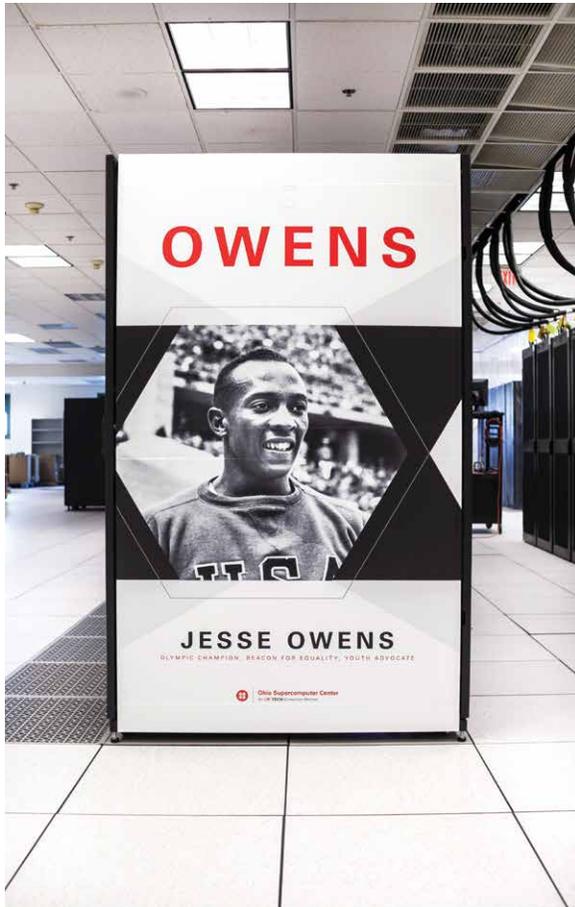# BIG DATA

Scientel IT Corp software showcases
power of OSC's Owens Cluster

In 2017, the Ohio Supercomputer Center partnered with Scientel Information Technology Corporation to demonstrate the power of the Owens Cluster by running the single-largest scale calculation in its history.

Scientel, a Big Data specialist company, used 16,800 cores of the Owens Cluster to test a new database software optimized to run on supercomputer systems. The seamless run created 1.25 Terabytes of synthetic data.

Scientel developed Gensonix Super DB, a software designed for Big Data environments that can use thousands of data-processing nodes compared to other database software that use considerably fewer nodes at a time. Scientel CEO Norman Kutemperor said Gensonix Super DB is the only product designed and optimized for supercomputers to take full advantage of high performance computing architecture that helps support Big Data processing.

"This is a wonderful testimonial of the capabilities of Gensonix Super DB for Big Data," Kutemperor said. "The robust nature of the OSC Owens Cluster provided the reliability for this large parallel job."

To demonstrate the power of Gensonix Super DB, the Scientel team created a sample weather database application to run using OSC's Owens Cluster. For this rare large run, Scientel used 600 of the system's available 648 compute nodes. During the run, the Owens Cluster reached a processing speed of over 86 million data transactions per minute with no errors.

"As the largest-scale run ever completed on OSC's systems, Scientel helped us demonstrate the power of the Owens Cluster," said David Hudak, Ph.D., OSC interim executive director. "Owens regularly delivers a high volume of smaller-scale runs, providing outstanding price performance for OSC's clients. The ability to scale calculations to this size demonstrates another unique capability of Owens not found elsewhere in the state and unmatched by our previous systems."

With satisfactory test results on the software, Scientel will push Gensonix Super DB to the forefront of technology to process large varieties of data and compute intense problems in areas such as cancer research, drug development, traffic analysis and space exploration. A single application written for Gensonix Super DB can use more than 100,000 cores to handle multiple petabytes of data in real time.

"(The OSC staff members) are extremely knowledgeable and very capable of understanding customer requirements, even when jobs are super scaled," Kutemperor said. "Their support and enthusiasm for projects of this nature are outstanding." ◄

{FAR LEFT} Norman Kutemperor, Scientel CEO, speaks with the OSC team about future data processing projects. Earlier this year, his company conducted the largest-scale run ever on an OSC system.

INDUSTRIAL ENGAGEMENT