

## **Scalable Productivity and the Ever-Increasing Tie between Data Analytics, Data Management and Computation**

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Cray continues to see an increasing trend in the HPC marketplace that we are calling “data-intensive” supercomputing. The dramatic growth in scientific, commercial and social data is resulting in an expanded customer base that is asking for much more complex analysis and simulation. There is a feedback loop between more and bigger datasets and more complex simulation modelling, and Cray is seeing this across our customer base and market segments. This is one reason that Cray sees the three pillars of computing, storage and analytics as a key to helping customers unlock new discoveries and unleash the full potential of their datacenter.

State-of-the-art for data-intensive supercomputing has to bring productive parallelization to the fingertips of the customer. Whether this is powerful parallel processing hardware and software, blazingly fast parallel file systems, or parallel graph analytics, parallelism is a key component of state-of-the-art. Open systems, where data is not permanently tied to a particular company or technology is also key. Cray heavily relies on open operating systems, open tiered storage and open analytics tools for many components of its system to insure the longevity of customer data and customer-developed tools. Cray innovates and differentiates on top of these open environments to improve productivity, and relies on these innovations, as well as total-cost-of-ownership and productivity improvements to bring customers back.

Cray sees this ever-increasing tie between data analytics, data management and computation to be a long-term trend. This tight coupling will lead to discoveries, both scientific and social, which will make their mark in the conscience of both the high performance computing user and society as a whole. HPC has long had difficulty showing the general public how our products impact their lives and our industry needs to get better at this. These impacts will become more pervasive and if we use them wisely, they will make all our lives more productive and more meaningful.

Cray has a single-minded focus on the high-end of computing, storage and analytics, which is ingrained in how we develop products that help customers achieve success. This focus is what differentiates us and drives our innovation choices. Our competitors design to the smallest commodity and then attempt to scale to solve customers’ complex problems. Cray designs to solve the ultimate challenges of scalability and then scales down our solutions to meet the needs of the technical enterprise customer. This is a basic design difference that leads to innovations in software and hardware in what we call scalable productivity. This scalable productivity is what makes Cray, Cray!

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