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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

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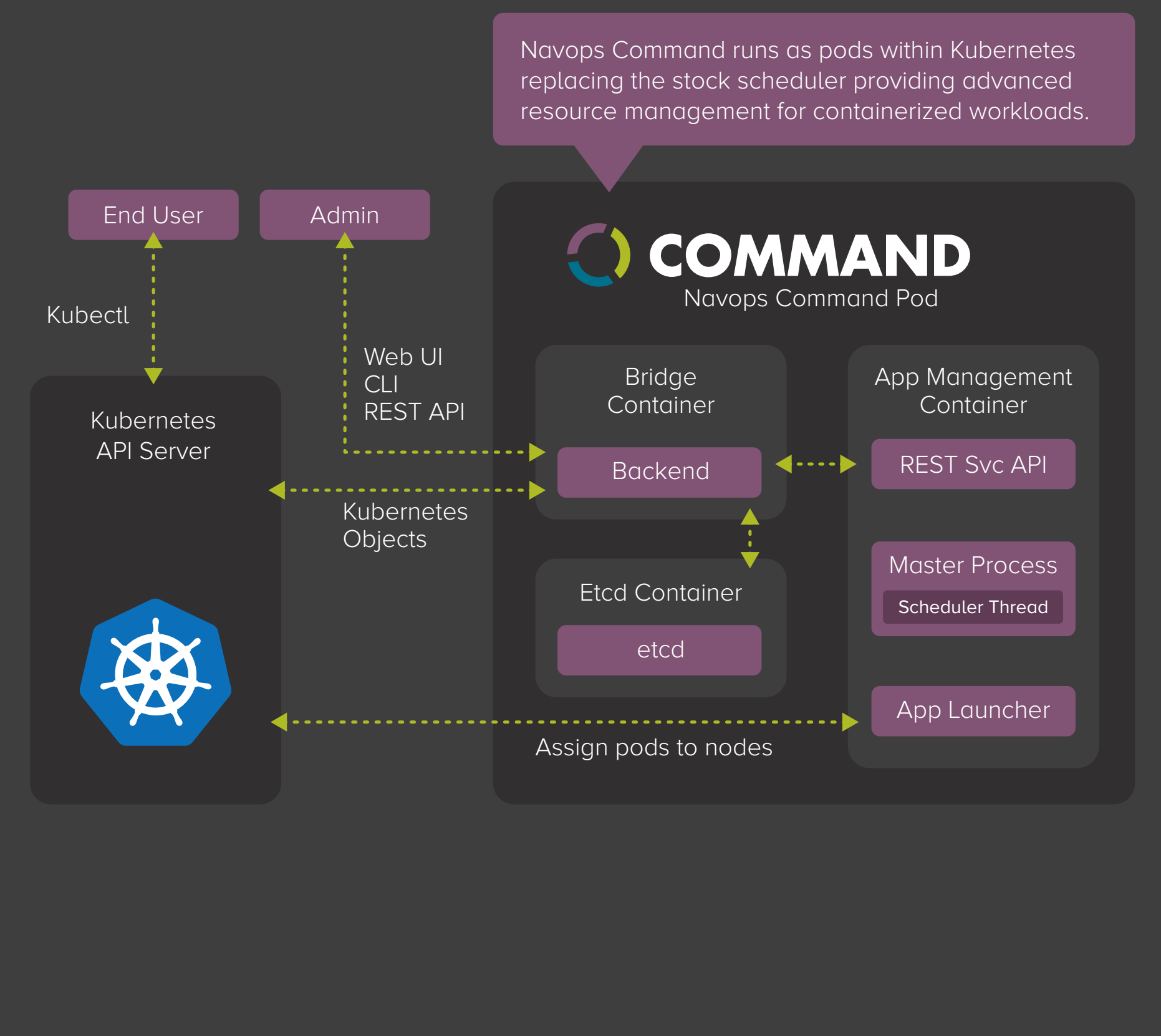
Hypothesis

