



## Leading Global Direct Marketer Chooses Windows Server for Storage Expansion and Flash Performance



### Customer Background

4imprint is a promotional product company, offering customers over twenty thousand different products from Band-Aids to bar glasses, as well as custom art and graphic designs. With 100,000 customers in North America and over 450,000 orders last year, 4imprint has grown into an acclaimed and Forbes-recognized company. 4imprint serves both North American and European markets from multiple offices in Oshkosh, Wisconsin, and Manchester, UK.

### IT Challenge – Beefing up the backend, IOPS and Flash storage

4imprint like many companies uses hybrid approach for their technology needs, with much of their e-commerce hosted in the cloud and a backend system on premises. 4imprint's kept an on premise system to manage their SQL databases, ERP apps, as well as a number of custom SQL applications, for their Wisconsin call centers and offices. 4imprint hosts their back-up and DR site at their second office and warehouse.

In their initial deployment 4imprint searched for VM system that would enable them to most efficiently run their SQL servers and manage their storage. 4imprint originally chose VMWare for their virtualization needs as they searched for the proper storage options. For their shared storage needs, 4imprint considered several vendors including: EMC VNXe, Equallogic PS6, and NetApp FAS. Eventually 4imprint choose NetApp's FAS with 10G iSCSI, thanks to its combination of price, cluster readiness, and preset integration with VMWare.

4imprint's VMWare and NetApp deployment was serviceable for a while, but issues soon arose. 4imprint's backend system, which was running SQL databases, ERP apps, and a number of custom SQL applications, proved to be very workload-intensive, too intensive for their NetApp FAS. From their NetApp FAS, 4imprint experienced declines in write and read performance, as the SSD and flash storage were underpowered. From VMWare, 4imprint grew impatient with their expensive licensing fees. With storage issues becoming a constant annoyance and software licensing fees adding up, 4imprint looked for a more cost effective and high powered virtualization and storage solution.

### Making a Microsoft Storage decision

4imprint established this new set of goals for their next storage and virtual machine platform:

- Lower software licensing costs
- Increased storage capacity
- Tiered flash storage
- Cost effective scalable modules for storage

As 4imprint begun their search for their next storage solution, they came across a TechED presentation from Microsoft on their Scale out File Servers (SoFS).

In Microsoft Scale out File Servers, 4imprint found a solution with Active-Active file shares making content accessible through all cluster nodes simultaneously. SoFS also provided a simpler management by removing the need for multiple clustered files, and providing increased bandwidth by utilizing the total bandwidth available for each node. With Hyper-V, 4imprint found a cost effective virtualization, providing significant savings versus VMWare. Engineers at 4imprint even implemented a new test environment to test drive SoFS. 4imprint tested SoFS on a server utilizing SSD/HDD drives, in order to see the system is real and does work.

### The Challenge



- Lower cost VMWare licensing
- Expand Storage Capacity
- Increase Performance to support customer SQL databases and ERP apps
- Find cost effective and scalable storage platform

### The Solution



- Deploy Windows Server SOFS with Active-Active file shares
- Migrate to Windows Hyper-V SOFS + JBOD increase storage availability and performance with SSD/HDD tiering
- Move to Azure and utilized ASR for site to site replication

### The Result



- Successfully implemented Windows Server 2012R2 Storage Space for Enterprise storage workload
- Increase storage capacity by 50%
- Reduced software licensing fees
- 70% cost saving by leverage Azure Site Recovery (ASR) for storage replication



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*"My best advice is to do a test drive first. When we were considering Microsoft and DataON we bought a server with some SSD and HDDs and played with it in a dev environment to test the system prove it. This lets you start small and learn some of the ins and outs, as it's a different mindset."cheaper to, I don't need my team to also learn Linux and this lowers the learning curve and reduce chance of human error."*

