



AgilityFlex™ Cluster

Tightly Integrated, Workload Optimized, Compute, Storage, Networking, Software, Implementation and Support

Highlights

Configurations

All systems come with

- Single head node; option for HA head nodes
- Cluster management software
- Rack and PDU's
- Networking
- Factory integration and configuration

Processor Options

- Intel Xeon
- AMD EPYC
- IBM POWER9

Available Storage Options

- ExtremeStor
- zScale
- Netapp FAS
- AgilityFlex Cloud

HPC Optimized Software Environment

- Bright Computing Cluster Management Software
- Red Hat Enterprise Linux HPC Edition
- Intel Parallel Studio XE, compilers, etc.
- IBM Spectrum Computing

Accelerator Options

- NVIDIA Tesla
- Intel FPGA

High Performance Networking Options

- Mellanox 100Gb Ethernet and InfiniBand
- Intel Omni-Path

Industry Specific Solutions

- FlexAI for AI/Machine Learning

Exclusively Focused on Technical Computing and Data Management

Applied Data Systems is 100% focused on technical computing, specializing in CPU and GPU computing, low latency networking and high-performance storage

Agile, Flexible Building Blocks Tightly Integrated for Blazing Performance

Our AgilityFlex Cluster line of High Performance Computing systems are designed to incorporate best of breed building blocks, tightly integrated and tuned to deliver blazing fast performance. The modular design allows for easy expansion and ease of management, all backed by an end to end warranty and support program for up to 5 years. AgilityFlex clusters can be custom designed for your use case or you can use one of our proven reference architectures for industry specific use cases, such as FlexAI for AI/Machine Learning.

Efficient Cooling and Low Processor Usage Effectiveness (PUE) Ratio

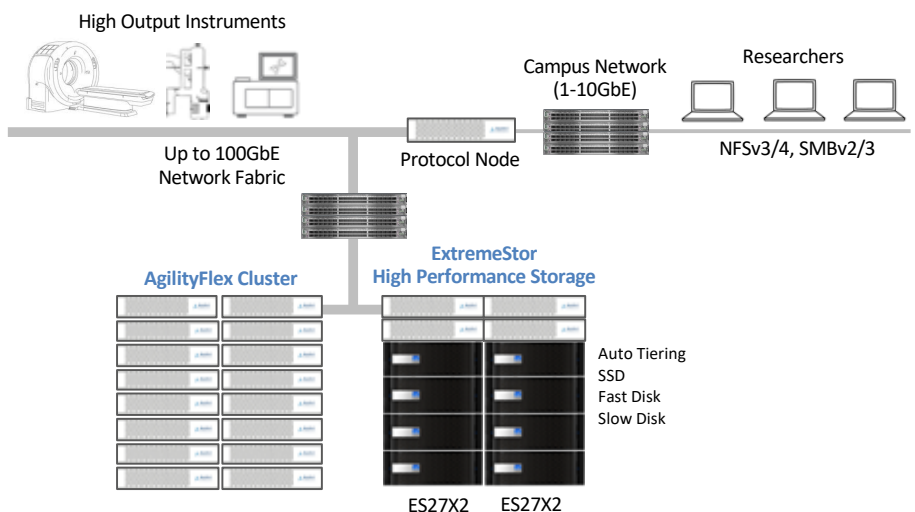
Our team knows how to tackle the most demanding of environments and applications. Have a desire for a low PUE? Well, we can offer two cooling solutions to help drive that PUE down as close to 1.0 as possible. Utilizing technologies such as direct chip liquid cooling and high-performance rear door heat exchangers, we can help you reduce operating costs, or even deploy HPC solutions in locations without the proper infrastructure to support traditional HPC systems.

Integrated High Performance Storage Optimized for the AgilityFlex Cluster

Integral to any compute solution is your storage back end. The team at Applied Data Systems can help you navigate your storage options and select the option that best fits your requirements: ExtremeStor Spectrum Scale, BeeGFS or Lustre high performance, scalable, parallel file storage, zScale ZFS based file system or Agility block storage for direct-attached storage. Want to tier your data off to the cloud? We offer AgilityFlex Cloud, an S3 compliant cloud offering that is competitive with the industry giants, all on enterprise grade hardware. Flexible platforms and plans will ensure you are getting exactly what you need and nothing more.

