

Navops Universal Resource Broker

Workload Optimization for Batch, Mesos & Containerized Services



UNIFIED WORKLOAD OPTIMIZATION FOR BATCH, BIG DATA, MESOS FRAMEWORKS AND SERVICES

Navops Universal Resource Broker (URB) is an open source solution that allows distributed application frameworks written for Apache Mesos to run seamlessly on Univa Grid Engine or Kubernetes clusters. This open source software enables massive scalability of resources and multiple big data frameworks, supports mission-critical processes and lays the foundation for the Internet of Things.

Navops URB allows enterprises to create a single, virtual high throughput, hyperscale compute pool from distributed data center resources by integrating batch, low-latency workload, containerized services and big data frameworks in a single distributed highly available cluster.

Enterprise data centers that deploy Navops URB can harness advanced optimizations and greater flexibility, resulting in new efficiencies and reduced costs.

KEY FEATURES AND CAPABILITIES

Workload Optimization

Navops URB provides organizations with a complete solution to distribute applications and services more efficiently, faster and with lower overall costs.

Flexibility of Frameworks

With minimal disruption, Navops URB supports any framework for which a Mesos integration exists, (e.g. Spark, Hadoop, Storm, Marathon, Chronos, Aurora, and Hudson/Jenkins). Navops URB runs on Kubernetes, or for users requiring additional policy controls, Univa Grid Engine, providing the ability to mix and match diverse workloads.

Mixed Workloads

Management and scheduling of multiple workloads including batch jobs, low-latency, containerized and distributed applications, long running services, and big data frameworks on the same cluster.

Advanced Univa Grid Engine Capabilities

Navops URB enables advanced Univa Grid Engine features for frameworks such as centralized management, policy control, accounting, and monitoring.

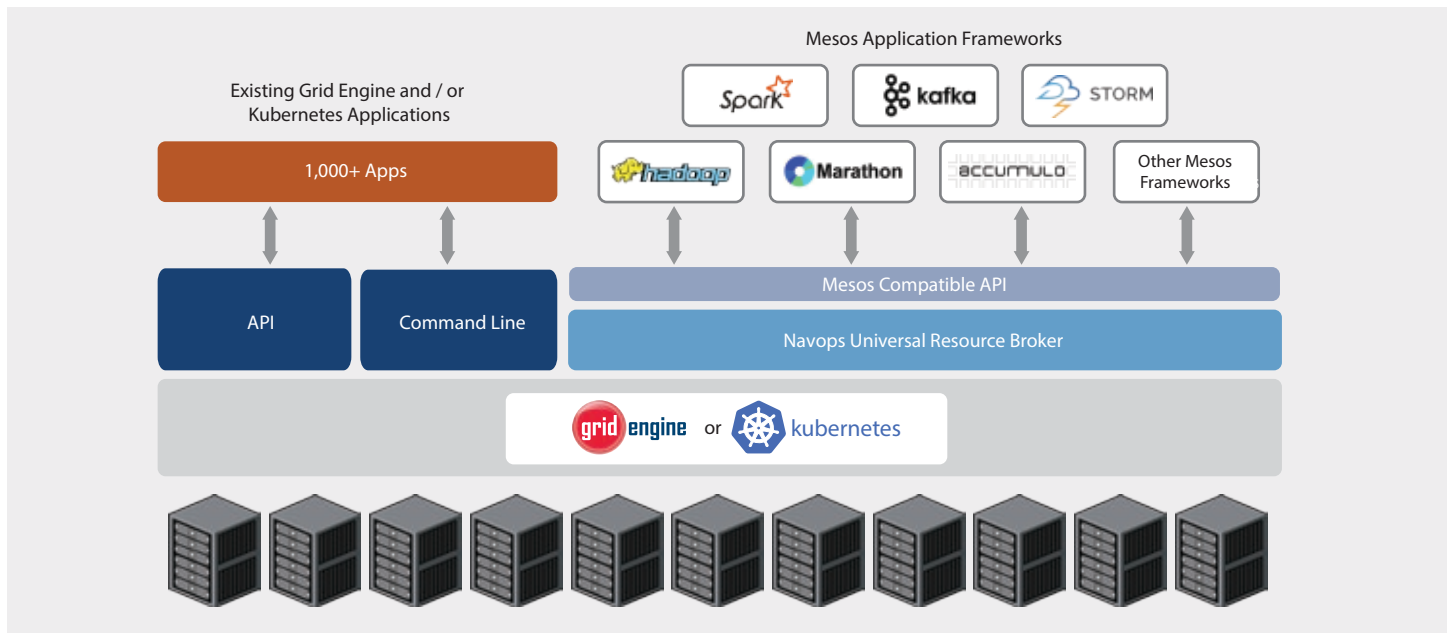
Navops Universal Resource Broker Highlights

- Advanced policies and lifecycle management
- Your choice of Kubernetes or Grid Engine clusters
- Centrally manage distributed applications, data center services and big data frameworks
- Run and manage existing Apache Mesos frameworks with high availability and automatic service fail-over
- Run with Navops Command on Kubernetes for additional scheduling controls

Supports Heterogeneous Machine Types and Architectures

- Run and manage bare-metal servers, leverage virtual machines, public or private cloud, or Docker containers
- Your choice of Kubernetes environments including Google Container Engine™, Red Hat® OpenShift, Rancher and others

Navops Universal Resource Broker Component Architecture



By extending Grid Engine and Kubernetes clusters to support a variety of Mesos frameworks, Navops URB provides freedom of choice. Users can run Navops URB supported framework on their choice of cluster manager to maximize flexibility, simplify administration and reduce infrastructure costs.

Sites with more sophisticated workload requirements can optionally deploy Navops Command on Kubernetes, enabling Grid Engine, Mesos frameworks (via Navops URB) and containerized workloads to all seamlessly share resources on the same cluster for a true mixed workload environment.

Benefits

- Efficiently manage and optimize multi-tenant, dynamically partitioned workloads within a single cluster
- Leverage the proven Univa Grid Engine platform for policy control, scheduling, and resource allocation
- Support Mesos application frameworks on Kubernetes
- Comprehensive accounting and reporting
- No disruption to end user workflows
- No need to statically partition cluster for HPC, Kubernetes and big data workloads

About Univa

Univa is the leading independent provider of software-defined computing infrastructure and workload orchestration solutions. Univa's intelligent cluster management software increases efficiency while accelerating enterprise migration to hybrid clouds. Millions of compute cores are currently managed by Univa products in industries such as life sciences, manufacturing, oil and gas, transportation and financial services. We help hundreds of companies to manage thousands of applications and run billions of tasks every day. Univa is headquartered in Chicago, with offices in Toronto and Munich. For more information, please visit www.univa.com.



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