

Breakthrough Performance, Scalability, Flexibility, and Economics for Oracle Cloud

Challenges

- Mission-critical applications often experience performance issues after migrating to the cloud
- Low latency or IO-intensive applications that share large amounts of data have been considered impossible to affordably run in the cloud

Solution

- The WEKA Data Platform on OCI provides a solution with consistent high performance and robust data services that scales to exabytes

Benefits

- Move performance-intensive applications to run in the cloud
- Deliver the highest performance to any application with zero tuning or customization
- Achieve the best economics with WEKA's scalable architecture

The Challenge of Modern Workloads

There are many well-known benefits to moving workloads to the cloud in terms of scalability, flexibility, security, and elasticity. What is not talked about much is that organizations have struggled with moving many applications to the cloud. Running large or resource-intensive workloads in the cloud is extremely challenging, particularly at the scale of the modern enterprise. This is an obstacle to making progress in fields such as Life Sciences, Financial Analytics, Media Creation, AI/ML, and High-Performance Computing (HPC). WEKA and Oracle have partnered to deliver a cloud solution that offers the breakthrough performance, scalability, flexibility, and economy that modern workloads require. The WEKA on Oracle Cloud Infrastructure (OCI) solution processes data in the cloud and meets all these requirements.

WEKA Data Platform on OCI

The WEKA Data Platform is the industry's first multicloud data platform for AI and next-generation workloads. It provides a single, unified product with consistent high performance and robust data services that delivers a seamless, simplified data management experience with best-in-class economics—regardless of where your data and applications are located.

WEKA seamlessly combines the performance tier of NVMe-enabled cloud compute shapes for the lowest latency with the capacity tier of native object storage for massive scalability, all presented in a single namespace for best economics at petascale. Integrated data management automatically and seamlessly moves data between the hot tier and the object storage data lake, so actively accessed data is always available at the highest performance. Because you can scale performance and capacity independently with WEKA, it is usually more than twice as cost-effective as native storage services at comparable performance levels.

WEKA enables modern high-performance applications to migrate to and run on Oracle Cloud Infrastructure (OCI). It excels at both latency-sensitive and large file IOs with no tuning required. WEKA has broad multi-protocol support, allowing multiple applications (Windows, Linux, Mac, POSIX, S3) to simultaneously share and collaborate on a single data set with full data consistency across protocols.

With its cloud-native design and software that also runs on-premises, WEKA's scalable architecture spans on-premises, hybrid, and cloud with a single global namespace and a robust enterprise feature set. Data protection, snapshots, and replication are all included with the highest performance in the cloud for any application. WEKA's blazing fast performance in the cloud was validated on the [IO-500 at International Supercomputing 2022](#).

OCI facilitates the processing and migration of critical enterprise workloads as it solves performance issues seen in other public clouds caused by resource-sharing through the compute hypervisor and oversubscribed networks. OCI was designed with key cloud technologies that address enterprise application requirements and enable you to natively run modern applications in the cloud as well as on-premises. It includes autonomous services for hybrid cloud strategies and seamless movement between on-premises and the cloud. OCI leverages built-in security to mitigate threats, ultimately supporting superior migration and economics.

OCI's scalability and availability, integrated governance and control, and reliability backed by end-to-end SLAs enable innovation and support emerging technologies such as AI, ML, the Internet of Things (IoT), blockchain, and human interfaces. With Oracle's OCI IaaS offering, you get a diverse range of capabilities, including a suite of bare metal services and remote direct memory access (RDMA) for performance-intensive applications. OCI is optimized for Oracle workloads and offers unique features and tools for migrating and efficiently running Oracle databases and business applications. Minimal changes are required to move Oracle applications, reducing the cost and length of migration to the cloud.

The WEKA-OCI solution leverages the synergy between the WEKA Data Platform and OCI to deliver breakthrough performance, scalability, flexibility, and economics.

Performance, Scalability, Flexibility, and Economics

The WEKA on OCI solution delivers maximum acceleration of your business outcomes by matching the speed of your compute and data storage resources. It delivers per-drive performance that is almost 3x faster than that of [Orion's Supercomputer storage](#), with WEKA-OCI delivering 2TB/s on only 373 NVMe drives versus 10TB/s on 5,440 NVMe drives for Orion.

The WEKA-OCI solution provides integrated tiering to object storage for maximum scalability to exascale capacity. WEKA's patented data layout and protection scheme distributes both data and metadata evenly across the entire file system to ensure the highest level of protection and eliminate hot spots and IO bottlenecks. The storage cluster can survive up to four concurrent node failures without loss of service. Integrated tiering to the OCI S3 object store delivers maximum scalability and the best economics.

The WEKA-OCI solution delivers the features and flexibility that enterprise customers have come to expect. WEKA on OCI offers data reduction, user quotas, high availability, encryption, data protection with instantaneous snapshots, clones, remote snapshots to object storage for disaster recovery, backup, cross-region replication, private cloud multi-tenancy, and cloud-bursting. The unique snap-to-object feature allows users to easily create a replica of the production data and instantly push it to a second object store—enabling snapshot-based replication. The second cloud copy can be used for workload migration to another application cluster or to provide a fast recovery point objective (RPO) service guarantee.

Oracle offers IaaS and SaaS services as part of its second-generation cloud offering. Oracle Autonomous Database services leverage the same high-speed network as other Oracle Cloud Infrastructure services—enabling you to deploy mission-critical applications rapidly in support of continuous innovation. WEKA on OCI can be deployed on bare-metal or VM shapes.

The flexibility of the WEKA on OCI solution delivers outstanding economics, return-on-investment, and application consolidation. Users get the most out of their GPU, TPU, and CPU resources by saturating them with data and maximizing their efficiency. The solution helps to optimize compute resource usage by growing or shrinking the global namespace, all without downtime. Users can add or reduce compute and storage capacity independently as needed, keeping hot data on NVMe and cooler data on S3 Object Storage while preserving a single namespace.

For More Information or to Arrange a Free Trial

- Visit us at <https://www.weka.io/get-started> or email us at info@weka.io.

Learn More on How to Deploy Weka on OCI or Run a Proof of Concept

- Ask your Oracle Sales Account team to engage the HPC Storage team.

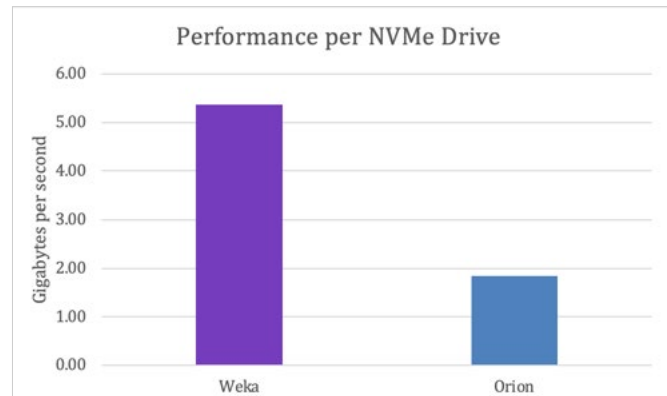


FIG. 1 WEKA on OCI Delivers almost 3x more performance per NVMe drive.



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