

pNFS SCSI layout server user guide

This document describes support for pNFS SCSI layouts in the Linux NFS server. With pNFS SCSI layouts, the NFS server acts as Metadata Server (MDS) for pNFS, which in addition to handling all the metadata access to the NFS export, also hands out layouts to the clients so that they can directly access the underlying SCSI LUNs that are shared with the client.

To use pNFS SCSI layouts with the Linux NFS server, the exported file system needs to support the pNFS SCSI layouts (currently just XFS), and the file system must sit on a SCSI LUN that is accessible to the clients in addition to the MDS. As of now the file system needs to sit directly on the exported LUN, striping or concatenation of LUNs on the MDS and clients is not supported yet.

On a server built with `CONFIG_NFSD_SCSI`, the pNFS SCSI volume support is automatically enabled if the file system is exported using the "pnfs" option and the underlying SCSI device support persistent reservations. On the client make sure the kernel has the `CONFIG_PNFS_BLOCK` option enabled, and the file system is mounted using the NFSv4.1 protocol version (`mount -o vers=4.1`).