

Market Forecast

A New View of the Total HPC Market: Adding Cloud's Substantial Impact

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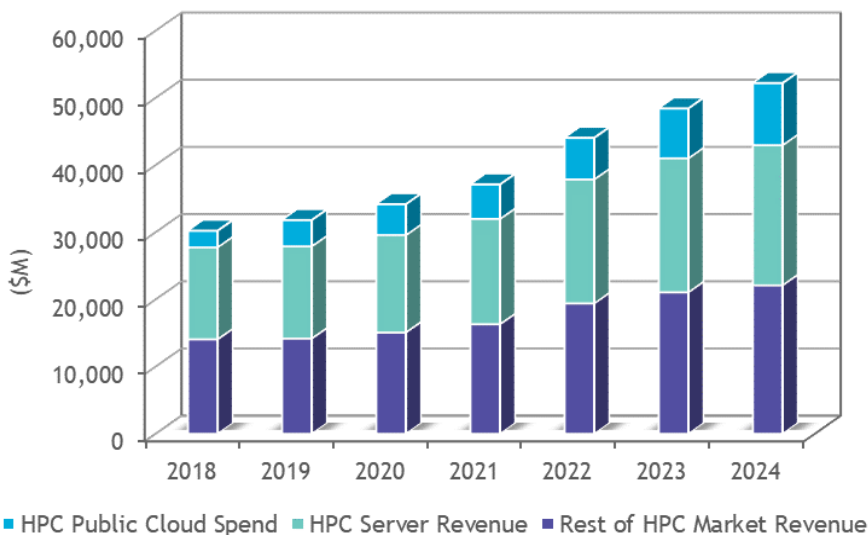
SITUATION OVERVIEW

HPC in the cloud has undergone significant growth in the past few years, attracting new users and more fully supporting existing users. Cloud Service Providers (CSPs) are key to this growth as they are taking a stronger interest in the HPC market, focusing on delivering capabilities that more closely match on-premise systems in performance, security, and in some cases, price. This major shift in the sector has prompted Hyperion Research to revise its HPC cloud forecast to include an additional \$1 billion in 2019, up from its original \$3 billion. Over the next five years HPC spend in the cloud is projected to continue its steep upward trajectory to reach over \$7.4 billion in 2023. With this addition, the broader market is expected to grow over the next five years at a healthy rate, reaching \$52 billion in 2024.

Note: these forecasts do not include impacts from covid-19.

FIGURE 1

New Total HPC Market Sizing Including Cloud



Source: Hyperion Research, 2020

The Updated Broader Market Forecast

The table below shows the different HPC segments now being tracked as a part of the broader HPC market. In the past, cloud resources were not included in the Hyperion Research HPC overall market sizing. This report now includes public cloud spending by HPC users as part of the overall HPC ecosystem. With this addition, the broader market is expected to grow over the next five years at a healthy CAGR of 10.4 percent, reaching \$52.187 billion in 2024.

TABLE 1

Revenues by the Broader HPC Market Areas (\$M)

	2018	2019	2020	2021	2022	2023	2024	CAGR '19-'24
Server	\$13,683	\$13,713	\$14,484	\$15,658	\$18,457	\$19,940	\$20,844	8.7%
Storage	\$5,568	\$5,629	\$6,065	\$6,761	\$8,272	\$9,238	\$9,977	12.1%
Middleware	\$1,591	\$1,618	\$1,716	\$1,863	\$2,218	\$2,411	\$2,531	9.4%
Applications	\$4,655	\$4,695	\$4,973	\$5,274	\$6,143	\$6,525	\$6,692	7.3%
Service	\$2,250	\$2,238	\$2,324	\$2,419	\$2,767	\$2,883	\$2,899	5.3%
Public Cloud Spending	\$2,466	\$3,910	\$4,600	\$5,135	\$6,182	\$7,418	\$9,243	18.8%
Total Market Revenue	\$30,212	\$31,803	\$34,163	\$37,110	\$44,040	\$48,416	\$52,187	10.4%

Source: Hyperion Research, 2020

FUTURE OUTLOOK

HPC spending in the cloud continues to expand as CSPs react and improve their offerings to address their growing portfolio of HPC workloads and users, offering options for better cost effectiveness, ease-of-use, shorter queue times, and access to a wide range of hardware. Hyperion Research projects that by 2024 cloud spending will be near equal with storage revenue for HPC.

The current nature of covid-19 makes long term effects to the HPC market unknowable. However, the cloud is expected to continue to grow, and one looming question is at what point will public cloud spending begin to replace on-prem server spending. Currently, cloud spending is complementary to server spending as most sites are increasing their on-premise capabilities to handle key, mission critical workloads while implementing a hybrid on-prem/cloud environment to tackle surges in jobs and new applications, especially in the AI space.

About Hyperion Research, LLC

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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