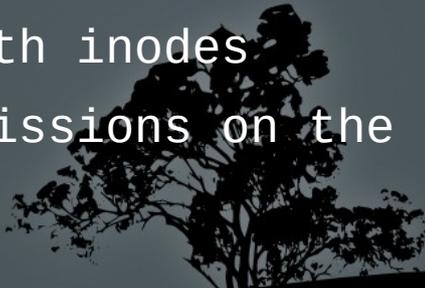


LPIC-1 101-400 – Lesson 22 – Lab

- * Enter into your Lab environment as root
 - # cd Lab22 # switch to the Lab22 directory
 - # ls -l /sbin | grep lrwxrwxrwx # list all symlinks under /sbin
 - # find /etc -type l -ls # find all symlinks under /etc
 - # find / -xdev -ls | cut -d ' ' -f1 | \ sort -n | uniq -d # find all file with more than one hard link
 - # find / -xdev -inum <inode_id> # pick an inode number from the command above
 - # touch sfile.test # create an empty file
 - # ln -s sfile.test symlink.test # create a symlink to it
 - # touch hfile.test # create another file
 - # ln hfile.test hardlink.test # create a hard link to it
 - # ls -li *.test # list all *.test files with inodes
 - # chmod 640 symlink.test # change the permissions on the symlink
 - # ls -li s*.test # any change?
- 

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- # `chmod 600 hardlink.test` # change the permissions on the hardlink
- # `ls -li h*.test` # any change?
- # `stat h*.test` # check the inode using `stat`
- # `ln $(which ssh) /usr/local/sbin/` # create a symlink of `ssh`
- # `ln $(which ssh) /usr/local/sbin/ssh-1` # create another symlink of `ssh` with a different name
- # `ls -li $(which ssh) /usr/local/sbin/ssh*` # compare them
- # `ln /bin/bash /usr/local/bin` # create a bash hard link
- # `df /bin/bash /usr/local/bin` # find the filesystem where the file lives
- # `su - user1` # switch to user1
- \$ `ln -s /etc/fstab` # create a symlink of `fstab`
- \$ `ln -s /etc/fstab fstab.slink` # create another symlink of `fstab` with a different name
- \$ `ls -li /etc/fstab fstab*` # compare the two symlinks
- \$ `ln $(which ssh)` # create an `ssh` hard link

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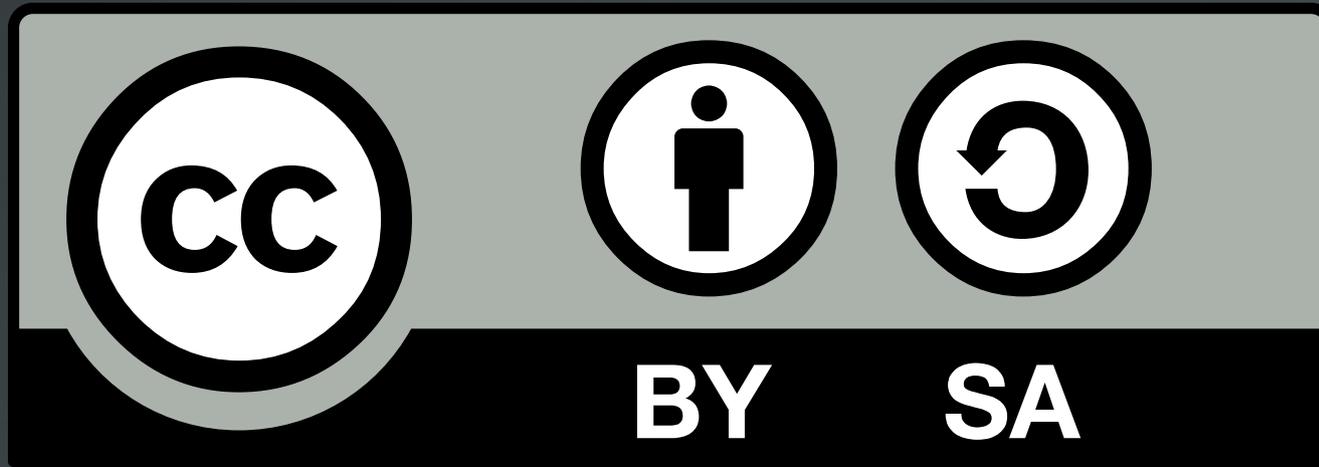
- `$ df $(which ssh) ssh # compare the inodes`
- `$ ln /home # create a hard link on /home/. Did it work?`
- `$ ls -ld /home # long listing of /home/ directory`
- `$ exit # exit to root`
- `# ls -li s*.test # list the symlink and its target`
- `# rm sfile.test # remove the target`
- `# ls -li s*.test # where does the symlink point to?`
- `# touch sfile.test # create the target again`
- `# ls -li s*.test # and we are back!`
- `# ls -li h*.test # list the two hard links`
- `# stat h*.test # verify their inodes`
- `# rm hfile.test # remove the original file`
- `# ls -li h*.test # the file is still there`
- `# rm hardlink.test # delete the other hard link`
- `# ls -li h*.test # now the file is truly deleted!`

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- # `ln -s /usr/lib libusr` # create a symlink to the `/usr/lib` directory
- # `ls -l libusr` # list the symlink
- # `ls -l libusr/` # list the contents of the target directory
- # `cd libusr` # switch to `libusr`
- # `ls -la` # list its contents
- # `pwd` # use the build-in `pwd`
- # `/bin/pwd` # use the executable `pwd`. Any differences?



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