

Risk Management for Complex Security Environments

Multi-Level Security on Cray distributed-memory HPC clusters

Global supercomputing leader Cray is the first vendor to successfully deliver certified Multi-Level Security (MLS) distributed-memory clusters to its customers. The solution leverages Cray® CS™ series clusters, Seagate's ClusterStor™ SL220 secure storage and Red Hat's Enterprise Linux® operating system, plus software from other vendors and customer security controls from a strategic partner, resulting in the most cost-effective and secure high-performance computing (HPC) solution for MLS.

Cray MLS clusters provide unprecedented control, protection and HPC capability in an environment that can be confidently shared. A combination of role-based access controls (RBAC) and mandatory access controls (MAC) allow multiple users operating at multiple sensitivity levels to coexist on a single unified system. Kernel-level policy enforcement eliminates data "spillage," unauthorized access or unnecessary process or file visibility. Cray MLS offerings have been independently evaluated and deemed compliant with ICD 503 and NIST 800-53 guidelines and directives.

Developed from the ground up to address today's stringent security requirements, Cray CS series MLS clusters are individually designed, manufactured and thoroughly tested prior to shipment. Using our secure, U.S.-based integration facilities, we can customize and configure entire HPC environments, including secured multi-tenant storage, and ship solutions with a "body of evidence" suitable for Interim Authority to Test (IATT) requests.



MANAGE RISK & COLLABORATE EFFICIENTLY

Securely share your computing assets and intelligence products. For the first time, teams at varying security clearances can use the same system in one environment while still maintaining data access levels. Users get secure access to the data they need, increasing productivity and innovation.



SAVE MONEY & TIME

Consolidating your systems frees up valuable floor space and saves on capital, power and cooling as well as the administrative costs of managing multiple systems. One Cray client combined 10+ applications onto a single system (that previously ran at different sites). The solution delivered more compute nodes while reducing space, power and admin needs.



STREAMLINE IMPLEMENTATION

Get your entire MLS solution — distributed memory clusters, storage and integration — from a single, experienced vendor. Cray engineers, along with our strategic partners, install a stateful OS on the cluster system and integrate it with certified storage in our manufacturing facility before the system ships to your site, saving you weeks of effort.

Work with the leader in distributed-memory clusters

Our partnership-based approach and MLS offerings reduce time, effort and complexity. We have 40+ years of experience building systems for organizations with the most demanding security and privacy requirements. From architectural design discussions to final accreditation, Cray can provide reliable answers to real-world concerns using secure, end-to-end, cost-effective solutions.