

High-Performance ComputingView 2023: Premium

AN IDC SPECIAL INTELLIGENCE SERVICE

IDC's *High-Performance ComputingView 2023: Premium* is an annual primary research survey that gains insights into the deployment strategies, purchase plans, and adoption rates of the buyers of high-performance computing (HPC) infrastructure. 2,000 respondents across 5 countries are surveyed and include a mix of those using HPC on traditional IT infrastructure as well as those deploying via dedicated and public cloud services.

Markets and Subjects Analyzed

High-performance computing — also known as modelling and simulation (M&S) — is one of three areas of performance-intensive computing (PIC) where large-scale mathematically intensive computations are performed. IDC HPCView provides analysis of both self-built and/or managed HPC infrastructure (computing platforms, storage systems, and related infrastructure software) and HPC as a service via either a dedicated or public cloud platform (IaaS, PaaS, and SaaS). Those surveyed are located in multiple different countries/regions, including the United States, Canada, the United Kingdom, Germany, and APAC. Respondents are chosen from a range of key industries, company sizes, and states/stages of adoption.

Core Research

- IDC HPCView Part 1: Adoption and Levels of Use
- IDC HPCView Part 2: Market Trends
- IDC HPCView Part 3: End-User Sentiments
- IDC HPCView Part 4: Summary of Findings and Vendor Guidance

In addition to the insight provided in this service, IDC may conduct research on specific topics or emerging market segments via research offerings that require additional IDC funding and client investment. To learn more about the analysts and published research, please visit: [High-Performance ComputingView 2023: Premium](#).

Key Questions Answered

1. What is the average spend on HPC infrastructure split by use case category as well as by deployment type including on-premises self-built, with a managed service provider, and/or with a dedicated or public cloud service (IaaS, PaaS, SaaS)?
2. What is the current HPC infrastructure usage across the three main market segments — supercomputing, custom (institutional) enterprise HPC, and mainstream (commercial) HPC — examining adoption rates, market trends, and customer sentiment?
3. What are the current implementations and future requirements by computing platform attributes, including platform type (classical computing, quantum computing), deployment (core versus edge), and medium-sized platforms (rack form factors) and/or large platforms (standalone racks)?
4. What are the current implementations and future requirements by stack attributes, including workload (abstraction and profile), compute (instance type, parallelization, scaling), storage and connectivity (storage type, storage data organization, file storage type, clustering connectivity), and deployment architecture (control plane, deployment location, management type)?
5. What are the vendor product attribute ratings, including computing complication types, processor architecture and attributes, media and memory, convergence, precision (floating point) types, and cooling options?

Companies Analyzed

NA