ByteDance

Accelerated VASP Pharmaceutical Molecular Model Computing with Intel® oneAPI Toolkits

Accelerating Medical Macromolecular Models on Volcano Engine with Intel® MPI Library and Intel® oneAPI Math Kernel Library

Medical macromolecular modeling plays a vital role in advancing the understanding of biological macromolecules, facilitating drug discovery and design, and guiding personalized medicine and vaccine development. However, these models are often computationally intensive due to their complexity and the duration of the modeling process. Intel® oneAPI Toolkits helped ByteDance improve the performance of these models for their customers. By using Intel® MPI Library and Intel® oneAPI Math Kernel Library, the solution improves performance by using highly optimized routines, leveraging HPC workloads to facilitate efficient communication between different nodes in a parallel computing system, thereby accelerating the applications and reducing R&D costs.

> *"Volcano Engine provides customers with secure, reliable, high-performance, and easy-to-maintain enterprise-level cloud services. Intel® oneAPI Toolkits brings ByteDance another avenue to achieve better performance for HPC applications."*
>
> ByteDance Solution Architect in Beijing

Key Features

- Biomedical Application
- High-Performance Computing
- Precision Medicine Analytics
- Scalable Infrastructure

Vertical:
Health & Life Sciences

Use Cases:
- Human Wellness Monitoring
- Precision Medicine Analytics

Country/Geo:
China/East Asia

Learn more:
- Intel Powers Volcano Engine to Accelerate VASP Pharmaceutical Molecular Modeling
- ByteDance Website

Intel Products and Technologies
- Intel® Xeon® Scalable Processors Product Page
- Intel® oneAPI Toolkit Product Page
- Intel® MPI Library Product Page
- Intel® oneAPI Math Kernel Library Product Page

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