

IBM announces new FlashSystem storage, new Spectrum Virtualize cloud solutions and new IBM Cloud Satellite SaaS offering

Silverton Consulting, Inc. StorInt™ Briefing

IBM® recently announced a new IBM FlashSystem® 5200 storage system, additions to their Spectrum Virtualize cloud solutions, and storage support for their IBM Cloud Satellite SaaS offering.

IBM FlashSystem 5200 storage system

The new entry-level FlashSystem 5200 storage is a brand new, dual controller, **1U** appliance with up to 12 2.5" NVMe SSDs, SCM or NVMe IBM FlashCore Module (FCM) drives. The new system includes Spectrum Virtualize software services, 2 4-core SkyLake CPUs, up to 512GB cache, 16/32Gbps FC NVMe-oF, 10/25Gbps RoCE/iWARP, and 10Gbps iSCSI. The FlashSystem 5200 also supports scale-up, SAS SSD extension shelves that can add another 736 SSDs to the system capacity. Further, FlashSystem 5200 offers scale-out configurations of up to 4-5200s in a single scale-out storage cluster.

IBM FCM offers outboard hardware compression and encryption plus flash capacity of 4.8TB, 9.6TB, 19.2TB or 38.4TB per drive drives. The NVMe SSDs offer from 0.8TB to 15.4TB capacity per drive and the SCM drives provide 0.4TB to 1.6TB drives. The FlashSystem 5200 supports a intermix of FCM, SCM and NVMe SSD drives. And can start with a minimum of 2 drives or 38TB in raw capacity.

The FlashSystem 5200 also offers a **hybrid flash**, which can take advantage of standard QLC Flash together with higher speed flash in NVMe SSDs, FCM or SCM. With Spectrum Virtualize Easy Tier®, active data will be automatically placed on higher speed flash with lower speed flash reserved for slower accessed data.

In addition, the new Spectrum Virtualize functionality offers Distributed RAID (DRAID) 1. Previously Spectrum Virtualize, offered DRAID 5 and 6, but with this level of system software on the FlashSystem 5200, they offer DRAID 1 as well, which can improve performance 10-15% for smaller configurations.

Furthermore, IBM has recently implemented Red Hat **Ansible**® automation for FlashSystem **HyperSwap**® active-active configurations as well as a new GUI to configure high availability HyperSwap plus remote replication for 3-site in-region and out of region DR.

FlashSystem 5200 also supports VMware® VASA, vVOLs, and SRM storage interfaces as well as CSI for Kubernetes® and Red Hat® OpenShift® container persistent storage.

The FlashSystem 5200 offers high IO performance, or up to 1.5M IOPS and 21GB/sec of throughput per system. And with scale-out, the FlashSystem 5200 offers linear performance, i.e. with 4 nodes, it can provide up to 6.0M IOPS and 84GB/Sec of throughput per cluster. In addition, the FlashSystem 5200 provides end to end NVMe storage with response time latencies down to 70usec.

Even with all its performance and scalability the FlashSystem 5200 was designed as an entry level storage system for the enterprise.

IBM introduced with FlashSystem 5200 a new two-tier IBM storage support offering which includes **Basic support** (5X9), next business day hardware service or **Advanced support** (7X24) with same day hardware service. Pricing for the two tiers of support is based on a percentage of purchase price and is available for 1 to 5-year contracts.

Spectrum Virtualize functionality also offers storage virtualization that includes transparent data migration, data reduction pools (deduplication-unmap), data-at-rest encryption, and local/remote replication (for snapshots, DR, and cloud migration/copy) that supports up to 500 different types of storage systems behind a cluster.

New Spectrum Virtualize cloud solutions

Spectrum Virtualize is already available on Amazon® AWS® and in IBM Cloud® but IBM will offer it on Microsoft® Azure® (beta program starts ~3Q21). With Spectrum Virtualize cloud migration and copy services, customers can have their FlashSystem data be automatically copied to the cloud for DR, capacity expansion and hybrid cloud.

New IBM Cloud Satellite SaaS

IBM Cloud Satellite is a new cloud managed service offering for on prem, in cloud and at the edge. Storage systems supported for IBM Cloud satellite include SAN Volume Controller, FlashSystem, Spectrum Scale and Elastic Storage Systems. The service supports deployment of Red Hat OpenShift software, IBM storage and servers from most major vendors.

Significance

The new FlashSystem 5200 in 1U offers lightning-fast response time with oodles of IOPS and throughput that can supply a significant shot in the arm for data centers suffering with lagging IO performance that also works all the way out to the edge. Although designed as an entry level storage system, the new dual-controller appliance's impressive packaging scale out performance and scale-up capacity together with Spectrum Virtualize functionality could become your data center's only storage system.

The upcoming Microsoft Azure Spectrum Virtualize storage offering will help IBM complete their hybrid cloud vision. And the new IBM Cloud Satellite SaaS offering enters a crowded, cloud-managed infrastructure environment that customers need to realize their multi-cloud/hybrid cloud vision.

Silverton Consulting, Inc., is a U.S.-based Storage, Strategy & Systems consulting firm offering products and services to the data storage community.