Technical Bulletin #517 (revised): /g home directory migration

New **/g** File Systems

Livermore Computing (LC) is pleased to announce the deployment schedule for new **/g** home directory file systems. These new NAS systems consist of four NetApp 8040 servers.

Because LC now provides 1TB for each user in an automatically created, non-purged **/usr/workspace/*/username** directory, LC does not expect to change quotas as a result of the transition of OCF home directories to the new NAS systems; however, if you have a need for an increased /g quota, please contact your Computer Coordinator with your LC username, the zone you need, and a short justification and ask them to make a request to increase that quota for you.

During the transition to new **/g** home directory servers, your **/g** home directory name will not change.

To minimize user disruption as much as possible, we are copying all the current **/g** data to the new file systems while the current file systems are still in use. LC expects no loss of data integrity, and this process avoids an extended period of unavailability to home directory file systems. Some disruption is unavoidable when the old file systems are unmounted and the new file systems are mounted in their place.

The **/g** home directories will be transitioned to the new servers in multiple phases. The following schedule is approximate and subject to change. It will be updated in the online Technical Bulletin and online news as needed. Please check news or this page (http://hpc.llnl.gov/bulletin517) for the latest schedule.

Zone	Phase	File Systems To Be transitioned	Transition Period
CZ	Phase I	`/g/g0`	Wednesday, March 29, 8:00 a.m.- 10:00 am
CZ	Phase II	`/g/g90, /g/g91, /g/g92, /g/g99`	Tuesday, April 4, 8:00 a.m.- 10:00 am

CZ	Phase III	`/g/g10, /g/g11, /g/g12`	Thursday, April 6 ,8:00 a.m.- 10:00 am
CZ	Phase IV	`/g/g13, /g/g14, /g/g15, /g/g16`	Tuesday, April 11, 8:00 a.m.–10:00 am
CZ	Phase V	`/g/g17, /g/g18, /g/g19, /g/g20`	Thursday, April 13, 8:00 a.m.–10:00 am
CZ	Phase VI	`/g/g21, /g/g22, /g/g23, /g/g24`	Wednesday, April 19, 8:00 a.m.– 10:00 am
RZ	Phase I	`/g/g10, /g/g11, /g/g12, /g/g13, /g/g14,` `/g/g15, /g/g16, /g/g17, /g/g18, /g/g19,` `/g/g20, /g/g21, /g/g22, /g/g23, /g/g24,` `/g/g90, /g/g91, /g/g92, /g/g99`	Thursday, May 11, 8:00 a.m.–10:30 am
RZ	Phase II	`/g/g0`	Tuesday, May 16, 8:00 a.m.–10:30 am
SCF	Phase I	`/g/g5`	Tuesday, September 12, 8:00 a.m.–noon
SCF	Phase II	`/g/g50, /g/g51, /g/g52, /g/g53, /g/g54,` `/g/g55`	Thursday, September 14, 8:00 a.m.–noon
SCF	Phase III	`/g/g56, /g/g57, /g/g58, /g/g59, /g/g60`	Tuesday, September 19, 8:00 a.m.–noon
SCF	Phase IV	`/g/gfr, /g/git, /g/guk`	Thursday, September 21, 8:00 a.m.–noon
SCF	Phase V	`Infrastructure file systems including` `web storage.`	Tuesday, September 26, 8:00 a.m.–noon
SCF	Phase VI	`/usr/give`	Thursday, October 19, 8:00 a.m.–noon
SCF	Phase VII	`/usr/dnta, /usr/dntb`	Tuesday, October 24, 8:00 a.m.–noon
SCF	Phase VIII	`/usr/gapps, /usr/gapps_uk` (Note: `/usr/gapps` and `/usr/gapps2` are merging into one.)	Thursday, October 26, 8:00 a.m.–10:30 a.m.

SCF	Phase IX	`/usr/axshare0, /usr/gdata`	Tuesday, October 31, 8:00 a.m.–10:30 a.m.

Impact to All Users

Near the end of each transition period, there may be intervals of interruption to all users on LC systems during the mounting of the new file systems (see schedule above). During part of this time, you may not be able to initiate a new login to an LC system, but most existing interactive sessions should not be affected. Also, new batch jobs may not be started, but running jobs should not be affected (except jobs using the file system being transitioned). New batch jobs submitted using msub or sbatch will be accepted and queued until they are able to run. It is possible that mounting the new file systems may require reboots of some systems during the transition period.

Your Home Directory File System Transition

Disruptions to your **/g** home directory access are expected during the transition period. Details on how the transition will be accomplished are described below. Please take the following precautions to facilitate the transition:

- If possible, avoid logging into LC systems during your home directory transition.
- Avoid running batch jobs during your transition because most batch jobs read from or write to the home directory to access your login files, history log, sometimes batch output logs, and more. Batch jobs attempting to access a transitioning home directory will likely need to be killed.
- At the beginning of the transition period, your home directory will be set to "read-only" while the old and new file systems are synced. Processes writing to your home directory after this change will generate errors and will be terminated.
- After the sync completes, all running interactive and batch processes accessing your home directory (including batch, interactive, and processes that cd to your home directory) will be killed so we can unmount the old file systems. After unmounting, all access to your home directory will fail.
- After the unmount is completed, we will begin mounting the new home directories on all LC machines. During this time, your home directory may be available on some LC machines and not on others.
- After the transition is completed, you should restart any active login sessions.

Additional Information

Removal or archiving of unneeded files before your transition will speed up the required transition time.

The new home directory file systems will continue to provide an online backup of the past 48 hours in the .snapshot directory (see news online.backup for details). However, during the transition, past .snapshots that are copied to the new home directory file systems may have been synced from a prior date. As a result, for the first 48 hours following the transition of any file system there will be some partial or possibly older than usual .snapshot directories. Backups of home directory file systems to tape will not be affected.

If you have any questions, please contact the LC Hotline— send e-mail to lc-hotline@llnl.gov (link sends e-mail) or phone (925) 422-4531.

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