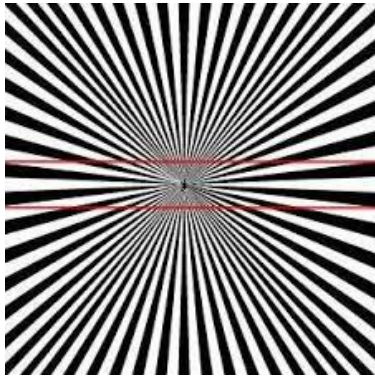


# TWENTY YEARS OF PERFORMANCE TUNING

by Chris Lawson



## TIP #1 Don't Begin with Parallelism

Mistakes in parallelism may be the biggest problem I encounter. Many queries submitted for performance analysis have *Parallel* hints, but the efficiency of the sql--which is far more important, has been neglected. This predicament is common, because it's easy to add a Parallel hint, but it takes skill and time to make the sql efficient. Invoking parallelism disguises the inefficiency sometimes, since a ton of parallel processes can often (if only temporarily) cover-up the problem with the sql.

Oracle can perform a full scan of a typical billion-row table in about 7 minutes using Parallel 6 (of course, the actual fields in the table have a big effect.) I have found a good rule of thumb is limiting the parallelism to 6 or 8, except for extreme cases (such as rebuilding a monstrous index when you have the entire system to yourself.) It's true that degrees beyond 6 or 8 provide some improvement, but the benefit falls-off, as you consume more resources. Then, those resources are not available to other jobs. If you do use parallelism, be sure to specify the degree; do not let Oracle decide how many processes to invoke--it could be way more than you expect.



**Chris Lawson** is the author of *The Art & Science of Oracle Performance Tuning*, as well as *Snappy Interviews: 100 Questions to Ask Oracle DBAs*. When he's not solving performance problems, Chris is an avid hiker, chorister, Amazon reviewer, and geocacher. Chris writes using the penname, "*Bassocantor*."

***Twenty Years of Performance Tuning*** is a series of tips based on the author's experience solving performance problems over the last 20 years.