produced in the United Kingdom  
October 2011  
All Rights Reserved

IBM, the IBM logo, [ibm.com](http://ibm.com), BladeCenter, System x, System Storage and System Storage DS are trademarks of International Business Machines Corporation, registered in many jurisdictions worldwide. A current list of other IBM trademarks is available on the Web at "Copyright and trademark information" at: [ibm.com/legal/copytrade.shtml](http://ibm.com/legal/copytrade.shtml).

References in this publication to IBM products, programs or services do not imply that IBM intends to make these available in all countries in which IBM operates. Any reference to an IBM product, program or service is not intended to imply that only IBM's product, program or service may be used. Any functionally equivalent product, program or service may be used instead.

All customer examples cited represent how some customers have used IBM products and the results they may have achieved. Actual environmental costs and performance characteristics will vary depending on individual customer configurations and conditions.

IBM hardware products are manufactured from new parts, or new and used parts. In some cases, the hardware product may not be new and may have been previously installed. Regardless, IBM warranty terms apply.

This publication is for general guidance only.

Photographs may show design models.



Please Recycle

---