

STRW Storage Environment



We are proud to announce the availability of a new storage environment based on the Dell PowerVault Fluid Filesystem hardware. The storage unit can potentially grow to multi petabyte scales, but is currently only 125TB large. In order to expand such a system we have to change our financial mechanism. Large disk space is not a free commodity. If you look at external companies, they charge you in the order of Euro 0.06/GB/month (Google, Amazon, etc.). That is Euro 720/TB/year!

We will charge you Euro 100/TB/year only. To explain how this pricing is calculated: The initial storage hardware to build a 125TB pool is of the order Euro 75k. This system can be extended with two Euro 40k extension boxes, each 125TB in size. So one complete unit of 375TB formatted space costs Euro 155k. Adding to this a fraction of man-power and additional network connectivity for Euro 30k gives Euro 185k for the total cost for an end-of-life period of 5 years.

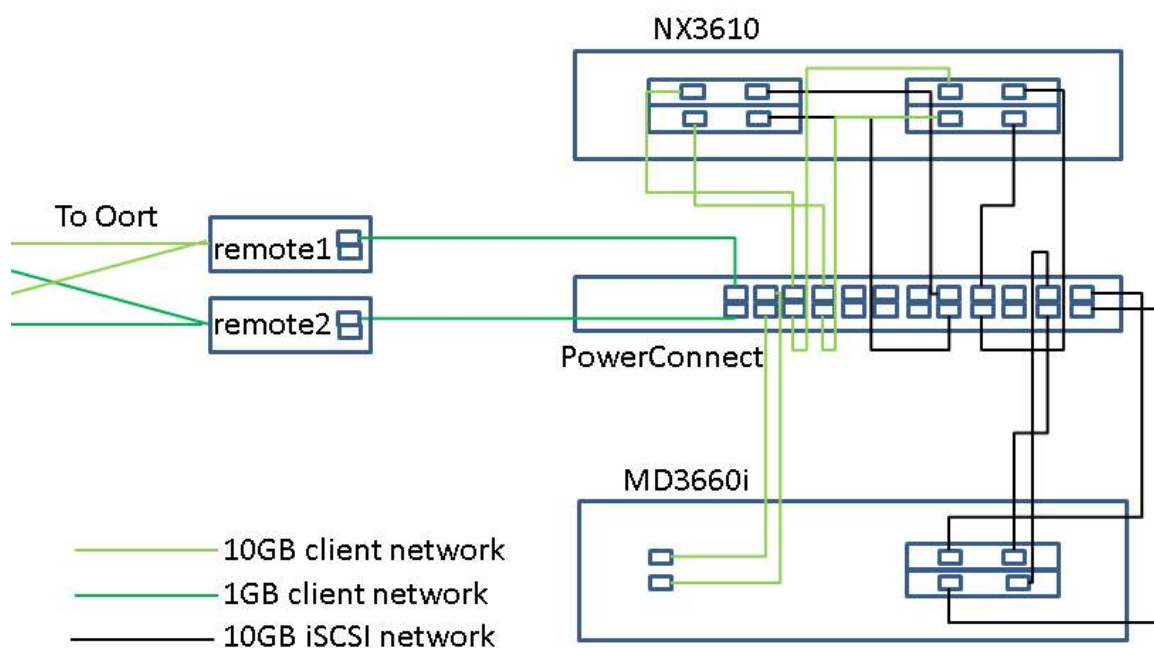
Therefore we will charge $185000/5/375 = \text{Euro } 100/\text{Tb/year}$.

What is it

To give you a flavour of the system, the disk store (MD3660i) uses a RAID6 redundancy (so two spare disks) per Logical Storage Unit. There are 8 such LUNs defined on the storage unit. These LUNs are presented through 4 x 10GB network connections to a NAS head (NX3610). This NAS head consists of two clustered computers that each have 2 x 10GB network connections to the disk store. In addition there are 2 x 10GB network connections going out of each NAS computer to the client network. Currently we do not have the full capacity to put this onto the routers, just 2 x 1GB (but this will soon be upgraded).

On the NAS head all the 8 LUNs are merged to an 125TB disk store that can be given out as smaller volumes. Each such volume can then be presented as an individual NFS share to the workstations and servers. Each share has its own read/write access rights and can be setup for individual groups.

Schematic overview of current system



If you wish to lease storage space, please email helpdesk@strw.leidenuniv.nl with your request.

Who uses it

Currently we have two requests recorded:

- SPZ group for 30 TB
- Lofar group for 30 TB

Hardware images

Dell NX3610 head providing nfs disks



Dell MD3660i PowerVault housing 60 x 3TB disks



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