High Throughput, Low Latency Networking

Our team will also help you select the best network for your code, environment and budget. Need the lowest latency for MPI? Choose between Intel OmniPath or Mellanox InfiniBand. Prefer an Ethernet based solution? AgilityFlex Clusters can support 1Gb up to 200Gb. We'll help you decide on which way to go and which switch design works best for you now and in the future. Choosing the appropriate network design now will help provide years of expected performance and scalability.



AgilityFlex Cluster within Applied Data Systems Workflow Optimized End-to-End Architecture

Models

- AFC-i2000 (Intel Xeon Scalable clusters)
- AFC-a2000 (AMD EPYC clusters)
- AFC-p2000 (IBM Power9 clusters)

Expert Service and Support

- Minimum 3 yrs on-site support up to 5 yrs
- White Glove installation

Enterprise Reliability and Availability

Rock solid system and high scale data management trusted by 1000's of organizations combined with best of breed components for extreme performance and data protection

Flexible Building Blocks

AgilityFlex Clusters are delivered as a modular, repeatable, and highly supportable solution consisting of best of breed industry standard components

Modular Upgradability

AgilityFlex Cluster is designed with optimal flexibility to expand as your computational needs grow. Performance can be scaled by simply adding more servers, networking and storage components.

Application Workflow Optimized

- Machine Learning
- Life Sciences
- HPC
- Media & Entertainment
- Oil & Gas
- Defense & Intelligence

Flexible Performance and Scale

AgilityFlex Clusters deliver top performance with the industry's leading processors and accelerators, providing the most advanced high performance computing cluster available

Factory Integrated for Rapid Deployment

AgilityFlex Clusters are fully integrated with customer specified HPC software and tested at the factory prior to shipment making them ready-to-deploy upon delivery

Cluster Management Software

Next, choose a cluster management package which will ease management and allow you to make the most out of your computing investment. Fully supported options include IBM Spectrum Computing and Bright Computing's Bright Cluster Manager. Both options support IBM POWER9, x86-64, and GPU based platforms.

Expertly Integrated by Applied Data Systems

AgilityFlex Cluster arrives turn-key and ready to deploy in your location. Our team will work with you to ensure that your new system arrives with the proper power distribution that is supported in your facility. Your new system will show up neatly racked and cabled, with the cluster management software and operating system loaded, along with the network and storage system configured and optimized. We will install the system in your facility and teach you how to use your new AgilityFlex Cluster with minimal impact to your daily operations.

Warranty

AgilityFlex Cluster comes with a base of three years support renewable to five years total (up to 7 years support for some systems). We take first call support for everything in our cluster making it easier to keep you online and off the phone. Need onsite service? Not a problem. With our AgilityEdge Enterprise line of servers, we offer next business day service as our base offering with a same business day, onsite support contract as an option.

Ultimate Flexibility with No Boundaries

The AgilityFlex cluster is just that; flexible. We can help you create the cluster that best fits your needs now and show you a path to scale in the future. We incorporate the latest technologies in to our designs and ensure that they offer the best price to performance for your applications. With our highly trained and experienced engineers, we are certain that we can design a system that best meets the needs of your HPC workloads.

Contact us now and let us help you get a high-performance, flexible cluster designed for years of use.

Model	AFC-i2000	AFC-a2000	AFC-p2000
Processor	Intel Xeon	AMD EPYC	IBM POWER9
Key Features	Leadership balanced performance and expansive application support	1-2 socket servers with up to 64 cores, 4 TB RAM and 128 PCIe lanes	Built for data intensive workloads with state-of-the-art I/O, including next generation NVIDIA NVLink, PCIe Gen4, and OpenCAPI
Disk Storage	NVMe, SSD, HDD		
RAS	Redundant power and cooling, optional failover management servers Modular replaceable components		
Networking	Mellanox 100Gb Ethernet and InfiniBand Intel Omni-Path 1 GbE and 10 GbE for management		
HPC Optimized Software Environment	Bright Computing Cluster Management Software Red Hat Enterprise Linux HPC Edition Intel Parallel Studio XE, compilers, etc. IBM Spectrum Computing		
Accelerator Options	NVIDIA Tesla Intel FPGA		
File Systems	ExtremeStor IBM Spectrum Scale BeeGFS ZFS		
Protocols	NFSv3/4, SMBv2/3, FTP, HTTP, S3, HDFS and POSIX parallel file system client for extreme performance		
Service and Support	Minimum 3 yrs on-site expert support up to 5 yrs White Glove installation		



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