

Service Listing: Sun Cluster Implementation Service

PS-CLNODC

PS-CLRGRC

PS-CLSTND

PS-CLRBK

Hong Kong

Scope

In this fixed-price service, Sun ("Sun") will configure Solaris Cluster software ("Software") purchased by the Customer to enable the Customer's Sun Cluster implementation to provide a foundation for highly-available, business-critical applications ("Service"). The Service entails Sun installing, configuring, and testing the Software on the Customer's Sun approved hardware ("Hardware"). Purchase of Sun's Server and Storage Enterprise Installation Services and Solaris Cluster Software Installation Service services by the Customer are prerequisites to this Service. Purchase of the appropriate Application Readiness Service by the Customer from Sun is a prerequisite to this Service for each High End server, or Mid Range server (Sun SPARC Enterprise M3000-8000, M9000, T1000-T3000, T5000, Sun Fire 4000-6000) platform which is to be configured as a cluster node.

The Sun Cluster Implementation Service includes the following tasks:

- Part Number PS-CLNODC Configuration of unique instances of the Solaris Operating System ("Nodes") into the Solaris Cluster.
- Part Number: PS-CLRGRC: Configuration of the appropriate Software data services.
- Part Number: PS-CLSTND: Configuration of the Software will include resource groups.
- Customization of the Test Procedures Plan to provide additional procedures which Sun will use to test the data service(s).
- Consultation on, and implementation of selectable (non-customized) measures to increase the security of the Solaris Cluster.
- Configuration, verification, and testing the Customer' Solaris Cluster to the agreed-upon design.
- Part number PS-CLRBK: Installation, delivery, customization, and demonstration of the Sun i-Runbook for Solaris Cluster. Customization of the Sun i-Runbook including the Customer specific contact information and up to a maximum of five additional the Customer-provided procedures for managing applications resident on the Sun Cluster. These Customer-provided procedures may not exceed a total of 500 words.
- Transfer of information on the Solaris Cluster configuration through the Solaris Cluster Configuration Management Review.
- Handover of the new Solaris Cluster to Customer.

The Sun Cluster Implementation Service does not include:

- The design or implementation of a campus-level or Geo-level cluster.
- Implementation of cluster software other than Solaris Cluster.
- Solaris Cluster product training.
- Installation or configuration of any application.

This service duration is dependent upon the total number of nodes, resource groups and data services to be implemented. It is estimated to take, including appropriate project management; 3 working days per cluster node, 1.5 days per resource group and 1 day per data service. A working day is eight hours of time during a five day work week for a single resource.

Sun will complete the Service by performing the following activities:

- Sun Cluster Implementation Service - Initiation Description

- Sun Cluster Implementation Service - Design
- Sun Cluster Implementation Service - Design Implementation
- Sun Cluster Implementation Service - Test
- Sun Cluster Implementation Service - Operations and Sun i-Runbook Delivery
- Sun Cluster Implementation Service - Management Review
- Sun Cluster Implementation - Service Closure

Summary of Service Deliverables:

- Service Project Schedule
- Solaris Cluster Design Specification
- Solaris Cluster Test Procedures Plan
- Solaris Cluster Management Review Guide
- Service Completion Form

Activity: Sun Cluster Implementation Service - Initiation Description

Sun will meet with the Customer to review conditions and prerequisites of the Service delivery, and to perform pre-planning activities. Additionally, Sun will conduct a project kick-off meeting with key the Customer contacts to finalize the project approach, discuss roles, responsibilities, and the work schedule. At the kick-off meeting, Sun and the Customer will review resource matters such as available workspace, access to telephones, copiers, faxes, LAN connections, tape drives, conference rooms, and printing facilities required by Sun to deliver the Service.

In addition, completion of the following activities are required during this stage of the Service:

- The Customer's Project Manager and Sun will review the tasks described in this Service Listing.
- The Customer's Project Manager will approve and obtain network and systems access permissions for Sun's Project Team as required for delivery of the Service.
- The Customer's Project Manager and Sun will review and agree on a schedule for providing the Service.

Activity Deliverable(s)

- Service Project Schedule.

