Use a Faster I/O System for Enhanced UGS NX Nastran Performance

Tech Tips

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UGS NX Nastran uses an out-of-core solver to solve large linear equations. To store intermediate results of the computation, NX Nastran uses large scratch files, in the order of several gigabytes.

The performance of NX Nastran is especially dependent on I/O bandwidth to read and write the scratch files. Therefore, using a good I/O system to run NX Nastran jobs, preferably a 3-4 disk RAID 0 stripe set per job, is important.

To check the performance of NX Nastran:

1. Open the log file of the NX Nastran job.
2. Compute the I/O time by subtracting the elapsed time from the (user+sys) time:

   I/O= elapsed - (user+sys)
3. If the I/O time is greater than 30% of the elapsed time, you should move to a faster I/O system.