

nfsp: A Distributed NFS Server for Clusters of Workstations

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A consequence of the increasing popularity of Beowulf clusters has been their increasing size (in number of nodes). Yet, the hard drives available on these nodes are only used for the system and temporary files, thus wasting a lot of space (several TiB on large clusters !). The systems that might help recycling this otherwise-unused space are few and far between. This paper presents a NFS server that aims at using the unused disk space spread over the cluster nodes and at offering performance and scalability improvements (compared to the plain NFS servers). The architecture of our solution uses a metaserver and I/O daemons. The client only sees plain NFS, thanks to NFS over UDP spoofing techniques. A first implementation and early performances are shown for this approach.