High–Performance Computing and Artificial Intelligence

SIMPLIFIED AND POWERFUL DECISION–MAKING ORCHESTRATED BY CDW

Artificial intelligence (AI) driven by the power of high–performance computing (HPC) is opening a new frontier of opportunity for financial services. This duo of advanced technologies, combining deep thinking and machine learning with powerful supercomputing, is enabling practical use cases, automating complex tasks and decision–making processes for every segment of the industry.

High–Performance Computing and Artificial Intelligence: Our Approach

Today, the benefits of artificial intelligence are available to every financial services firm, made possible with the supercomputing power of an HPC solution. Leverage the benefits of artificial intelligence for higher performance in loan underwriting, fraud detection, regulatory compliance, customer behavior and sentiment analysis, IoT and a host of other applications. CDW has the expertise and the partnerships with leading technology providers to orchestrate an HPC–supported AI solution, driving faster, more efficient solutions to challenging problems and creating new business and market opportunities for your organization.

Considerations When Updating Your HPC to Support Artificial Intelligence

Whether you are in initial planning stages or ready to architect an AI solution, investing in the right technology ensures that your organization can take in multiple data sources to inform smart decisions and actions. Ask yourself:

☐ What are your biggest challenges with your current data and analytics strategy?

☐ How are you protecting your organization from internal/external fraud and cyberattacks?

☐ What concerns do you have regarding critical decision–making within your organization?

☐ Are you facing any challenges regarding meeting compliance regulations and reporting?

☐ Is your storage and network infrastructure able to support advanced, rapid processing?

☐ What tools are you using to identify and deliver services/products based on individual customer behavior and needs?

Call **888.706.4239** to set up a consultation with an AI solution expert or visit **CDW.com/finance** for more information.

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THE SOLUTION

CDW's experts understand that each financial institution is at a different stage in building out their AI solution. We can help you assess your technology needs and work as your partner to design, deploy and manage the best AI solution to meet your challenges. Powering up for HPC supported AI requires the right hardware and software components that include:

LOW LATENCY NETWORKS. Faster decisions mean better results and keep you one step ahead of the competition. To squeeze latency out of the environment, specialized hardware is needed to help accelerate, streamline and manage the intense network traffic, including:

- Ultra-low-latency switches
- Message acceleration appliances
- High-performance network monitoring management tools
- Network interface cards (NICs)
- WAN/application optimization
- Next-generation networking

SERVERS. Power up the process and analyze large volumes of data quickly and easily with high-powered servers. Your organization can improve efficiency and reduce operating costs, yielding sharply higher performance within existing data center footprints and thermal envelopes.

- Blades
- Racks
- Tower servers

PROCESSORS. Speed and low latency are key elements of HPC-supported AI, and having the right processors in place will accelerate processing and calculation, reduce latency, and lower power consumption for cost savings. Traditional CPU technology can't keep up with the demands, GPU processors drive supercomputing. Features to look for include:

- Parallel execution
- Streamlined memory access
- Cutting-edge processing techniques

PARALLEL STORAGE. You'll need robust storage to manage the large amounts of data needed for critical analysis. The same technology will also help you streamline data retention policies, as well as design a flexible, secure and easy-to-manage data storage blueprint. This technology includes:

- Parallel file systems
- Solid-state disk storage
- Hybrid storage arrays
- Direct-attached storage (DAS)
- Network-attached storage (NAS)
- Storage area network (SAN)
- Unified storage
- Software-defined storage (SDS)
- Object storage software
- Flash storage
- Hierarchical storage management

ADVANCED DEEP LEARNING/DATA ANALYTICS. The brains behind the hardware. Your team will generate more models, more accurately, than traditional analytical and programming approaches with real-time analysis and decision-making. Software should include either:

- Business intelligence software
- Machine learning software

SERVICES from CDW improve performance, reduce risk and free up staff time:

- Managed Infrastructure Services
- Managed Cloud Services
- Data Migration Services
- Managed Networks
- Colocation Services

ORCHESTRATING THE SOLUTION

CDW is a leading provider of technology solutions and services dedicated to supporting the highest standards of trust and performance for the financial services industry. For more than 30 years, CDW has continued to help over 127,000 banks, credit unions, capital markets and specialty financial service companies assess and align their IT infrastructures with growth strategies, managing regulatory compliance and costs.

Check out AI in action! CDW's cutting-edge new FSI Solutions Lab demonstrates real financial services environments including a mock stock exchange, data warehouse, and fraud and anti-money laundering.

Read this **white paper** to learn more.

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