

System x Enterprise Solution Services

Lenovo Lab Services

HPC Intelligent Cluster Implementation Services

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Overview

This implementation and training service takes bare hardware and gives you a cluster that can be used for real work. Let System x Enterprise Solution Services help you get the most out of your system by quickly configuring it to meet your needs and giving you the skills necessary to perform day-to-day administration tasks. Clusters can be constructed from a variety of rack servers, blade servers, ldataPlex servers, NeXtScale servers, and storage products appropriate for your application and Lenovo and OEM (e.g. CISCO) networking components. System x Enterprise Solution Services has the skills and expertise to make it work together for you.

How is this done?

This is a process tailored to customer needs and wants. To begin the process a list of services desired is prepared from a menu of available options and then a "Statement of Work" is constructed that is customized to meet the functional requirements. This may require a conference call to discuss options. From the hardware configuration and the list of services desired a project scope and sizing is determined. These steps are integrated into the Lenovo Intelligent Cluster order fulfillment process so that you can purchase the hardware and the services required to put it into production at the same time.

Once the cluster hardware and services are ordered and delivery is imminent – implementation planning calls will be held to ensure a smooth delivery. When it is mutually convenient a consultant, or a team of consultants depending on the size of the cluster, will arrive at the datacenter ready to provide the services desired. Before the end of the project the consultant will ensure that functionality is demonstrated and the configuration documented.

What are the advantages?

- Speed of Implementation - Our consultants have the experience that you need to make your cluster work for you in the most expeditious fashion. They will use proven implementation practices and recommend proven software components helping to avoid iterations of trial and error – getting you straight into production.
- Quality of Implementation – Our consultants are constantly accumulating best practices and improving the techniques for installation and configuration. They also work with Lenovo development and customers worldwide to help refine both the products and their implementation.
- Reduced Risk – Our consultants will help you avoid typical pitfalls which result in sub-optimal performance, compatibility or warranty issues.

By engaging System x Enterprise Solution Services you will be giving yourself the means to fully exploit the capabilities of your new system purchase and not overlook important features. You should be able to benefit from the depth of experience that our consultants bring with a minimum investment of your time.

For More Information Contact:

Tim A Jones - tjones8@lenovo.com or x86svcs@lenovo.com for group mail box.

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What is generally included in an engagement?

Each engagement can be unique but most include the following:

- A preparation and planning teleconference
- Management node
 - RAID configuration
 - OS installation
 - CMOS setting
 - Firmware verification/update
 - Cluster management software installation (xCAT)
- Ethernet provisioning and management network configuration and verification
- Configure nodes (compute, storage, login, special purpose, etc.) with RAID as appropriate
- Provision nodes (compute, storage, login, special purpose, etc.) with an OS
 - Verify/Configure CMOS settings
 - Verify/Update firmware
 - Update drivers and software stack as required

What are optional services that depend on hardware configuration?

- High speed network (Infiniband or 10G) configuration and verification
 - Special or particular software stack implementations to match, e.g. OFED.
- Storage subsystem configuration and verification
 - Install Storage Management software on the management node
 - Configure multi-pathing software as appropriate
 - Zone storage controllers and/or SAN switches
 - Create arrays, LUNs and filesystems
- Special purpose node configuration, e.g. GPU nodes.

What are optional services that depend on software configuration?

- Implementation of a Resource Manager/Scheduler, e.g. Torque/Maui, Torque/Moab, PBS-Pro, LSF, Platform HPC, SLURM, etc..
- Implementation of Monitoring and/or Alerting Software, e.g. Ganglia and Nagios
- Implementation of General Parallel File System (GPFS)
- Implementation of special purpose tools and libraries, e.g. Intel Compiler, Intel MKL, special MPI bindings.

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What are optional additional services?

- Assistance with solution architecture or review of proposed solutions
- Hardware testing:
 - Power up/down testing
 - Execution of standard benchmarks including: STREAM, PALLAS, IOzone, and HPL.
- Assistance with benchmark execution and acceptance testing
- In depth skills transfer on any of the cluster components
- Assistance with application and license manager installation
- Project Management assistance:
 - Scheduling
 - Hardware and Software ordering and delivery
 - Budget management

Pricing

To order this service, contact one of our opportunity managers to establish requirements and create a Statement of Work (SOW). This service can be ordered using Lenovo System x part number 49Y3780 which represents a day's work (8 hours) by one of our consultants. Travel and living expenses are included when the part number is used. The number of part number units required will be determined when the project is sized and the SOW is created.

Who we are:

System x Enterprise Solution Services is one of the for-fee services organizations of Lenovo's world renowned Systems x development labs. Through System x Enterprise Solution Services you can bring the expertise of the development community on the latest technologies to your enterprise. With deep skills in System x products and technologies, System x Enterprise Solution Services can help you with your most difficult technical challenges. System x Enterprise Solution Services exists to provide you with successful implementations of emerging technologies to help accelerate your investment ROI and drive up your satisfaction with your Lenovo solutions.

For more information on Lenovo System x Enterprise Solution Services (Lab Services), please look here:
<http://www-03.ibm.com/systems/x/services/>

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