GridMarkets helps speed drug discovery with high-performance Oracle Cloud

HPC • Cloud Rendering • Visual Effects Animation • Media Healthcare • Financial Services

“The big difference between Oracle and its competitors is that Oracle’s VMs have more memory, more compute, and are more responsive. It’s just a much better value for us and our customers.”

— Mark Ross, Cofounder and CEO, GridMarkets

GridMarkets saves 70% over other cloud providers by running its image-rendering platform on Oracle Cloud Infrastructure’s high-performance computing.

Founded in 2011, GridMarkets is a cloud rendering and simulation service company delivering specialized environments for the animation and visual effects, drug discovery and financial services industries. With a mission to democratize creativity, the company seamlessly integrates access to high-performance computational cloud resources into the end-users’ compute demanding applications.

Serving customers in over 90 countries, they collaborate with leading artists from top Hollywood studios, and researchers from global pharmaceutical companies.
**Challenge:**
Render complex molecular models in less than 24 hours in a secure and responsive environment for customers

The solid green and solid purple regions represent the protein backbone of the COVID-19 main protease, with the protein surface shown partially transparent. The multi-colored sticks are different drug molecules bound to the active site of the protease.

*Courtesy of Andy Jennings Consulting*

"These things require enormous calculations not even big pharmaceutical companies can justify buying an on-premises cluster big enough to speed through a few bursts, because for the better part of the year, that cluster just sits idle."

— *Andy Jennings, Computational Chemist*

GridMarkets doesn’t put user workloads in queues or schedule them for rendering, so its customers can access all the virtual machines they need at any time, and their jobs run immediately. That means GridMarkets can’t predict the number of VMs the company will need at any given time. When it ran on Amazon Web Services and Google Cloud, GridMarkets had to estimate capacity and pay premiums to reserve it, which often meant high costs for overages or paying for unused capacity.

"Oracle Cloud Infrastructure costs GridMarkets about 70% less than running its high-performance workloads on AWS or Google Cloud."
“To accelerate our customers’ complex workflows, GridMarkets needs hundreds of concurrently running servers. Our services are expected to be secure and responsive even when we are deluged with demand. Without Oracle Cloud, we simply could not satisfy these customer expectations.”

— Mark Ross, Cofounder, GridMarkets

Since moving workloads to Oracle Cloud Infrastructure, GridMarkets is able to run complex mathematical simulations and render ultra-heavy special effects in record time compared with the days and potentially months it took previously with on-premises server farms. For example, using GridMarkets has allowed one university to reduce video rendering time from six days or more to just hours, because it can access all the nodes that it needs and run them simultaneously in the cloud.

Oracle Cloud Infrastructure also helps configure GridMarkets’ software and compute resources for each of its clients’ jobs, encrypts the client’s data, and when the job’s finished, automatically shuts down the machines, so there are no lingering costs charged to the company or its customers for unused capacity.

Using Oracle Cloud Infrastructure also lets GridMarkets’ customers access high-performance computing from any location, including people working from home. That helps drug researchers, students, and freelancers continue working despite being shut out of physical computer labs due to COVID-19.
“The Oracle brand stands for trust. That credibility is helping us grow from a technology and customer standpoint. We can now say GridMarkets is backed by the highly secure and highly robust Oracle Cloud and that’s helping to open even more doors for us across the globe.”

— Mark Ross, Cofounder, GridMarkets

Benefits from Oracle for Startups Partnership

- **Acceleration with Oracle Cloud.** 100% migration from Google and AWS has meant that GridMarkets saves 70% over other cloud providers with a substantial increase in price-performance value over competing cloud infrastructure providers.

- Exposure through Global Marketing and Events, including Oracle OpenWorld: San Francisco, APAC

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