

Much Efficient Migration

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Approximately 85-95% of a Seismic Data Processing centre's computing power is used for pre-stack migration (in various forms) – a huge capital investment. Migration run times are typically 2000-9000 msec/trace. A 3D Kirchhoff PSTM for 1000 sq kms could take ~7000 days or ~20 years to run on one node. Therefore we need to use 100's of nodes to make the job run in a sensible time. With these statistics it is easy to understand that any re-run at this level has a significant impact on a total project and depending on the capabilities of a particular processing center it also has potential to affect other projects needing the same migration resources. In many cases the need for re-migration arise due to the presence of some noise contamination left in the processed dataset which ultimately gives poor migration results. So what we do is correct the errors in pre migrated data and re-migrate the whole data set again. And this way we are spending money on the same job and also not generating any revenue. Since, problems do occur due to many variables of processing, we need to create a way to re-migrate in a cost effective manner. So found below is a method to ensure that such large money losses are reduced.