

# HIGH PERFORMANCE COMPUTING *CENTER OF EXCELLENCE*

The CSC logo consists of the letters "CSC" in white, bold, sans-serif font, centered within a red hexagonal shape.

Dayton, Ohio  
USA

Greenbelt, Maryland  
USA

Huntsville, Alabama  
USA

San Jose, California  
USA

Vicksburg, Mississippi  
USA

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HPC Coe Web Site  
<http://cschpc.com>

Founded in 1999, the High Performance Computing Center of Excellence understands the science behind high performance computing and thus is uniquely positioned to apply HPC techniques to your business problems.

“Supercomputing,” “High-End Computing,” “High Performance Computing” ... no matter what the label, the challenge in planning, integrating, operating and sustaining a complex computing environment can be significant. CSC’s High Performance Computing Center of Excellence (HPC CoE) capitalizes on the strengths of the latest technologies to deliver the solution that is right for your customers. Whether you are in the initial planning stage for delivering high performance solutions for the first time, growing or expanding your current center, or have a mature, aging facility where you face infrastructure limitations, the HPC CoE offers a variety of services that can help you meet that challenge.

#### SOLUTIONS ARCHITECTURE CONSULTING

The HPC CoE delivers solutions architecture from concept through design, leveraging our HPC subject matter experts’ technical and managerial strengths and experience. We lead or team to analyze and architect HPC and storage, high speed data movement, file systems, data visualization, software benchmarking and optimization, and workload management solutions that are right-sized for your center and meet your customer’s requirements. *Value Proposition:*

- **Leverage** our broad experience.
- **Effective, resilient, and secure** solutions .
- Scalable solutions assure lasting **value**.
- **Reduced cost** of transformation and increased value.
- **Lower risk**.

#### OPERATIONS AND SUSTAINMENT

The HPC CoE offers to provide management of the day-to-day HPC operations that are focused on System Administration, Application Management, Workload Management (WLM), and Program/ Project Management of a heterogeneous HPC infrastructure, storage, third-party and custom applications, databases, networks and security. By implementing industry-standard best practices and methodologies (ITIL, PMI, CMMI) to manage systems and applications through their total lifecycle, CSC HPC CoE will bring successful support models that promote consistent and reliable HPC service delivery. *Value Proposition:*

- Allows you to **focus** on your core business.
- **Customized** and flexible Levels of Support .
- **Enhance** existing systems with new technologies.
- Ensure the **integrity** of your systems.

### CSC Assures Premier HPC Expertise

- Operates a dedicated HPC group (over 145 professionals), one of the few IT firms to do so.
- Provides experience with multiple and diverse HPC vendor equipment: SGI, IBM, Cray, HP, Sun and Dell.
- Delivers solutions to NASA, DoD, Alabama Supercomputing Authority, Procter & Gamble, Gulfstream, and Pratt & Whitney.
- Operates HPC systems with aggregate capability exceeding 150 teraflops, and manages over 24 petabytes of data across all client sites.

CSC's Centers of Excellence help clients explore state-of-the-art solutions with minimum up-front investment, leveraging CSC's top talent to maximize innovation and results. Each Center has a designated facility and staff.

In addition to the HPC Center of Excellence, CSC also has an HPC Innovation Center where customers, vendors and CSC staff can demonstrate solutions and evaluate products, methodologies

### SYSTEMS INTEGRATION

Our team assists you in delivering a stable, interoperable HPC environment through the planning, testing and integration of resources and services, from acceptance to production. *Value Proposition:*

- CSC 's **proven** techniques that reduce installation time.
- **Performance** assurance.
- **Maintain ROI** by selecting only the required and necessary services.

### STAFF AUGMENTATION

This service offering provides exceptionally qualified intellectual talent to meet your organization's HPC and IT goals using an optimal mix of internal staff, outside consulting resources and project outsourcing. *Value Proposition:*

- Provides the customer considerable staffing level **flexibility**.
- **Knowledge** transfer of niche skills between CSC subject matter experts and on-site staff.
- Fills important staff, skill and **experience** gaps in custom HPC technologies.
- The ability to **leverage** CSC's HPC experience and expertise.

### TOTAL OUTSOURCING

CSC's HPC CoE offers a complete center management and operational support solution package, focused on day-to-day center operations. Primary support areas, tailorable to your needs, include: Solutions Architecture, Systems Integration, HPC Operations and Sustainment, and UNIX/Linux Desktop Management as well as Software Benchmarking and Optimization, User Services/Call Center (including application management/support), IT Security and Web/Database Support. *Value Proposition:*

- Allows customer to **focus** on core business.
- Single point of responsibility for **increased responsiveness**, reduced contractual oversight, and aligned service management.

### HPC OnDEMAND COMPUTING

This service offering is a cost-effective, reliable and flexible approach for additional computing resources as your requirements and demands dictate. The offering includes all the basic services for the base hardware plus software support, maintenance, configuration/asset management, secure access to the system, batch facilities and usage reports. Customers can continue to focus on their mission. *Value Proposition:*

- **No** facility burdens.
- **No** additional staff.
- **Use** when needed.
- **No** set-up or tear-down overhead associated with system usage.
- **No** delay or management overhead associated with installation of dedicated compute resources.