Activity: Sun Cluster Implementation Service - Design

After concluding the kick-off meeting, Sun will hold a series of architectural review meetings with the Customer representatives to review the intended architecture of the Software configuration. During this series of meetings, Sun will consult with the Customer representatives on the following topics:

- Solaris Cluster Build Specification.
- The configuration of shared storage to be used by Solaris Cluster HA services based on the Customer 's design.
- Installation and configuration of Veritas CVM and Oracle UDLM when Oracle OPS or Oracle RAC is part of the Software configuration.
- Design and implementation of Software resource groups.
- The configuration of Solaris Cluster HA data services.
- Customization of the Software configuration.
- Customization of the Test Procedures Plan to provide additional procedures which Sun will use to test the Solaris Cluster HA data service(s).
- Basic security measures for Solaris Cluster.

Sun will document the completed design of the Software configuration in the design document ("Design Specification").

Any deviations requested by the Customer from the recommendations as offered by Sun during the design phase ("Deviations") will be noted in the Design Specification. Sun assumes no liability for any shortcomings in the operation or performance of the Software due to Deviations. Sun will ask the Customer to validate the Design Specification which will serve as the basis for the configuration

process.

Activity Deliverable(s)

- Solaris Cluster Design Specification.

This will be provided to Customer in one hardcopy or print-ready copy, which may be used only as set forth in the license provision of the Assumptions section in this Service Listing.

Activity: Sun Cluster Implementation Service - Design Implementation

Sun will complete the Software configuration as described in the Solaris Cluster Design Specification. Sun will perform a series of basic functional tests to confirm that the Software operates in conformance with the Design Specification. These tests will cover the Software, security hardening of the Software, the configured data service(s), and will include any additional test procedures as designed in Design Activity of this Service Listing. The additional test procedures will be designed to confirm appropriate behavior of the configured data services within the Software environment including starting, monitoring, and stopping the application.

While the tests are carried out by Sun, it is normal practice for the Customer to observe the tests. A designated Customer representative will sign off on the test document ("Test Procedures Plan") when the tests are complete. The Customer's failure to sign the Test Procedures Plan has no bearing on the acceptance of this Service.

Activity Deliverable(s)

- Sun-provided data service(s) integrated into the Solaris Cluster environment.

Activity: Solaris Cluster Implementation Service – Test

Sun will perform a series of basic functional tests to confirm that the Software operates in conformance with the Design Specification. These tests will cover the Software, security hardening of the Software, the configured data service(s), and will include any additional test procedures as designed in Design Activity of this Service Listing. The additional test procedures will be designed to confirm appropriate behavior of the configured data services within the Software environment including starting, monitoring, and stopping the application.

While the tests are carried out by Sun, it is normal practice for the Customer to observe the tests. A Customer representative will sign off on the test document ("Test Procedures Plan") when the tests are complete. The Customer's failure to sign the Test Procedures Plan has no bearing on the acceptance of this Service.

Activity Deliverable(s)

- Solaris Cluster Test Procedures Plan.

This will be provided to Customer in one hardcopy or print-ready copy, which may be used only as set forth in the license provision of the Assumptions section of this Service Listing.

Activity: Sun Cluster Implementation Service - Management Review

Sun will conduct a Solaris Cluster Management review addressing key Sun Cluster management issues and best practice approaches in the Sun Cluster environment.

Activity Deliverable(s)

- Solaris Cluster Management Review Guide.

This will be provided to Customer in one hardcopy or print-ready copy, which may be used only as set forth in the license provision of the Assumptions section of the Service Listing.

Activity: Sun Cluster Implementation - Service Closure

Sun will conduct a formal meeting with the Customer to:

- Review the tasks and deliverables for this Service which Sun completed.
- Review any applicable support arrangements and obligations of Sun and the Customer.

- Obtain the Customer's sign-off on Service Completion Form ("Completion Form"). The Customer will sign Sun's Service Completion Form provided Sun has completed all tasks and provided all deliverables set forth in this Service Listing. The Customer's failure to sign the Service Completion Form has no bearing on acceptance of the Service.

Any outstanding issues will be reviewed at this time.

Activity Deliverable(s)

- Service Completion Form.

