

# **An Optimized Distributed Approach for Efficient Downstream Processing of Oil and Gas**

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In the summer of 2015, the hopes for oil and gas exploration were revived with the strong potentials of this project in Lebanon. Information Technology (IT) is among the key execution challenges, in particular the handling of the large computational demands due to the amount of data and the complexity of required processing. Time to discovery will be an essential element for increasing the feasibility of the exploration process. This proposal aims to optimize distribution of downstream processing of oil and gas into a heterogeneous set of computational nodes taking advantage of state of the art fast computational Reconfigurable Active SSD (RASSD) nodes. The performance of the optimized seismic models will be evaluated to reflect the performance gains for different distributed platforms. The study will provide insights into the advanced computational platforms needed to achieve certain desired levels of processing performance in oil and gas exploration.