

Worldwide High Performance Computing 2017 Total Market Model and 2018–2022 Forecast: Vertical Markets

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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 vertical markets across industry, government, and academia. 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*: servers, storage, networks, software, service, cloud, other
- *Economic sectors*: industry, government, academia
- *Vertical markets (this report)*: 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 economic sectors and across product and services categories, in which the stable-seeming 1.6% year-over-year growth rate belies an underlying dynamic market. Total HPC market revenue was \$35.4 billion in 2017, with growth driven primarily by commercial vertical markets. Chemical engineering and financial services posted some of the biggest gains in 2017.

The HPC market will grow at a 6.9% compound annual growth rate (CAGR) from 2017 through 2022. The industrial sector will continue to be the primary engine of growth for the HPC market. 70% of the total HPC market incremental revenue over the next five years will come from industry. By the end of the forecast period, the commercial vertical markets will represent 60% of all HPC market revenue.

TECHNOLOGIES COVERED IN THIS REPORT

- HPC system elements
 - Systems, clusters
 - Server technologies
- 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

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