

Case Study:

emBoot - ACC Yotta awarded straight A's for transforming Learning Assistant's premium web application infrastructure; delivering a meaner, greener hosting platform

Double-Take® Software Customer Profile

Company: Learning Assist - www.learningassistant.com

Business: **Learning Assistant Ltd**

Leading the field in online assessment for vocational qualifications, Learning Assistant has enabled thousands of learners to get qualified since 2002. Their highly intuitive, interactive online e-portfolio solution is used by many colleges, councils and training companies throughout the UK.

Over the last two years, the company has experienced faster than projected growth, thanks partly to a number of innovations made by their software development team.

The Challenges

Looking at the accelerated growth rate, especially in the corporate sector, Bryan Mathers, Learning Assistant's Managing Director could see clouds on the horizon in terms of the scalability of their premium hosting setup. This was something that was going to effect the scalability of the entire business, not just the software.

"Bigger corporate customers require better Service Level Agreements (SLAs). In order to satisfy more demanding requirements, we were facing a huge shift in cost and management overhead for the commissioning of an upgraded premium solution."

What Learning Assistant needed was the most resilient and scalable system they could find, which took up the least amount of physical space, used the least amount of power, and of course, still be the most cost effective solution. Finally, the system had to pretty much run itself, and be manageable by in-house staff.

Could 'bare metal' hardware be replaced remotely in minutes? Could entire server volumes be sent offsite to DR facilities? Could a multi-terabyte corrupted server volume be restored in seconds? These were all questions being asked of the existing enterprise setup.

The ACC Yotta solution

Having pioneered high scalability, low footprint hosting infrastructures, ACC Yotta were ideally placed to create and deploy Learning Assistants 'dream system'.

Based on ACC Yottas own 'YotEnv' hosting methodology, the proposed solution involved:

- Diskless dual quad core capable low voltage, low profile Supermicro XEON servers

- emboots Winboot/i Diskless iSCSI boot server
- 6TB of high performance clustered SAN storage (Infinitely scalable)
- High performance multi-gigabit switching
- Avocent KVM over IP system

The entire solution slotted into just 8U of rack space, and used no more than 4 Amps of power. The use of a diskless environment meant that spare low-voltage servers could be powered up and 'swapped out' should any server in the setup fail or need to be taken down for maintenance. Thanks to the KVM over IP solution, all recovery tasks are possible to execute remotely.

Server storage capacity can be 'sliced off' the SAN and allocated to server volumes as and when needed - meaning an end to hard disk upgrades. Additionally, entire multi-terabyte server volumes can be 'snap-shotted' in milli-seconds, and instantly re-mounted, all with zero server overhead.

Live use

Because the solution was small enough to snap in alongside the existing systems, there was no need to rent additional cabinet space for the upgrade, or to worry about swapping out the old system for new. The new system went in, and was able to run alongside live systems until it was ready for 'show time'.

Over the first two months, the system has proven to be 100% reliable. Moreover, there have been a number of 'incident scenarios' in which the new system has proved its worth:

Scenario 1

After the first week of live use, one of the new servers - a development system, had some untested software installed on it which caused the server to apparently fail after reboot. With no means of connecting to the troubled server, previously, this would have meant a trip to the hosting centre, and a complete re-installation.

Resolution

The KVM over IP system enabled support staff to get boot stage messages from the server, and gain better insight into the exact cause and severity of the problem. Once it was decided the situation was serious, thanks the SANs snapshot facility, it was possible to recover the server back to a configuration just before the problem software was installed. In 5 minutes, the server was up and running again, the entire job undertaken remotely.

Scenario 2

After the second week, a database server started using storage space at a higher than usual rate. Whilst the issue was troubleshooted, the server urgently needed more storage space. This was a live production database server, and could not be taken down without first notifying all customers, something there was no time to do.

Resolution

Storage capacity was simply 'hot sliced' off the SAN as easy as typing in a bigger number into the server's disk capacity setting box.

Developers were then able to take more time, and therefore be able to approach, troubleshoot and solve the issue in a completely stress free environment.

Summary

The new premium system as proven itself to be highly scalable, highly efficient in terms of power consumption and manageability to run, and crucially, rock solid in terms of reliability.

The final word from the top...

"From inception to delivery of our new hosting solution, ACCYotta have been extremely thorough, exceptionally detailed, and really rather clever. Always prepared to handhold us into new technologies, but also knowing the right time to do so engendered a level of trust that we feel has been essential. We are very happy with our new platform."

Bryan Mathers, Managing Director, Learning Assistant Ltd.

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About Double-Take® Software

Headquartered in Southborough, Massachusetts, Double-Take® Software (Nasdaq: DBTK) is a leading provider of affordable software for recoverability, including continuous data replication, application availability and system state protection. Double-Take Software products and services enable customers to protect and recover business-critical data and applications such as Microsoft Exchange, SQL, and SharePoint in both physical and virtual environments. With its unparalleled partner programs, technical support, and professional services, Double-Take Software is the solution of choice for more than ten thousand customers worldwide, from SMEs to the Fortune 500. Information about Double-Take Software's products and services can be found at www.doubletake.com.

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For more information on this news, please contact:

Ian Masters
UK Sales and Marketing Director
Double-Take Software
Tel: +44 (0) 1905 745 711
Email: ian@doubletake.com

Double-Take Press Contacts:

Mark Kember
Goode International
Tel: +44 (0) 1491 873 323
Email: mark.kember@goode.co.uk / laura.hawksfield@goode.co.uk