

## Multi-Client Study

# 2020 HPC Multi-Client Study: Use of Public/External Clouds for HPC Workloads, 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 public/external clouds.*

## HYPERION RESEARCH OPINION

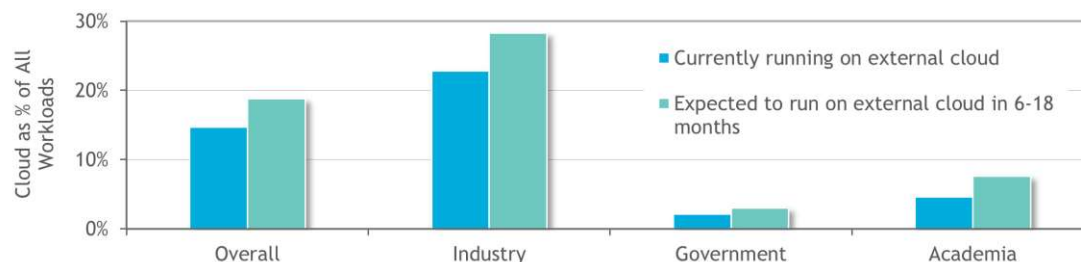
This document explores HPC cloud adoption, specifically for traditional HPC workloads as well as HPC-enabled AI workloads. HPC cloud adoption and usage has grown steadily over the past few years, driven by the high value proposition cloud posits for users, as well as the increased technical capabilities of cloud services providers (CSPs) and the focus by CSPs on HPC as a target market.

Report highlights include:

- The number of users running HPC workloads in the cloud has increased dramatically, from around 25% (2017) to more than 63% (2019), while the overall portion of HPC workloads run in the cloud has decreased from 2017.
- Both traditional modeling and simulation workloads as well as AI workloads are anticipated to increase in cloud utilization in the next 6-18 months.
- 78% of industrial users are utilizing the cloud in some way, the highest of the three major segments of the HPC market.
- Figure 1 shows the current and anticipated utilization of cloud by sector. Industrial users are planning to increase their cloud usage to almost 30% of all HPC workloads.

## FIGURE 1

### External Cloud Usage and Plans for the Future by Sector



Note: n=194

Source: Hyperion Research, 2020

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Hyperion Research provides data-driven research, analysis and recommendations for technologies, applications, and markets in high performance computing and emerging technology areas to help organizations worldwide make effective decisions and seize growth opportunities. Research includes market sizing and forecasting, share tracking, segmentation, technology and related trend analysis, and both user & vendor analysis for multi-user technical server technology used for HPC and HPDA (high performance data analysis). We provide thought leadership and practical guidance for users, vendors and other members of the HPC community by focusing on key market and technology trends across government, industry, commerce, and academia.

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