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

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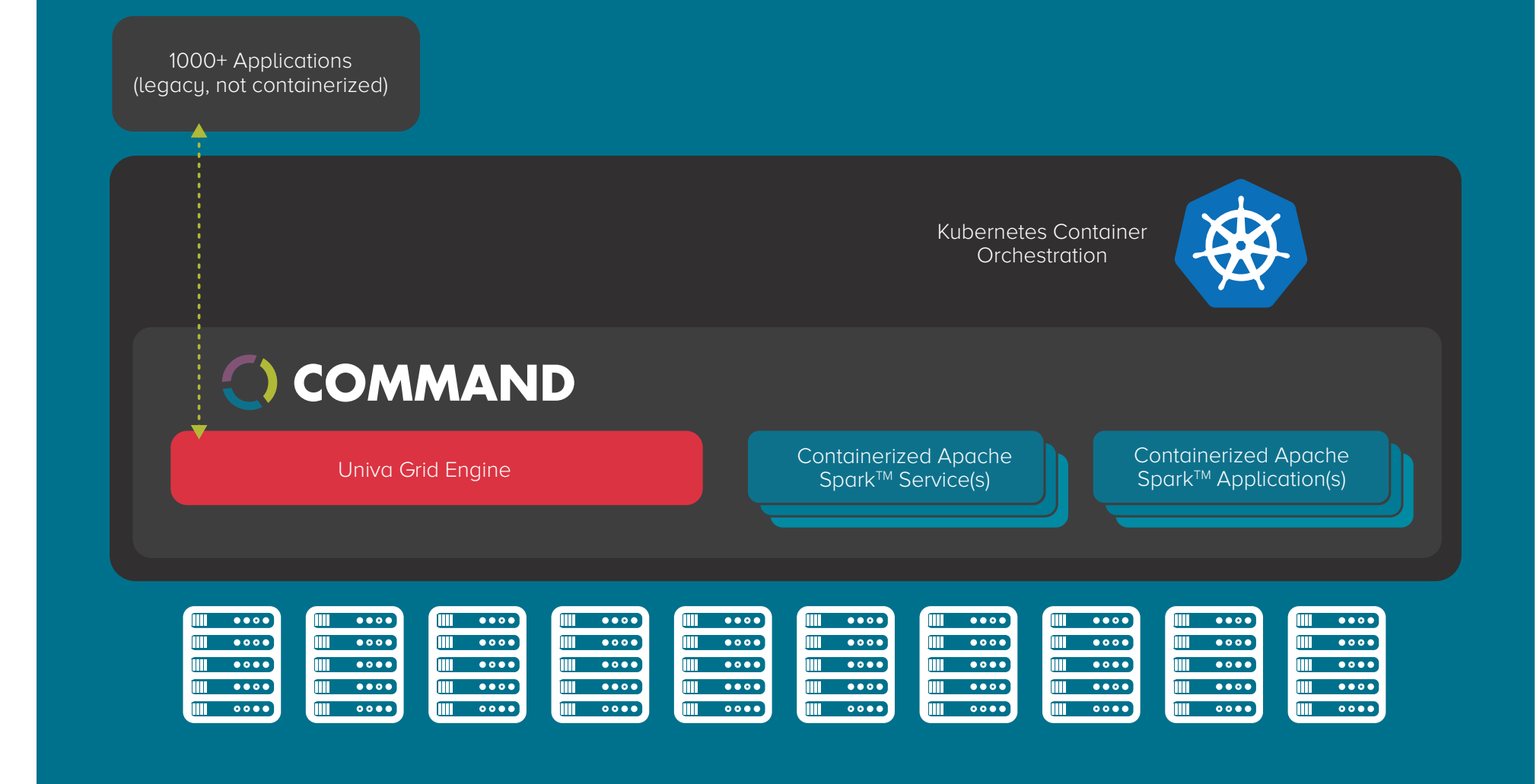
The Unique Capabilities of Navops Command

- 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



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Machine Learning Use Case Examples



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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