Microsoft Azure

AMD

Supercomputing performance with cloud versatility

Choose Azure HPC for scalable, reliable and cost-effective high-performance computing purpose-built for computationally intensive workloads. Microsoft and AMD's long-standing collaboration delivers the most advanced HPC platform powered by the latest AMD processors. Engineered at every layer specifically for compute-intensive workloads, Azure HPC is a complete set of supercomputing, networking, and storage resources with integrated AI, analytics and workload services.

Get the resources you need, anywhere, at any scale, with a global, trusted cloud platform. Azure and AMD are helping customers across industries push the boundaries of innovation. Full cloud or hybrid, businesses around the world are benefiting from secure, scalable and cost-efficient compute power on demand from Azure HPC.

Simulation & modeling

Easily run, scale and manage complex, compute-intensive simulations and modeling and gain deeper insights into scientific, engineering, and real-world scenarios with Azure supercomputing platform and services.

Visualization & gaming

Support the most extreme graphic-intensive workloads with on-demand access to Azure HPC workstations with a range of operating systems and CPU/GPU, memory and storage configurations.

Rendering

Render securely with confidence from anywhere and easily deploy render farms, burst as needed to Azure HPC and automate to minimize errors and costs and optimize productivity and scalability.

AI & advanced analytics

Easily add AI and advanced analytics to HPC workloads with secure, integrated Azure AI and data services.

3.5 billon
weather observations per day
Climavision

90%
cost reduction in simulations
Molecular Modeling Lab

70%
compute capacity gain
Jellyfish Pictures

Azure virtual machines powered by AMD


High-performance compute


Memory intensive


Storage intensive


Confidential computing


GPU visualization

HBv2 Optimized for applications driven by memory bandwidth, such as fluid dynamics, finite element analysis, and reservoir simulation. Optional high-throughput network interfaces (RDMA.

AMD EPYC™ 7V12 | up to 120 cores/instance | 4GB RAM/core | 350 GB/s mem bandwidth | 200 GB/s Quantum InfiniBand

HBv3 Optimized for fluid dynamics, explicit and implicit finite element analysis, weather modeling, seismic processing, reservoir simulation, and RTL simulation. Optional high-throughput network interfaces (RDMA.

AMD EPYC™ 7003 series | up to 120 cores/instance | 32 GB L3 cache/core | 630 GB/s mem bandwidth | 200 GB/s Quantum InfiniBand

HBv4 Provides up to 2.5x improvement over HBv3 for weather simulation, CFD, EDA, financial risk analysis, and AI model inferencing.

AMD EPYC™ 9V33X | up to 176 cores/instance | 96 GB L3 cache/core | 1.2 TB/s mem bandwidth | 400 GB/s Quantum-2 InfiniBand

HX With 2x memory capacity as HBv4, the HX are optimized for the most advanced EDA processes with the highest memory-intensive workloads.

AMD EPYC™ 9V33X | up to 176 cores/instance | 96 GB L3 cache/core | 1.2 TB/s mem bandwidth | 400 GB/s Quantum-2 InfiniBand

NVv4 Specialized virtual machine with unprecedented GPU resourcing flexibility targeted for heavy graphic rendering, video editing, and remote visualization workloads. Available with single or multiple GPUs.

AMD EPYC 9V33X | up to 32vCPUs/instance | up to 112 GB RAM/instance | 16 GB VRAM/GPU | up to 700 GB temp storaage

Learn more

Power innovation with Azure HPC
Achieve more with AMD and Azure