

## Multi-Client Study

# 2020 HPC Multi-Client Study: Technical Computing System Software and Middleware Usage, Trends, and Drivers

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*This annual study is part of the sixth edition of Hyperion Research's high-performance computing (HPC) end-user-based tracking of the HPC marketplace. It covers 194 user sites with 1,849 HPC systems. This report focuses on system software and middleware.*

## HYPERION RESEARCH OPINION

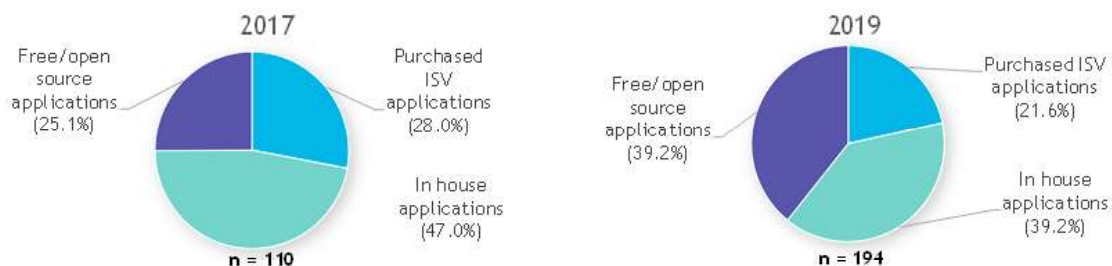
This document explores select systems software and middleware segments of the HPC market. Hyperion Research projects moderate growth in the HPC middleware sector, worth about \$1.3 billion in 2020, and growing to \$2.2 billion in 2024, a 6.6% CAGR. Likewise, the HPC application sector is projected to grow from \$3.7 billion on 2020 to \$5.9 billion in 2024, a 4.6% CAGR.

Select report highlights include:

- Despite widespread use of multicore resources, surveyed sites reported that about half of total HPC applications were running on no more than a single node.
- GPUs or other accelerator dependence has increased as more sites use such devices in an increasing portion of their overall workloads.
- Python, MPI, and CUDA have a growing presence at HPC sites, and Python is now the most popular programming language found at more than 78% of sites, edging out C/C++ from the number one slot.
- Figure 1 shows the shift in HPC application software sources from 2017 to 2020.

## FIGURE 1

### HPC Application Shift Towards Free/Open Sources and Away from In-House/ISV



Source: Hyperion Research, 2020

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## About Hyperion Research, LLC

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