FedCentric Technology

Transforming Data into Knowledge for Bioscience, Cyber, and Fraud

Success in High Performance Data Analytics (HPDA) requires hardware and software innovation that keeps pace with bioscience, cyber, and fraud challenges.

FedCentric creates an integrated system for solving complex problem sets. We team with Intel®, SGI®, and NVIDIA® to develop high speed platform solutions, layer open source and commercial-off-the-shelf (COTS) software on top, and glue them together with FedCentric subject matter experts with deep expertise in extracting knowledge from massive data lakes.

Actionable real-time results require millions of answers per second

When data is scattered across dozens or hundreds of network-clustered servers, delays add up and results slow down.

FedCentric significantly speeds the time to insight by putting all RAM and compute power in a single server. This simplifies the programming model because there is no need to break up the application, shard the data, pass messages between hosts to sync data, or map/reduce to parcel out the work and then reassemble it to get a result.

Instead, there is just one huge block of memory to hold the data and hundreds or thousands of compute core to crunch results.

Tightly Coupled Scale-Up Servers

FedCentric provides millions of real-time results with standard commodity hardware. We build Linux servers with up to 4096 Intel X86 compute core and 64TB of RAM in a single server, as well as PBs of storage.

- Intel Xeon processors
- PCIe IO bus
- DDR4 RAM
- NVMe SSD

Perform more complex queries and reduce time to insight

FedCentric constantly evaluates best of breed HPDA software solutions to complement the resources in large memory servers.

- Open source software stacks like Apache Spark thrive in big memory and can outperform Hadoop by 100X
- In-memory DBs like MemSQL can perform some OLTP operations 1000X faster than older disk-based DBs running on SSDs

The algorithms, codes, and tools that run on these systems are specific to different disciplines, such as bioscience, cyber, and fraud. But since they share a common framework, breakthroughs in performance and functionality achieved in one discipline can be applied to others. The result is a faster rate of technological advancement for every FedCentric customer.

High Performance Innovation

- Multi-Terabyte In-memory Databases (IMDB)
- Variety of Graph Analytics technologies
- Deep Learning Techniques
- Massively Parallel Applications
- GP-GPU and Intel Phi™ Enabled Databases

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FedCentric Labs

FedCentric Labs is where software, hardware, and integrated solutions are put to the test before we recommend them to customers. The FedCentric facility is equipped with two High Performance Computers (HPC) and state-of-the-art compute, network, storage, and cyber gear from leading vendors.

At FedCentric Labs, seasoned engineers and domain specialists team with government agencies, national labs, and Fortune 100 companies to test hardware, software, and platforms for applicability to a variety of HPDA problems. The research and knowledge gained from these investigations is used to give FedCentric customers a head start toward their goals. Innovation starts in the FedCentric Labs, but it doesn't stay there.

FedCentric Labs Provides Three Customer Advantages

1 Start the project immediately

Start on our systems, transfer to your own when ready

2 Remove the theory

Try real data on the real software/hardware platform

3 Learn from results

Not PowerPoint proposals

Exceptional Environments Need Innovative Answers

Master Your Massive Data with FedCentric

Call (301) 263-0030 today

or contact:

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FedCentric: The Pioneer in High Performance Data Analytics

FedCentric Technologies LLC, a HUBZone certified and Service Disabled Veteran-Owned Small Business, was founded in 2005 to provide solutions to difficult business applications that exceed the capabilities of traditional approaches. FedCentric pioneered the use of In Memory DataBase software using large memory systems and continues to lead the market with unique architectures and techniques for the most difficult Big Data requirements.