

Sun Lustre On-Site Implementation Services for Large Configurations

PS-LUSTRE-LARGE

Hong Kong

1.Scope

Under this fixed-price service, Sun will provide Customer with the design, on-site integration, and acceptance testing of the functional components for implementation of one (1) Lustre file system large configuration ("Covered Software"), as described in Section 2 below ("Service"). A large configuration consists of a maximum of twenty (20) client systems (additional client systems may be set up on a time and material basis). The functional components include: two (2) metadata servers, six (6) object storage servers, one (1) storage array, twelve (12) storage servers, four (4) fiber channel host bus adapters (HBAs), and Covered Software. Sun will compile Covered Software for up to two (2) different types of clients (OS version and Kernel version), additional clients can be compiled on a time and material basis at Sun's then current rate. Sun will use commercially reasonable efforts to provide this Service.

Limitations: Covered Software is designed to operate solely on hardware designated exclusively for Covered Software ("Designated Hardware"), and Customer must not operate any other software on Designated Hardware. Prior to the commencement of the Service, Customer must remove all software and data on the Designated Hardware, if any, and Customer is solely responsible for the backup of any such data. Implementation for any software other than Covered Software is specifically excluded from this Service. Purchase of the Designated Hardware is a prerequisite to this Service and such purchase is subject to separate terms and conditions, including payment terms.

2. Sun's Tasks and Deliverables

- **Service Initiation.** Sun will conduct a project kick-off meeting with key Customer contacts to finalize the project approach, and to discuss roles, responsibilities, site preparation, and the work schedule. At the kick-off meeting, Sun and Customer will review resource matters such as available workspace, access to telephones, copiers, faxes, LAN connections, tape drives, conference rooms, and printing facilities required to deliver the Service. The project kick-off meeting shall not exceed 4 hours.
- **Service Design.** After conducting the kick-off meeting, Sun will hold a design meeting with Customer representatives to review the Covered Software and Designated Hardware configuration and required functionality. Sun will document configuration and functionality requirements for two (2) metadata servers, six (6) object storage servers, one (1) storage array, twelve (12) storage servers, four (4) fiber channel host bus adapters (HBAs), and Covered Software with input from Customer ("Design Specification"). Customer will provide to Sun the host names, IP addresses and network configuration requirements. Sun will consult with Customer on any customer-specific changes to the Covered Software configuration to be implemented on site. This design meeting to scope the implementation for the Covered Software shall not exceed 4 hours.
- **On-Site Design - Implementation.** Sun will complete the implementation of the Covered Software configuration as described in the Design Specification.
- **Implementation Tests .** Sun will perform a series of tests to determine whether the Covered Software operates in conformance with the Design Specification ("Implementation Tests"). Implementation Tests include the burn in of hardware, Lustre Network (LNET) self test, disk performance, system reboot and input/output.
- **Transfer of Information to the Customer.** Sun will conduct a meeting with Customer to:
 - Provide information to help Customer understand and manage file striping;
 - Provide an overview of the Covered Software;
 - Help Customer develop a proper backup and recovery strategy for Covered Software; and
 - Obtain Customer sign-off on the service completion form ("Completion Form"). Customer's failure

to sign the Completion Form has no bearing on acceptance of the Service.

3. Customer Responsibilities

Customer must provide to Sun:

- A primary contact to:
 - Provide direction and guidance to Customer's personnel as required by Sun for the Service;
 - Provide information (including existing IT infrastructure, network maps, IP addresses, router ACLs, firewall rules, the IT organization's operational capabilities and system management information) and resources in a timely manner as required by Sun to enable Sun to perform the tasks described in this Service;
 - Be readily available and on-site when required by Sun for the duration of the Service;
 - Coordinate all required meetings with Customer personnel.
 - Receive any deliverables provided as a result of this Service.
- Access to a maximum of 20 client systems to complete the Implementation Tests.
- Access to Customer's relevant IT personnel as necessary.
- Parking and access passes as required by Sun as necessary for Service delivery.
- Timely delivery of information and support (i.e., in a time period that does not adversely affect Sun's scheduled delivery of the Service) from suppliers of non-Sun equipment and services as requested by Sun.
- An escalation procedure in the event that timely responses are not provided to Sun to enable the Service to be delivered within the established time frames.
- Access to management and/or technical resources for critical decisions related to the Service. A 24-hour turnaround will be requested on all "Request for Decision" memorandums.
- Any third party products required for the Service and applicable licenses and rights thereto at its sole expense.
- Performance of all data backups on a regular basis at the site where the Service is to be performed. The Customer acknowledges that Sun has no responsibilities whatsoever with respect to the Customer's data.

4. Special Provisions

- The estimated duration for the Service is made on the basis of Sun's technical knowledge; a 40 hour work week during local business hours or an 8 hour day during local business hours; and the availability of information upon Sun's request. The actual duration of the Service may differ from the time estimated.
- The date for commencement of the Service shall be by mutual agreement.
- Covered Software download will be provided by Sun subject to separate licensing terms. The Covered Software is subject to the GNU General Public License (GPL). Support for the Covered Software is not included in the Service.
- Sun will perform the Service at one location only. A location consists of one building, and Sun, in its sole discretion, has the right to determine whether the location of one or more Designated Hardware units is in fact in one location. Additional locations will entail additional travel and labor costs at Sun's then-current Time and Materials ("T&M") rates.
- The tasks and deliverables described in this Service will be deemed accepted by Customer upon

delivery.

- Customer will assign staff to support Sun that are properly trained in their area of responsibility (e.g., properly trained as a Systems Administrator).
- Meetings will take place at a mutually acceptable date, time and location.
- Sun reserves the right to use subcontractors in any role within the Service where Sun deems appropriate, in its sole discretion.
- The only tasks and deliverables Sun will undertake or deliver in providing the Service are those specifically listed.
- The Service will be provided during Sun's standard business hours, and all of the Service may not be performed on-site at the Customer's location.
- The implementation of any recommendations resulting from the Service are beyond the scope of this Service.
- Customer will provide access to Customer's data center and to all necessary documents and systems within 24 hours of commencement of the Service, or of Sun's arrival on-site, whichever occurs sooner. If Sun does not have access to the data center or to all necessary documents within this time frame, Customer will be charged Sun's then-current T&M rates for each day or fraction thereof during which access to the data center or documents is not available. If it is necessary for Sun to leave and return to the site due to Customer's failure to provide physical or document access, Customer will be charged Sun's then-current T&M rates for travel in both directions.
- Upon completion of the Services by Sun, responsibility for administering any deliverables (including hardware and software) passes to Customer. Subsequently, Sun will only work on any deliverables provided under this Service pursuant to Sun's responsibility under any separate Sun support contract held by Customer and subject to payment of any applicable fees.

This Service is subject to your existing services agreement with Sun that governs the delivery of Services. If you do not have a services agreement with Sun that would govern the delivery of Services, then Sun's delivery of Services shall be subject to the terms located at www.sun.com/sales/salesterms. This Service Listing or SOW does not constitute an offer by Sun. The Services described above are subject to availability and unless otherwise stated, are only available within the above-referenced country. Any reference to "Customer" in this Service Listing or SOW refers to the party entitled to receive the Services.

Last Revised: April 2009