

# OPENSOLARIS DELIVERY OF PNFS

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# Presentation Overview

- pNFS Open Solaris Project
- How To Get Our Source
- How To Get Our Bits
- Configuring a Solaris pNFS Community

# pNFS Open Source

- pNFS development is now an OpenSolaris project!
  - > Provides early access to our bits
  - > Foster participation outside of Sun.
- Open Source Project Page
  - > Includes announcement, discussions, blogs, etc.

<http://www.opensolaris.org/os/project/nfsv41>

- Discussions Forum
  - > Email - [nfsv41-discuss@opensolaris.org](mailto:nfsv41-discuss@opensolaris.org)
  - > To Subscribe or review postings:

<http://www.opensolaris.org/os/project/nfsv41/discussions>

# pNFS Open Source Repository

- Open Repository Updated Instantaneously
- Uses Mercurial Source Code Management
  - > SUNWMercurial Package Required
  - > Download from:

<http://www.opensolaris.org/os/community/scmdownloads>

- To create a copy of the repository:

```
hg clone ssh://anon@hg.opensolaris.org/hg/nfsv41/nfs41-gate dest
```

# pNFS Open Source Development

- Sun pNFS developers are encouraged to:
  - > Post design documents on pNFS project web page.
  - > Make code changes and webrevs openly available.
  - > Send email requests for code review to [nfsv41-discuss@opensolaris.org](mailto:nfsv41-discuss@opensolaris.org)
  - > Include pointer to webrev in email.
- External contributions of bug fixes or enhancements are encouraged.
  - > Contact [nfsv41-discuss@opensolaris.org](mailto:nfsv41-discuss@opensolaris.org)

# pNFS Executable Bits – Try Them!

- Download and install OpenSolaris from ISO images.
  - > Try this in a VirtualBox!
  - > <http://www.virtualbox.org>
- Download and install SUNWonbld tools
- Download and install pNFS bits
  - > Updates released approximately every 2 weeks
- Download page

<http://www.opensolaris.org/os/project/nfsv41/downloads>

- Configure the pNFS Community.

# pNFS Installation Example

- Download the SUNWonbld package and install it
  - > <http://www.opensolaris.org/os/project/nfsv41/downloads>
  - > pkgadd -d . SUNWonbld
- Download the on-bfu-closedv6-osol for the appropriate platform (i386 or sparc), unzip and extract files.
  - > bunzip2 on-bfu-closed-v6-osol.i386.tar.bz2
  - > tar -xvf on-bfu-closedv6-osol.i386

# pNFS Installation Example (cont.)

- archives-nightly-osol directory
  - > Contains platform specific bits to install



# pNFS Installation Example (cont.)

- Install OpenSolaris
  - > <http://cr.opensolaris.org>
- Use the onbld “bfu” tool to update the system with the pNFS bits:
  - > `/onbld/bin/bfu archives-nightly-osol/i386 (or sparc)`
  - > Resolve any bfu conflicts using “acr”
  - > `/onbld/bin/acr`
  - > Reboot!

# Requirement for pNFS

- At least 2 systems running pNFS bits are required.
- Obviously extra storage is required the DS and MDS.
- Currently the DS and MDS are not supported on the same system.
- Client and DS can be the same system.

# Configuring the pNFS Community DS Configuration

- Create a zfs storage pool
  - > `zpool create dspool /dev/dsk/c0t1d0s6`
- Create a zfs pnfs dataset for the DS
  - > `zfs create -o sharenfs=on -t pnfsdata dspool/pnfsds`
- Share this zfs filesystem
  - > `share /dspool`

# Configuring the pNFS Community DS Configuration (Cont.)

- Configure the DS to use this ZFS data set
  - > `dservadm addstor dspool/pnfsds`
- Tell the DS which MDS to use
  - > `dservadm addmds 192.168.90.23.8.1`
    - > Where 8.1 represents the port number (2049)
- Start the data server
  - > `dservadm enable`
- Do this for each DS in the pNFS Community.

# Configuring the pNFS Community

## MDS Configuration

- Create a zfs storage pool
  - > `zpool create mdspool /dev/dsk/c0t1d0s6`
- Create a zfs dataset in this pool
  - > `zfs create -o sharenfs=on mdspool/mnt`
- For more details on setting up a pNFS community see:
- <http://wikis.sun.com/display/NFS/Latest+-+pNFS+Admin+Documentation>

# Use it on the client!

- Mount the pNFS file system on the client and use it!
  - > `mount pnfsmds:/mdspool/mnt /mnt`
- If the client has successfully done `exchange_id`, `create_session` the following message is displayed  
“enabling pNFS on /mdspool/mnt”

# Questions?

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