### Advice for IT Pros

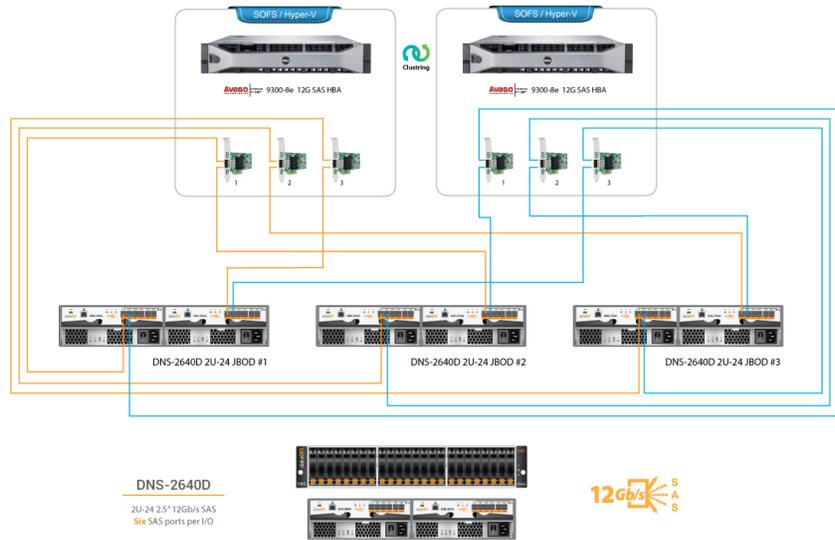


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### Why DataON™?

4imprint first became aware of DataON's storage expansion options during a Microsoft Storage presentation. After reviewing the DataON performance, technical expertise and pricing, it soon became clear to 4imprint that the DataON Storage solution met their strategic, operational, and cost requirements. The DataON JBOD platforms presented the right balance between a fully vendor supported hardware platform, Microsoft certifications, and deep technical integration (SoFS and SMB3 Networking) with their Microsoft based environment.

DataON's JBOD provided an easy to deploy integrated platform that includes redundant powers supplies, SSD and HDD storage, and multiple networking options including InfiniBand and 1/10/40GbE RDMA (Remote Direct Memory Access) for maximizing network and storage connectivity via SMB (Server Message Block) transfers networking platform that unified management of all systems components with MSCS VMM, additional SSD and HDD in JBODs increase storage capacity, all to create a high availability cluster environment. Thanks to the Microsoft SoFS, and DataON JBODs, 4imprint now works with 50% spare storage.



### Primary and Secondary systems, and Azure Site Recovery

4imprint extended their Microsoft decision by switching to Microsoft Azure for their cloud needs. Instead using Azure simply for cloud based disaster recover as a service (DRaaS), 4imprint utilized Azure for site to site replication between their Wisconsin and UK sites. To manage their disaster recovery, 4imprint utilizes Azure Site recovery for on-premise to on-premise recovery between their main office and call center and their back-up infrastructure at their warehouse, all which is managed through the Azure portal. Site Recovery coordinates and manages the ongoing replication of data by integrating with existing technologies including System Center and SQL Server Always On. For their UK offices, 4imprint also uses Azure for its cloud based disaster recovery.

Another benefit of switching to Azure for site to site recovery were the significant savings. Azure Site recovery to Azure cost \$54/month per instance protected, versus Azure Site Recovery to an owned site cost only \$16/month per instance protected. That makes Azure Site Recovery 70% less expensive when recovering to an owned site versus recovery to Azure. For every 100 instances this would represent a savings of \$3,800 a month.

### About DataON™

DataON™ is the industry leading provider for Hyper-Converged Cluster Appliances (HCCA) and storage systems optimized for Microsoft® Windows Server environments. Our solutions are built with the single purpose of rapidly and seamlessly deploying Microsoft applications, virtualization, data protection, and hybrid cloud services. Our company is focused on customers who have made the "Microsoft Choice" and we provide the ultimate platform for the Microsoft Software-Defined Data Center (SDDC). DataON™ is a division of Area Electronics Systems, Inc.

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