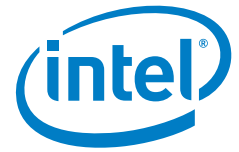


## SUCCESS BRIEF

Intel® Xeon® Processor E5 Family  
Government/Public Sector  
High-Performance Computing



# Driving Innovation and Job Growth with HPC

Oklahoma Innovation Institute builds an HPC cluster with Intel® Xeon® processors to foster economic development in Tulsa

## ORGANIZATION

The Oklahoma Innovation Institute is a not-for-profit organization created to boost economic development in the Tulsa, Oklahoma, region. Supported by private-sector, government, and philanthropic partnerships, the Institute fosters collaborative research, entrepreneurship, and creative, future-oriented thinking that can lead to new business opportunities and job creation. Its first initiative is the Tandy Supercomputing Center, a community-oriented supercomputing center that serves the private, public, and academic sectors.



Oklahoma Innovation  
INSTITUTE

"By building our new HPC infrastructure with the Intel® Xeon® processor E5 family, we can offer academic researchers and business users the performance they need to answer complex problems and to commercialize research in ways that spur new economic development in the Tulsa, Oklahoma, area."

— George Louthan,  
Computer Scientist and Director,  
Tandy Supercomputing Center,  
Oklahoma Innovation Institute

## CHALLENGE

The Institute wanted to provide high-performance computing (HPC) resources to academic researchers and business users to facilitate new research and spur economic development. The HPC resources would serve the "missing middle" who might have had difficulty gaining timely access to HPC resources and local IT support. In particular, a larger, shared supercomputing center could help enhance research at the University of Tulsa, the University of Oklahoma-Tulsa, and Oklahoma State University in Tulsa, while expanding teaching and training at Tulsa Community College. Together, these four academic institutions form Tulsa Research Partners, one of the Institute's cornerstone programs.

## SOLUTION

With help from Fujitsu, the Institute designed and implemented a 100-compute node cluster comprising Fujitsu Server PRIMERGY RX200 S7\* servers based on the Intel® Xeon® processor E5-2680. The processor will provide the outstanding floating-point performance that users need to accelerate research and solve complex problems. The system is also uniquely scalable; the environment is pre-built to accommodate 224 more nodes, more than tripling its initial size, without adding any additional infrastructure. The cluster will support a wide variety of research applications on the Red Hat Enterprise Linux\* operating system. The Institute's IT staff enables users to capitalize on the Intel® Cluster Studio XE 2013 to optimize code for the cluster.

## BENEFITS

- **Providing access to robust resources.** By providing access to robust HPC resources plus expert IT support, the Institute will help users accelerate research and solve more complex problems than they could with the smaller workstations and desktops they had used in the past.
- **Optimizing application performance.** Users can employ software tools from the Intel Cluster Studio XE 2013 to find execution hot spots and optimize code.
- **Supporting new grant applications and spurring economic development.** Offering large-scale, shared HPC resources will help research groups secure larger grants than they might have earned otherwise. Providing entrepreneurs and business users with HPC resources will help spur economic development and ultimately produce new, high-impact jobs in Tulsa.

Find the solution that is right for your organization. Contact your Intel representative, visit [Business Success Stories for IT Managers](#), or explore the [Intel IT Center](#).

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