

Worldwide High Performance Computing 2017 Total Market Model and 2018–2022 Forecast: Products and Services

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EXECUTIVE SUMMARY

This Intersect360 Research report presents the 2017 total market model and five-year forecast for the overall High Performance Computing (HPC) market, segmented into product and services categories, including servers, storage, services, software, networks, cloud, and other products. The forecast horizon is from 2018 through 2022, with compound annual growth rates (CAGRs) using 2017 as a base.

Intersect360 Research defines HPC as the use of servers, clusters, and supercomputers—plus associated software, tools, components, storage, and services—for scientific, engineering, or analytical tasks that are particularly intensive in computation, memory usage, or data management. Intersect360 Research reports available in this series include the following segmentations:

- *Products and Services (this report)*: servers, storage, networks, software, service, cloud, other
- *Economic sectors*: industry, government, academia
- *Vertical markets*: academia, national security, national research labs, national agencies, state or local governments, bio sciences, chemical engineering, consumer product manufacturing, electronics, energy, financial services, large product manufacturing, media and entertainment, retail, transportation, other
- *Regions*: North America, EMEA, Asia-Pacific, Latin America
- *Server class (HPC server revenue)*: entry-level, midrange, high-end, supercomputer
- *Cloud categories (HPC cloud revenue)*: raw cycles, cloud storage, application hosting (SaaS), infrastructure hosting (IaaS, PaaS), other
- *Software categories (HPC software revenue)*: operating environments, developer tools, middleware, storage software, transfer costs, application software, other
- *Services categories (HPC services revenue)*: maintenance and repair, system engineering, system integration, training, programming services, other
- *HPC server market shares* (current year only, not forecast)
- *HPC storage market shares* (current year only, not forecast)

This was an unusual year for the HPC market, with mixed results across the categories. Total HPC market revenue was \$35.4 billion in 2017, growing 1.6% over 2016. Public cloud consumption for HPC had a breakout year, with 44.3% growth. Spending on HPC servers grew 7.4%. The disparity between the growth of servers and other hardware categories is due to end users shifting to more computationally-rich environments, fueled greatly by new requirements in machine learning. The software, network, and services categories all declined, despite the increase in HPC budgets.

The HPC market will grow at a 6.9% compound annual growth rate (CAGR) from 2017 through 2022. All product segments will show healthy, stable growth, while cloud computing for HPC will continue to grow at very high rates, especially in the near-term years in the forecast, before moderating in future years.

TECHNOLOGIES COVERED IN THIS REPORT

- HPC system elements
 - Systems, clusters
 - Server technologies
- Processor Elements
 - Accelerators and Co-processors
 - GPU computing / GPUs
- Storage elements
 - Storage systems
- Interconnect elements
 - System interconnects
- Software elements
 - Operating systems
- Services
- Cloud computing, grid computing, utility computing
- Other technology trends
 - Big Data trends
 - Government programs or investment in HPC
 - Artificial Intelligence / AI
 - Deep Learning / Machine Learning

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