Interview

Why the technology of the DDP differs from others

The shared storage solution of the DDP - Dynamic Drive Pool - the Ethernet SAN system differs from all others. We want to invite you to join a conversation with Jan de Wit, CEO of Ardis Technologies, telling you more about the DDP technology and its benefits.

Jan, we often spoke about what's unique with DDP systems. DDP is an Ethernet SAN system using iSCSI. Could one say that the basis for all the unique features is the Ardis Virtual File System AVFS, the metadata controller developed by Ardis Technologies?

Jan: The Ardis Virtual File System AVFS is the technology behind the DDP, yes.
It manages access to the Ethernet SAN and enables that one or even more DDPs - if you have a Cluster configuration - are in one file system. There is only one file system, the - ddpvolume - that holds all files, folders and foldervolumes.

Jan de Wit, CEO Ardis Technologies

> ### The DDP has only one file system, the "ddpvolume", that holds all files, folders and foldervolumes.

The DDP FolderVolumes are surely one of the main features that are unique to the DDP. What's making them so special?

Jan: With the DDP technology, the metadata (the virtual file system) is independent of the data. The data itself is stored in Data Locations. The metadata show up as one virtual volume ("ddpvolume"). This "ddpvolume" can hold folders with volume properties, so-called foldervolumes. For each foldervol-ume you have a precise access control, you can assign quota to manage capacity and they also enable a unique way of using SSDcaching and deciding dynami-cally where the data resides by selecting Data Locations.

You just mentioned one of the nowadays "buzz words": SSD Caching. I remember that you told me that what DDP means with caching is not very much related to the caching meth-ods used by other manufacturers.

Jan: That's true. Most people confuse metadata SSD caching with data SSD caching. Very often SSD Caching is used as a synonym for caching of metadata. For us, the main topic is the data SSD caching. It's another big advantage of the DDP technology that although iSCSI itself is a block-based technology, the DDP system's caching is file based. This enables advanced caching modes. You have full control of the SSD Cache and it can be configured for each of your foldervolumes to increase performance where and when it is needed.

Okay, that sounds a bit abstract to me now. Could you give me an example?

Jan: Let's say you have a DDP system with 3 Data Locations: "Cache", "HD1" and "HD2". "Cache" consists of SSD drives, HD1 and HD2 consist of normal spinning hard drives. To start your project you create a FolderVolume to hold your project data. It is a virtual volume so you can set the caching method and the Data Location specifically for this FolderVolume. Choose "On-Demand" as cache method and "balanced" as Data Location. All data that you now copy/ingest into your FolderVolume will be distributed Load Balanced to HD1 and HD2. This Load Balancing already increases performance.

Plus all data in use will be also copied to the SSD Cache, which again increases performance. For projects with a very high-performance requirements you can also use the SSDs as primary storage, so all files are directly stored on the SSD cache.

The example "DDP system with three Data Locations" sounds like one single DDP system. How does the procedure differ when the setup is a Cluster configuration?

Jan: There is no difference as it is all within AVFS. As there is always just one "ddpvolume", the virtual file system can hold one DDP or multiple DDPs. The three Data Locations mentioned above can be all in one single DDP system, but they could be in DDPs of different types and build dates and even do not have to be in the same room or city. DDP is real Scale Out. Linear Scaling in bandwidth and capacity. Desk-tops have Parallel Data Access to DDPs in a Cluster. More DDPs can be added without changes to the directory tree.

That sounds to me that especially with a DDP cluster configuration you are pretty safe for the future?

Jan: Well, if you realize that you can add new DDPs or remove old DDPs any time without interrupting the workflow, if you realize that you can easily increase capacity and performance, yes, that means that a DDP Cluster is able to live forever and remains up to date.

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