

niu capitalizes on mid-market growth with the IBM XIV Storage System

“Hosts with the most”: IT managed services provider extends services and capacity while spending less

Overview

Challenge

For its ambitious growth strategy, niu needed a more efficient data storage infrastructure that would enable incremental, efficient scaling at low cost, and provide high flexibility and ease of management.

Solution

Implemented two IBM® XIV® Storage Systems (42 TB and 27 TB; usable) supporting a large number of virtualized Linux® and Windows® servers on VMware ESX Server.

Benefits

- Boosted performance by a factor of three
 - Cut cost of new capacity by 25 to 33 percent
 - Reduced administrative effort
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niu, an Information and Communication Technology (ICT) outsourcing partner for mid-sized companies, offers a complete, end-to-end portfolio of voice and data services. The company was established through the acquisition and merger of four organizations: Telinet, EVD, Pasporte and Ipitomi. It serves more than 5,500 UK companies and, through business relationships with other IT services and telecommunications providers, operates internationally in over 160 countries.

niu has grown rapidly through corporate acquisitions and organic growth, and is focused on continued expansion. “Our uniquely broad spread of services and customers creates a great opportunity for cross-selling; we are also gearing up to increase our penetration in the higher echelons of the midmarket,” says Steve Bedford, Technical Director, niu. “To support this planned growth and handle background growth of around 1 TB per month in capacity demands from existing clients, we needed to refresh our storage infrastructure.”

According to Bedford, diverse factors contributed to the rising demand for data storage capacity: Growth in the number and size of hosted customers; natural growth in business data volumes over time; new data retention policies of certain customers; increasing customer demand for data replication to support high-availability environments; and significant growth in demand for the recording and retention of voice data.

Previously, niu found it relatively costly to expand its high-end disk capacity, particularly as the need to support Microsoft® Windows-based customers led to large amounts of unused capacity. Bedford explains: “We had to ensure adequate headroom for growth in each customer’s environment, especially for Windows, where it’s not really possible to resize LUNs. We charge our customers for only the capacity they actually use, so all unused headroom was an unrecovered



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cost—in terms of purchase price as well as energy consumption. This is where the XIV system’s thin provisioning helped us realize economies of scale and lower our costs, internally, and for our customers as well.”

High performance at low cost

To meet the challenge of delivering more capacity more efficiently and at lower incremental cost, niu selected the IBM XIV Storage System, initially implementing a single storage system with 27 TB and later adding a second storage system, which was recently upgraded to 42 TB. The company uses its XIV systems to host a large variety of customer systems, the vast majority running on virtualized Microsoft® Windows and Red Hat Enterprise Linux instances on VMware ESX Server. Applications using the XIV system include: Microsoft Exchange Server, Lotus Notes®, Sage accounting software, Microsoft Dynamics ERP, Ariba procurement software, and business intelligence software from SAS and IBM Cognos®. Databases include IBM DB2®, Microsoft SQL Server, Oracle and MySQL; the XIV systems are also tapped by several of niu’s web-based environments, using IBM WebSphere® and the LAMP stack. The company uses IBM Tivoli® Storage Manager to back up the XIV systems to tape libraries. It maintains a mixed IBM storage environment – the XIV system alongside IBM System Storage® DS8300 servers to provide the broadest coverage for its customers’ diverse requirements.

“The IBM XIV Storage System delivers high performance and low cost in an enterprise-class solution,” says Bedford. “IBM XIV gave us an immediate three-fold performance increase—and as we add capacity, it will get even faster. Performance is a key element of our SLAs—this is making some service providers in our industry nervous, because so many different factors affect the overall performance of an application or service. With the XIV system, we are confident that data storage won’t be a bottleneck!”

Lightning-fast deployment

niu worked with Tectrade, an IBM Premier Business Partner in the UK, to deploy and configure the XIV storage systems, and to provide training for two in-house staff members. “The IBM XIV implementation was quick and easy, as expected, and the training costs were astonishingly low,” says Bedford. “Setting up new customers is much faster than before, which means we can grow our customer base without adding additional resources. With the previous solution, it took about an hour to define a host, provision storage and map it—we can do the same steps on the XIV in just 10 minutes. And with IBM XIV’s thin provisioning, we can assign plenty of headroom for each customer without actually using up disk space. This is particularly handy for virtual desktop environments, which represent a major

IBM Solution Components

Hardware

- IBM XIV® Storage System
- IBM System Storage® DS8300

Software

- IBM AIX®
- IBM Cognos®
- IBM DB2®
- IBM Lotus Notes®
- IBM Tivoli® Storage Manager

Business Partner

- Tectrade
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IT Environment

Operating systems

- Microsoft Windows Server 2003 and 2008
- Red Hat Enterprise Linux 3 and 4

Databases

- Microsoft SQL Server 2005 and 2008
- Oracle
- MySQL

Applications

- Microsoft Exchange Server
- Sage
- Ariba
- SAS
- Apache, Apache Tomcat

Virtualization

- VMware ESX Server 3.5 and 4.0
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growth area for niu. Taking the higher utilization into account, our incremental costs per terabyte have fallen by 25 to 33 percent—and that’s with better performance and data protection.”

Jim Summers, IT Infrastructure Manager, niu, comments: “Energy consumption is becoming a bigger issue for us as costs rise, and that was certainly a factor in looking for a new storage solution. The smaller power footprint of the XIV is a clear benefit, especially given the rate at which our storage capacity is growing. The more compact and efficient the infrastructure, the lower the costs.”

Inclusive package

Some 40 percent of niu’s customers now require some degree of high availability across their hosted systems. For those using VMware—a whopping 80 percent of all new customers—niu will achieve this by replicating data between its two XIV systems. “The software bundled with XIV makes replication much more cost-effective than before enabling us to offer enterprise-class asynchronous and synchronous mirroring options that are within the budget of our midmarket customers,” says Bedford. “We are also impressed with the XIV snapshot function, which is fantastic for moving preproduction environments into production.”

“With IBM XIV, we make far more efficient use of the available capacity, which means less frequent upgrades and lower costs for us,” says Summers. “It’s particularly compelling when you compare it with the cost of implementing something like RAID 5 or RAID 10 on a conventional array, when you need to tie up large numbers of disks. By striping data across all available disks, the XIV system automatically gives us a much higher level of protection and redundancy, with much higher performance and much faster recovery times.”

With no RAID configuration to set up and maintain, and on-the-fly resizing of LUNs, niu is managing customer storage with less time and effort, freeing up internal staff to focus on service delivery and strategic concerns.

Bedford concludes: “Our business is in keeping our customers’ IT running optimally at all times. The XIV system takes away a huge amount of administrative effort and hides the underlying complexity, enabling us to spend less time managing storage and more time concentrating on service excellence.”

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For more information

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Route 100
Somers, New York 10589
U.S.A.

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July 2010
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