

# PRODUCT REVIEW

## IBM STORWIZE V7000 GEN2

Virtualising storage in the enterprise is essential for big data apps but if the solution is difficult to use then any cost benefits can easily be outweighed by management and support overheads.

IBM's Storwize V7000 Gen2 overcomes these issues as this clustered, storage virtualisation platform has been designed from the ground up to be easy to deploy and provision.

It's also a good fit for mid-sized businesses as they can start from as little as 5TB and expand capacity as demand and budgets dictate. The Storwize is packed with storage features which include snapshots, high performance thin provisioning plus optional FlashCopy replication and it can dynamically migrate storage from legacy SANs.

IBM's optional Easy Tier monitors I/O activity and after a 24-hour learning period, migrates hot data on to SSDs for faster access. The new Gen2 enclosures are optimised for flash storage and support three tiers where hot data is moved to SSD, to SAS drives as it cools and then to cheaper nearline SAS when it's cold.

Using dedicated acceleration hardware, real-time compression can make big savings with IBM claiming it can compress active production data by up to 80 percent. IBM can analyse snapshots of customer workloads and will guarantee to deliver specific storage savings.



Multiple MDisks are allocated to storage pools and within these, you create virtual volumes and map them to your hosts. During creation, you can choose from generic, mirrored, thin provisioned, mirrored thin provisioned or compressed volumes.

Storage pool balancing automatically distributes data across member arrays for improved performance while the optional IP replication feature uses Bridgeworks SANrockIT technology to perform transparent network optimisation.

The 2U rack chassis supports either 12 LFF or 24 SFF drives, comes with dual redundant active controllers and offer choices of 16Gbps and 8Gbps FC, 10GbE or Gigabit data ports. Expansion potential is impressive as up to 20 external disk shelves are supported for 1PB of raw storage while quad enclosure clusters can push this to a massive 6PB.

Installation has been simplified further as IBM has done away with the USB key in the Gen1 models. All we had to do was connect a laptop to the controller's 'technician' network port and provide a management IP address.

Provisioning doesn't get any easier either as the slick web GUI opened with a wizard to guide us through storage configuration. Referred to as MDisks (managed disks), arrays can be created for you by the wizard based on the drives present or you can create them manually where it offers sage advice on array optimisation.

You can also virtualise external arrays from other vendors where you map them to the Storwize which presents them as separate storage pools. Auto-balance is another new feature that automatically distributes virtual volumes across all MDisks in a pool for improved performance.

Host mapping is a simple task as you can either do this during virtual volume creation or later on. Either way, we could view connected hosts by their auto-detected WWPNs or create new ones manually.

For appliance monitoring, the web GUI provides a basic set of graphs showing general utilisation and interface performance over the previous five minutes. If you want more the optional Tivoli Storage Productivity Centre (TSPC) software can gather detailed performance statistics and present trending analysis to help plan future storage provisioning.

**Product:** Storwize V7000 Gen2  
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**Price:** Starts from £15,000 ex VAT

**VERDICT:** The Storwize V7000 looks very good value as it can scale easily with demand and has an impressive expansion potential, making it a solid long-term investment. We found it remarkably easy to deploy and manage while the new features in the 2nd Generation models make it even more versatile.