

LENOVO INTELLIGENT CLUSTER

Take the complexity out of complex solutions



SOLUTIONS MADE SIMPLE

Deploying solutions for Technical Computing, High Performance Computing (HPC), Analytics and Cloud environments can place a significant burden on IT. The Lenovo® Intelligent Cluster™ leverages decades of Lenovo System x® experience to reduce the complexity of deployment with pre-integrated, delivered, and fully-supported solutions that match best-in-industry components with optimized solution design. With Intelligent Cluster, clients can focus their efforts on maximizing business value,

instead of consuming valuable resources to design, optimize, install and support the infrastructure required to meet business demands.

OPTIMIZED SOLUTION DESIGN

Intelligent Cluster solutions feature industry-leading System x servers featuring powerful Intel® Xeon® processors, storage, software and third-party components that allow for a wide choice of technology within an integrated, delivered solution. Lenovo thoroughly tests and optimizes each solution for reliability, interoperability and maximum performance, so clients can quickly deploy the system and get to work achieving their business goals.

INCREASE RESULTS

Clients are expanding the use of Technical Computing and HPC to solve complex problems at a smaller scale, and smaller organizations typically lack the dedicated resources needed to deploy and manage cluster systems effectively. As an integral part of the Intelligent Cluster portfolio, the Platform HPC comprehensive management solution lets clients quickly put the system to work with minimal effort and skill. Platform HPC optimizes resources automatically to maximize utilization, and the easy-to-use web-based tools make application deployment and ongoing management simple.



END-TO-END SOLUTIONS

Intelligent Cluster solutions are built, tested, delivered and installed by Lenovo, and supported as a single solution instead of being treated as hundreds of individual components. Lenovo provides single point-of-contact, solution-level support that includes both System x and third-party components to deliver maximum system availability throughout the life of the system, so clients can spend less time maintaining systems and more time delivering results.

NEW OFFERINGS

Lenovo is adding several System x rack server offerings, including the Lenovo System x3550 M5, x3650 M5, the Lenovo Flex System™ x280 X6, and the Lenovo RackSwitch G7052. New OEM offerings include Mellanox EDR technology.

WHY LENOVO

Lenovo is the leading provider of x86 systems for the data center. The portfolio includes rack, tower, blade, dense and converged systems, and supports enterprise class performance, reliability and security. Lenovo also offers a full range of networking, storage, software and solutions, and comprehensive services supporting business needs throughout the IT lifecycle.

SPECIFICATIONS

SYSTEMS	Lenovo NeXtScale™ System – M5 available with Water Cool Technology Lenovo Flex System™ x240, x280 X6, x440 compute nodes Enterprise servers: System x3850 X6, x3950 X6 Rack servers: Lenovo System x3550 M5, x3650 M5, x3750 M4	
INTERCONNECTS	Ethernet Switches	Lenovo Networking, Mellanox, Edgecore, Extreme
	Ethernet Adapters	Chelsio, Mellanox, Emulex, Intel
	InfiniBand Switches and Adapters	Mellanox, Intel
	Fibre Channel	Brocade, Emulex, Intel
	Infiniband to Ethernet Gateway	Mellanox
EXTERNAL STORAGE		
STORAGE SYSTEMS	IBM Storwize V3700	
STORAGE EXPANSION	EXP 2512 Storage Expansion Unit; EXP 2524 Storage Expansion Unit;	



SPECIFICATIONS

OEM STORAGE SOLUTIONS	DDN SFA 7700 Hybrid Flash Appliance; SFA7700X
GRAPHIC PROCESSING UNITS (GPUS)	NVIDIA: Quadro 5000, Tesla K10, Tesla K20X Tesla K40; Stella Duo K80
CO-PROCESSORS	Intel® Xeon® Phi 5110P; 7120P
OPERATING SYSTEMS	Red Hat Enterprise Linux (RHEL); SUSE Linux Enterprise Server (SLES)
CLUSTER MANAGEMENT SOFTWARE	Platform HPC; Platform Cluster Manager; xCAT (Extreme Cloud Administration Toolkit); Moab Adaptive HPC Suite; Moab Adaptive Computing Suite; General Parallel File System (GPFS) for Linux; LoadLeveler; Parallel Environment
RACK CABINETS	
5000 42U RACK CABINET	79.5" H x 25.2" W x 43.3" D (2020 mm x 640 mm x 1100 mm); 574.2 lbs (261 kg)*
5000 25U RACK CABINET	49.0" H x 23.8" W x 39.4" D (1344 mm x 605 mm x 1001 mm); 221 lbs (100.2 kg)*
POWER AND COOLING	Calibrated Vectored Cooling™, energy-efficient power supplies, low-voltage processors, Power Configurator, Thermal Diagnostics
SCALABILITY	One management node is required and one redundant management node for failover is optional. A minimum of two and a maximum of 1,024 managed nodes are supported (optional software may limit supported nodes). This total can include up to 64 storage nodes. The maximum configuration is 1,026 nodes including compute, storage and management nodes. Larger configurations are available through a special bid process
SERVICES	<ul style="list-style-type: none"> • Intelligent Cluster hardware installation is included at no charge on 100U, 42U and 25U racks • HPC cluster software services and SupportLine for Linux and Windows Clusters are available as optional fee-based services • Cluster Installation Support Services are available through the Cluster Enablement Team (CET) as optional fee-based services
WARRANTY	3-year parts, customer replaceable unit (CRU) or on-site labor, limited warranty, with individual nodes retaining the warranty and service upgrade offerings for that System x machine type; optional warranty service upgrades

* Weight is dependent on the nodes added and will vary when disks, adapters and peripherals are added.

FOR MORE INFORMATION

About Lenovo, the Intelligent Cluster, or to contact your Lenovo representative or Business Partner, visit lenovo.com/systems/servers.

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IBM x86 products are now products of Lenovo in the U.S. and other countries. Learn more at ibm.com/lenovo-acquisition

