Is Your Workstation Delivering the Best Performance for Today's Complex Interpretation Workflows?

Sami Al Awfi[1] and Maan Al Hawi[1]

[1]Saudi Aramco

Abstract

Achieving an optimum performance of Geologic and Geophysical (G&G) applications in an enterprise environment is a challenging task. In an enterprise computing environment, many security, network and storage constraints are imposed that surely result in degrading applications' performance at users end. Best industrial practices advise that a dedicated test environment is made available to pilot any new technologies/ software and tune various network components' configurations for the best possible performance that can be achieved for these software. It is usually the responsibility of G&G applications' support analyst to investigate applications' performance in the enterprise environment and work with company IT to calibrate it for optimum performance. In many cases, network architecture should be carefully reviewed to avoid any bottlenecks in data traffic across the network. Moreover, many of the default network and storage settings such as TCP packet size, AntiVirus Host-based Intrusion Prevention System (HIPS) configuration, as well as many application- specific workflows should be challenged to get the most optimal application performance. Security is top priority and will not be relaxed under any circumstances. However, it is still possible to configure the network, storage, workstations and review application workflows to greatly improve on performance. Usually network and storage default configuration is not optimized for such demanding applications. The settings have to be fine-tuned to take the behaviors and needs of these applications into account. Also the way workflows are developed and executed in these applications can have a major impact on performance. By doing small and continuous fine-tuning it is possible to improve a lot on performance. In this study some examples of network, storage and workflow performance enhancements are shared.