Univa Machine Learning Survey: Key Findings
• Most organizations have been using Machine Learning for more than 2 years
• Available infrastructure for Machine Learning remains CPU-heavy
• There is interest in deploying new infrastructure to support Machine Learning over the next 6 months
• Machine Learning applications will make use of all capabilities – existing CPUs & GPUs plus new Big Data & containerized
• There is definitely interest in private/public/hybrid clouds – though on-premise deployments are expected to dominate

Univa Machine Learning Survey: The Fine Print
• Small sample size bias challenges extrapolation to larger markets
• North American and EMEA sampling bias challenges extrapolation to other geographies
• New Intel Xeon Phi processor requires interpolation to determine its impact
• Existing GPU capabilities likely to be repurposed to accommodate Machine Learning requirements

Hypothesis
Container clusters are disruptive enablers of enterprise-grade Machine Learning capabilities in oil/gas applications and workflows when delivered as a fully converged platform

The Unique Capabilities of Navops Command
• Workload prioritization
• Sophisticated policies include Maximize Resource Utilization / Proportional Shares / Runtime Quotas / Access Restrictions / Interleaving / Priority Ranking
• Web-UI driven policy configuration
• Workload affiliation based decision making
• Pluggable support for any Kubernetes distribution
• On-the-fly policy re-configuration

Machine Learning Use Case Examples

Conclusions re: Container Clusters for Machine Learning
• Apache Spark is easily containerized as a service or an application
• Navops Command delivers sophisticated, enterprise-grade workload placement and advanced policy management capabilities for Kubernetes-based container clusters that address mixed workloads
• Microservices-based approaches can be systematically refactored into existing applications and/or workflows
• Univa offers unique solutions for fully converged infrastructures