Customer's Responsibilities:

The Customer shall provide Sun with the following:

- A project manager ("Project Manager") who is able to:
- Provide direction and guidance to the Customer's personnel as required by Sun to maintain project timelines and momentum.
- Provide information and resources in a timely manner as needed by Sun to enable Sun to complete the tasks described in this Service Listing.
- Be readily available and on-site as and when required by Sun for the duration of the Service.
- Receive any deliverables created as a result of this Service.
- Provide any needed approvals for the Customer under the Escalation Procedures provision below.
- Adequate workspace for each of Sun's personnel, as well as access to telephones, copiers, faxes, conference rooms, and printing facilities as reasonably necessary.
- A list or summary of the Customer's relevant business requirements and all relevant service-level agreements.
- Access to key the Customer's personnel, including business, IT and operational staff.
- Parking and access passes as required by Sun as necessary for Service delivery.
- A timely response (i.e., provided to Sun within a time period that will not adversely affect Sun's scheduled delivery of the Service) to all requests for information by Sun.
- Timely delivery of information and support (i.e., provided to Sun within a time period that will not adversely affect Sun's scheduled delivery of the Service) from suppliers of non-Sun equipment and services as requested.
- Any relevant operational performance standards in use by the Customer related to Service delivery.
- A timely response (i.e., provided to Sun within a time period that will not adversely affect Sun's scheduled delivery of the Service) to the review of all Service-related documentation.
- An escalation procedure with contact information for use in the event that timely responses are not provided to Sun or the event that any other non-compliance by Customer is adversely affecting the delivery of the Service within the established time frames ("Escalation Procedure").

Sun Responsibilities:

Sun will assign a project manager for the Service and will coordinate project management activities with the Customer's project manager. Sun's project manager will have primary responsibility for coordinating all activities and deliverables for this Service, including scheduling resources, confirming project activities and that deliverables are within the scope of this Service Listing and all related milestones. Sun's project manager will serve as Sun's single point of contact for this Service.

Assumptions:

Sun will rely on the following assumptions, together with those stated elsewhere in this Service Listing, in performing the Service. Should any of these assumptions prove incorrect or incomplete, or should the Customer fail to comply with any of the the Customer responsibilities set forth in this Service Listing, Sun reserves the right to modify the price, scope, or schedule of the Service.

- The Customer has valid licenses for all software covered by the Service, and all licenses will cover Sun's use of the software as well.
- Sun will perform the Service at one location only, unless otherwise stated. A location consists of one building. Sun, in its sole discretion, has the right to determine if the location of one or more servers or storage subsystems is in fact in one location. Additional site visits will entail

additional travel and labor costs at Sun's then-current Time and Materials ("T&M") rates.

- Any Service schedule estimates represent Sun's commercially reasonable technical judgment based on information available. The actual duration of the Service may vary.
- The Customer will assign staff to support Sun that are properly trained in their area of responsibility (e.g., properly trained as a Solaris Systems Administrator).
- Sun's provision of the Service relies on the understanding that the Customer is performing backups on a regular basis at the proposed site, prior to Sun providing the Service. Sun has no responsibility in any way with respect to the Customer's data in providing the Service.
- Meetings will take place at a mutually accepted location.
- Sun reserves the right to use subcontractors in any role within the Service where Sun deems appropriate.
- The engagement will begin on a mutually acceptable date.
- The tasks and deliverables described in this Service Listing will be deemed accepted by the Customer upon delivery.
- The only tasks and deliverables Sun will undertake or deliver in providing the Service are those specifically set forth in this Service Listing.
- Unless otherwise specified by Sun, all Service-related documentation requested by Sun must be provided at least one week prior to Sun's initial on-site visit
- All work will be completed during normal working hours.
- Sun will make commercially reasonable efforts to meet those critical time frames identified by the Customer and agreed to by Sun in writing.
- Sun makes no statement concerning the percent availability of any application installed or configured under this Service. The use of the term "highly-available" does not imply any fixed percent availability.
- The Custom Data Service developed by Sun may cease to function properly due to changes in the application environment, including but not limited to, changes in the name or location of application executables, changes in the name or number of running processes which compose the application, and changes in the start, stop, or monitoring methods of the application. The Customer assumes responsibility for the maintenance of the Custom Data Service as required to support the application in the Customer's environment, and the Customer understands that changes in the application environment, including but not limited to those described above may cause the application to behave in an undesirable manner within the Software environment.
- The Custom Data Service is copyrighted and title to all copies is retained by Sun and/or its licensors. Sun will also hold all right, title, and interest, including but not limited to all intellectual property rights, in and to any and all ideas, concepts, expertise, programs, systems, methodologies, data, or other materials embodied in, underlying or reduced to practice in the Custom Data Service, the Custom Data Service documentation, and the test procedures plan. The Customer will not sublicense, distribute, assign, resell or transfer the Custom Data Service, the Custom Data Service documentation, or the test procedures plan. Nothing in this provision modifies any other license agreement between the parties or grants the Customer any right or license to any Sun product. Any breach of this provision will be deemed a material breach of the applicable agreement governing the Service and/or this Service Listing.
- Sun grants to the Customer a non-exclusive and non-transferable license to use the Custom Data Service internally in the United States; and to use and modify the application-specific start, stop and monitor methods of the Custom Data Service, produced by Sun Professional Services as part of this Service, for internal purposes only in the United States. The Customer will reproduce and apply all proprietary rights notices of Sun and/or its licensees on all copies of the Custom Data Service in an unmodified form.
- Sun will contact the Customer and qualify the ability of the Customer's application's to run in a Solaris Cluster environment utilizing a custom data service, if required. In the event it is determined by Sun at any point during the delivery of this Service that either the Customer's application can not run in a Solaris Cluster environment or that a custom data service

