

2022 Multi-Client Study Results

HPC Users Are Optimistic About Budgets, Prioritizing Hardware and Storage

- **Half of surveyed users (52%) expect HPC budgets to increase by at least 5% over the next year**
 - Top categories included HPC hardware, add-on storage, and public cloud
- **Most users reported willingness to pay a 10-15% premium for their desired system attributes**
 - Top categories included better processors, larger/faster memory, higher performance external I/O and storage, and better density/power/cooling
- **Average site storage capacity increased significantly over the past year among Industry sites**
- **A quarter of overall public cloud spending in HPC (23%) is persistent storage**
- **Ethernet continues taking share from InfiniBand**

Other Priorities: Acceleration, Data Locality and HPC/AI Expertise

- Many sites report using accelerators on their most used or most important application
- Most cloud compute instances (64%) are reserved and many (43%) are accelerated
- Top limitations for increasing public cloud use are budgets and data locality/speed. Among Industry sites, data security is #1 concern
- Expertise is a top concern for both HPC and AI, outranked only by budget concerns
- Following Red Hat's change to the CentOS business and support model, Ubuntu Linux has risen in popularity as a free alternative CentOS usage declines

Emerging Technologies Are Gaining Traction: AI, Edge Computing, And Composable Infrastructures

- **AI popularity continues to rise**
 - Virtually all users report plans to use AI methodologies
 - In Industry, AI is overtaking traditional mod/sim as % of workload
 - AI-specific software licenses such as Databricks and Anaconda are almost exclusively being purchased by Industry sites
- **A quarter of users (28%) expect to employ edge computing within 2 years**
 - Top motivators include improving real-time data collection/processing, accelerating HPC applications, access to IoT devices for data collection, and a wider range of sensor data
- **Composable infrastructures are gaining interest and attention, as are DPUs**