

## IBM System Storage N series – The perfect partner for VMware

In today's competitive landscape, the need to ensure that your organisation's IT infrastructure is working for you to drive down costs, increase availability and improve efficiency and manageability is increasingly important. One solution that many businesses are contemplating is server consolidation, and one of the most popular routes for consolidation is with VMware virtual infrastructure.

The benefits of VMware virtualisation are typically most prevalent within the server space; however to fully maximise the benefit of VMware, you need a suitable storage solution to prevent excessive centralised storage growth.

So, you've consolidated your server infrastructure down to a resilient, manageable and optimised environment, only to find that your storage has now ballooned, is running with poor utilisation, difficult to backup and is potentially the highest cost single point of failure in your entire environment!

### What are the options?

First of all, it's not all doom and gloom. All IBM disk subsystems are capable of improving the centralised storage required by a consolidated server environment, but one stands out among the rest for a VMware infrastructure, and that's the IBM System Storage N series.

### Why N series?

#### 1. Availability

The N series range has multiple standard and optional features that can help improve availability, including a bespoke RAID level (RAID-DP) which gives optimum performance and availability, cluster services for high-availability, SnapShot capability to provide point-in-time copies and mirroring for disaster recovery options to name a few.

#### 2. Utilisation and Provisioning

An obvious driver for server consolidation is improved utilisation, so ideally you'd want the storage to be efficiently utilised also. This is another area where the N series excels. Thin provisioning of storage allows the N series to only consume disk when data is written to it, whereas traditionally you have to allocate the total amount of space you require from the start. This allows for the storage to always be optimally utilised and additional disk purchases to be delayed until required. Other advanced features including flexible cloning and flexible volumes add to the improved utilisation effort also.

#### 3. Improved Server Consolidation

If the ultimate goal of your consolidation project is maximum reduction in servers, whether they are virtual or physical, then the N series can help. The N series range can serve files directly to Windows or UNIX clients through optional built-in CIFS and NFS capabilities helping you to remove traditional file servers from your environment.

#### 4. Heterogeneous Storage Access

The industry norm is that when asked how you'd like to connect to your storage, you have to decide whether you are going to use fibre channel or iSCSI, or even a NAS solution. The IBM System Storage N series range allows you to implement a single storage solution that can operate iSCSI or FC protocols and operate as a NAS appliance all at the same time and on any of the models from entry up to enterprise.

#### 5. Compliance

If you are required to retain data, the N series range can be partitioned to provide WORM capable disk storage so that this data is non-erasable and non-rewriteable. Most disk solutions require a totally separate WORM solution to provide this level of functionality.

#### 6. Scalability

All N series models share a common architecture, single operating system and management interface. This allows for significantly simplified training and integration, a straightforward upgrade path, higher productivity and interoperability and ultimately a lower total cost of ownership.

The above reasons are a brief outline of how the IBM System Storage N series range can excel in a consolidated environment, but the key message here is; **when looking at consolidating your server environment, have you fully investigated the storage requirements as well?**

