

Dell Technologies™ new PowerStore, PowerScale & APEX offerings

Silverton Consulting, Inc. StorInt™ Briefing

Dell Technologies announced a couple of new storage appliances and three new APEX-aaS offerings at Dell Technologies World 2021 and the previous month.

New Dell EMC PowerStore 500 appliance

The PowerStore product line are Dell EMC's unified block and file storage solutions in the same appliance that was just resealed last year and has already achieved the fastest market growth of any product in Dell's history. The new PowerStore 500 offers a lower cost-effective entry point addition to this platform and provides up to 1.2PBe (@4:1 compression, guaranteed) in the same form factor as other PowerStore models.

The PowerStore 500T can scale out with other PowerStore T models (by adding up to 3 more PowerStore T appliances to a 4-node cluster) or can scale up by adding more drives to the appliance.

New Dell EMC PowerStoreOS 2.0 enhancements

PowerStoreOS 2.0 introduces new capabilities that increase performance, scale, efficiency and resiliency. The platform now offers NVMe over fabrics/FC (NVMeoF/FC) support. So, any PowerStore appliance can support normal FCP as well as NVMe FC services. The new release also adds intelligent data reduction which increases (up to 20%) IOPS during peak IO. PowerStoreOS 2.0 also enables users to scale-out appliances running AppsON to easily add capacity and compute.

In addition, the new release adds SCM metadata tiering. In prior releases, customers had to configure appliances to be all SCMs or all NVMe SSDs, but with the latest software, customers can deploy hybrid (SCM & NVMe SSDs) storage. PowerStore then uses SCM for metadata to improve access speed. A new DRE or dual redundancy parity option is also offered to protect against dual drive failures.

New Dell EMC PowerScale F900 appliance

The new PowerScale appliance is their most powerful node yet and is an all-NVMe file system storage appliance that comes in a 2U configuration with up to 24NVMe SSDs offering from 48TB to 369TB of raw capacity per node or up to 93PB raw capacity per cluster. The F900 comes with inline, hardware -assist, compression/deduplication. The new F900 node is tailor made to support massive graphics and video files, as well as large analytical, research, genomic and AI/ML/DL data repositories.

As you may recall PowerScale supports a minimum of 3 PowerScale nodes to a maximum of 252 nodes in a single cluster and run OneFS storage software. OneFS 9.2 adds a performance boost for F200 and F600 nodes. And PowerScale is now available on GCP for Tier 1 Agile configurations.

New Dell Technologies APEX-aaS offerings

Dell Technologies new APEX-aaS offerings come in 3 types:

- **Infrastructure Services:** provides on premises storage as-a-service. Customers can order file or block services with service levels for capacity, performance and availability. Capacity commitments start as low as 50TB with the option to scale as needed. Hardware is installed in as few as **14 business days** at customer sites, edge locations or in a CoLo facility. The storage is owned and maintained by Dell Technologies but operated by the customer. The service will be billed on a \$/GB/month basis under a 12- or 36-month subscription. Dell monitors and manages the SLAs for the storage service.
- **Cloud Services:** provides managed compute services. Customers can order from Dell up to 500 cloud compute instances at various performance levels/specifications to be installed and run in private or hybrid (private-public) cloud locations. Customers pay only for what's used, and the service is billed on a monthly compute instance consumption basis for 12- or 36-month subscriptions. Cloud services compute instances can be deployed **within 14 business days** and be scaled up or down within 5 business days.
- **Custom Solutions:** offers two models, a **flex-on-demand model** data center infrastructure where customers pay per use or a **data center utility model** with a flat fee for the service.

All these services are ordered and managed with the new **APEX Console**. In addition, later this year APEX will be offered in **Equinix CoLo locations** throughout the world which will offer multi-public cloud connectivity for these services

Significance

The new PowerScale F900 and PowerStore 500 appliances are great additions to Dell EMC midrange and clustered file system storage. The new PowerStoreOS NVMeoF/FC and SCM metadata tiering should increase block IOPS and speed up file storage access as well.

APEX represents Dell's move to adopt, across the board, a new consumption model for storage and compute to match cloud offerings. Many other storage vendors are also moving in this direction, but Dell has a broader portfolio than most of the others.

The **14 business days from order to deployment** seems fast but their (public cloud) competition can offer these services (within reasonable scale) at a click. We presume that as the APEX moves forward these timeframes will be reduced even more. However, we don't foresee it ever matching public cloud infrastructure at a click.

Silverton Consulting, Inc. is a Storage, Strategy & System consulting services company, based in the USA offering products and services to the systems and data storage community.

