



Response to EMC VMAX³ and all Flash VNXe announcements for Storwize

[“EMC Announces VMAX³ as Enterprise Data Service Platform”](#)

[“EMC Announces All Flash VNXe3200”](#)

In addition to adapting the VMAX³ to be a storage virtualization solution to provide data services for externally attached storage that competes with the SVC, additional improvements with the FAST (storage tiering) software have been made for setting service level objectives to manage the quality of service across tiers of storage, including externally attached tiers.

In the storage virtualization area, VMAX³ includes the following, which will be common competitive areas for the Storwize systems that virtualize external storage and the SVC:

EMC has relabeled their Federated Tiered Storage feature of VMAX³ as FAST.X along with modifications. The modifications include changes to allow a variable number of processor cores to be allocated for the FAST.X software and use of external storage as different tier levels within the FAST tiering software including Service Level Objective settings. Previously, external storage attached with Federated Tiered Storage was always tier 4.

As part of the external storage attachment with FAST.X, two offerings from EMC were announced: CloudArray with VMAX³ and XtremIO with VMAX³ as another tier of storage. CloudArray is the TwinStrata software on a server with a Fibre Channel target and operates as LUNs that are migrated to a cloud. The XtremIO is another externally attached (via Fibre Channel) storage system as a tier within VMAX³ with the benefit of the data services provided.

The new HyperSwap feature for IBM Storwize will compete with SRDF/Metro for VMAX³. SRDF/Metro cluster provides native active-active stretched clusters for VMAX³. Previously, stretched clusters were only available with the use of VPLEX.



Stretched clusters are supported for all attached storage, including externally attached.

A major focus for EMC is simplifying use of VMAX³. In addition to the new features or adapted capabilities, EMC has greatly simplified the configuration and provisioning for the VMAX³ with redesigned software and factory default settings for best practices. A major demonstration at EMC World showed how fast new volumes could be configured with a challenge to attendees to post the fastest time at an interactive booth.

EMC released an orderable configuration for the VNXe3200 with all flash as a unified storage system. Citing a 3TB system for under \$25K, the system is a standard VNXe3200. Three capacity models may be configured: 2TB, 3TB, and 7.2TB.

IBM to Customers

The message regarding simplicity should be that EMC still has a long way to go to approach the simplicity of administration that Storwize has with its advanced GUI. The improvements are significant for EMC but still not to the level of Storwize and note that Storwize advances will continue while EMC tries to catch up.

For storage virtualization, Storwize has a long history since 2003 and EMC's new focus by repurposing Federated Tiered Storage which had a very low adoption with a new name – FAST.X – shows that EMC is just now understanding the value of the Storwize ability to use external storage with advanced storage tiering. EMC is following IBM's lead. IBM has Easy Tier to provide automated management of tiered storage, including external storage, with I/O Rate Controls across I/O groups to provide quality of service controls. EMC is just now addressing this needed customer capability, which has long been included with Storwize.

As with the SVC messaging, it could also be pointed out to the customer that having an XtremIO connected behind the VMAX³ is EMC's counter to the common Storwize capability shown with IBM FlashSystem V9000 which uses the Spectrum



Virtualize software as an SVC in front of the FlashSystem 900 to provide advanced data services.

Adding an orderable configuration for VNXe as an all flash system is EMC coming late to realize that customers want choice. IBM has supported all flash versions of Storwize for a long time. EMC reaction to competition and customer need is very late.