development using non-standard methods is required, this result will be documented and discussed with the Customer, and either party may terminate the Custom Data Service task of this Service Listing. In the event the task is terminated, the Customer will not be charged for the development of the Custom Data Service. The remainder of the Service Listing will remain in effect and the associated fee will still apply.

- All Build Specifications, Inventories, Configuration Information, Runbooks, Operations Guides, Architecture Reports, Solution Design Documents, custom scripts, and Test Specification (collectively, "Service Items") provided to the Customer include Sun intellectual property and Sun confidential information, especially trade secrets, and are subject to the following:
- Sun grants the Customer a non-exclusive and non-transferable license to use and reproduce the Service Items for the Customer's internal use in the country identified above for this Service Listing and solely for the purpose of running and servicing the hardware and software for which the Service Items were provided, subject to the following restrictions; (1) The Customer shall reproduce with all copies of the Service Items all Sun proprietary rights notices in an unmodified form; (2) The Customer shall make only one on-line copy of the Runbook for archival purposes; and (3) The Customer shall pay the fees associated with the number of Service Items created and the number of users granted access to the Service Items.
- The Software and Runbook are copyrighted, and title to all copies is retained by Sun and/or its licensors. No ownership of any intellectual property rights is transferred by this Service Listing or any of the activities contemplated herein. The Customer does not obtain any ownership interest in the Service Items, and may not sublicense, distribute, assign, resell or transfer any Service Items.
- Sun will also hold all right, title, and interest, including but not limited to all intellectual property rights, in and to any and all ideas, concepts, expertise, programs, systems, methodologies, data, or other materials embodied in, underlying or reduced to practice by Sun in the course of performing the Service in all Service Items.
- Sun will provide no support, including but not limited to upgrades or updates, for the Service Items, unless explicitly granted in writing by Sun.
- No license is granted for use of any Service Items or the Sun-recommended toolset on third-party sites, unless explicitly granted in writing by Sun.
- Unless enforcement of this provision is prohibited by applicable law, the Customer will not modify, decompile, disassemble, decrypt, extract, or otherwise reverse engineer any Service Items.
- The Customer will only provide Service Items to its employees and contractors who have entered into a confidentiality agreement similar to the confidentiality provisions and obligations found in the service agreement or Non-Disclosure Agreement that governs this Service. The Customer will maintain the confidentiality of the Service Items with the same degree of care as it uses to protect its own confidential information, but in no case less than a reasonable degree of care.
- Upon hand over, responsibility for administering any Service components (including hardware and software) passes to the Customer. Subsequently, Sun will only work on the Service components pursuant to Sun's responsibility under any support contract held by the Customer.
- The Customer will sign Sun's Service Completion Form provided Sun has completed all tasks and provided all deliverables set forth in this Service List. The Customer's failure to sign the Handover and Completion Certificate has no bearing on acceptance of the Service.

This Service is subject to Customer's 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. All other defined terms in this Service Listing correspond to the definitions found in Customer's existing services agreement with Sun or the sales terms located at www.sun.com/sales/salesterms, whichever applies.

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