

## **Service Listing: Sun Application Readiness Service (ARS), Volume Server**

WW-PS-ARS-VOL-STD

**Singapore**

### **1 Scope**

The Sun Application Readiness Service provides a project managed implementation that results in a system ready for applications to be loaded (the "System"), as more fully described below (the "Service"). As the first step towards the System build specification, Sun will provide design and consulting services to enable the Customer to run the System in a production environment. Sun will use commercially reasonable efforts to provide this Service.

Subject to certain limitations, Sun will provide the following as part of the Service:

- Online System documentation that incorporates Sun's preferred practice guidelines for key technical procedures.
- Sun's project management methodology that is used to help Customers minimize risk and help implement a high level of project control and issue management.
- Design documentation that describes the System to be built from listed components.
- Implementation of one Sun volume range server, as described below.
- This service is applies to one Sun server, namely a Sun SPARC Enterprise T1000-T3000, T5000, Sun Fire X2x00, X4x00, Sun Blade Chassis 6000, 8000 server or a Sun Blade processor module.
- The server will be installed with the standard Sun security hardening baseline.
- A testing plan will be carried out on installed System.
- Sun i-Runbook online documentation will be installed and configured for System components.
- If applicable for this System, Sun Management Center (SunMC) agents will be integrated into an existing SunMC topology.

Limitations on the Service:

- The service will be provided during standard the business hours of Monday to Friday, 0900hrs to 1700hrs local time.
- The Service excludes reconfiguration of existing storage or servers to which the delivered System is to be connected. Reconfiguration of an existing SAN is also excluded.
- Sun will install but will neither configure nor test non-Sun products such as third party Input/Output adapters.
- Only System storage (i.e., the storage used by the operating system) is implemented in this Service. Any services relating to the installation and configuration of data storage must be separately ordered, and separate charges will apply.
- Servers will not be connected to storage that is already in use by other systems.
- The Service does not include Solaris OS resource management configuration.
- Installation of a SunMC server is not included in the Service.
- The server must be a Sun server that is purchased from Sun or an authorized Sun reseller.

Sun will perform the following activities, as as more fully described below:

- Sun Application Readiness service initiation

- Sun Application Readiness service control
- System design
- Sun server build specification
- Volume Management installation testing (Solaris Boot Disks)
- System configuration customization
- Sun server testing
- Sun i-Runbook service deployment
- Operational handover
- Sun Application Readiness service closure

Summary of the Service deliverables:

- Project initiation document (PID)
- Project plan
- Formal meeting minutes
- Risk log
- Issue log
- Progress reports
- System design documentation
- Test plan
- Sun server build specification
- Sun server system-level backup
- Completed and documented Sun server installation tests
- Completed and documented volume management installation tests for the Solaris boot environment
- System configured to the agreed design document and build specification
- Completed and documented Sun server tests
- Installed and configured Sun i-Runbook
- System backups
- Signed off handover certificate
- Project folder

### **1.1 Sun Application Readiness Service Initiation**

Sun will work with the Customer to review Sun's conditions and prerequisites for the performance of the Service. Additionally, Sun will conduct a project kick-off meeting with designated Customer contacts to finalize the Service quality approach, and discuss roles, responsibilities and the schedule. To facilitate the delivery of the Service, Sun and Customer will agree to a schedule for the Service and general time frames for performance of the Service, which may include additional meetings and identification of specific milestones as necessary.

In connection with initiation of the Service, Sun will:

- Prepare a detailed project plan, which will identify activities, resources and timelines to be completed.
- Establish project control mechanisms.

- Produce a project initiation document (PID).

The project initiation document will detail the specific project organization, including the Customer and Sun management reporting paths. It will also contain provisions on assumptions, risks, change control and quality control.

#### **1.1.1 Activity Prerequisite(s)**

- List of Customer contacts for delivery of the Service.

#### **1.1.2 Activity Deliverable(s)**

- Project initiation document
- Project plan

### **1.2 Sun Application Readiness Service Control**

Progress reports will be produced and addressed during review meetings between the Sun project manager and the Customer's project manager. Project risks and issues, identified during the Service, will be documented by the Sun project manager and will be reviewed throughout the Service by both Sun and the Customer.

#### **1.2.1 Activity Deliverable(s)**

- Meeting minutes (to document the topics discussed).
- Risk log (to document the identified project risks).
- Issue log (to document the identified issues to resolve with the Customer).
- Progress reports (to document the progress toward project goals).

### **1.3 System Design**

Sun will appoint a design consultant responsible for the overall design of the System. Sun will assess and document the Customer's business and technical requirements. The requirements will then be analyzed to produce the design documentation which will describe all of the components of the System, including but not limited to:

- Servers
- Storage
- Storage area networks (SANs)
- Backup and restore
- Security
- System management and operations management
- Applications

The documentation will provide a first level breakdown of each technical component into its subcomponents. The following examples illustrate the level breakdown covered by this activity:

- Servers: numbers and types of CPUs, memory, I/O subsystems, Solaris zones and software packages.
- Storage: volume sizes, file system sizes and software packages.
- Clusters: node configurations and failover strategies, resource groups and data services.
- Security and networking.
- Backup / Restore: numbers of clients, servers and storage components, software packages and backup/restore strategies.

The design documentation will include a high-level design document and may also include one or more detailed design documents depending on the nature of the technology and the requirements of the System. Sun will provide the high-level design document to the Customer before the start of any detailed design activities, which focus on the individual subsystems within each component. If necessary, supplemental information documents may also be provided to provide background information about the relevant Sun technologies.

Sun will provide the System design documentation to the Customer prior to the start of any build specification activities.

Once the System requirements are understood, a test plan will be produced covering all components within the System design. The test plan will be based on Sun's preferred practice and will be provided to the Customer prior to the start of any testing.

### **1.3.1 Activity Prerequisite(s)**

- Customer requirements assessed.

### **1.3.2 Activity Deliverable(s)**

- System design documentation.
- Test plan.

## **1.4 Sun Server Build Specification**

Sun shall consult with the Customer to develop a detailed build specification for each Sun server to be used during the installation.

The build specification shall detail the configuration of the supplied Sun hardware and System software, System disk layouts, and the network configuration. The build specification shall be based upon Sun's preferred practice.

For each Sun server, Sun shall document the following:

- DNS, NIS, NIS+ client configuration
- System disk layout including swap
- System disk mirroring and logical volume management
- Operating system revisions and any specific patch requirements
- Timezone information
- Operating system packages to be installed
  
- Lights out management (where applicable)
- Any unbundled software to be installed

The build specification(s) shall be based on the System design documentation.

The procedure for testing the installation in accordance with the standard Sun installation test plan shall be described by Sun and confirmed by the Customer.

Sun will provide the build specification(s) to the Customer for review and approval before Sun proceeds to build the System.

### **1.4.1 Activity Prerequisite(s)**

- System design documentation.
- Customer-supplied configuration requirements.

### **1.4.2 Activity Deliverable(s)**

- Sun server build specification(s).

## **1.5 Sun Server Installation**

During the installation, Sun will unbox, assemble, connect and soak test the hardware as described in the Sun Server Build Specification. Sun will install, patch and license the System software according to the Sun Server Build Specification.

Sun will perform a basic back-up of the System disks to customer-supplied media using the Solaris ufsdump utility.

### **1.5.1 Activity Prerequisite(s)**

- Implemented Site Survey recommendations (where applicable).
- Sun Server Build Specification.
- Provision of fully operational network infrastructure as described in the Build Specification.

### **1.5.2 Activity Deliverable(s)**

- Sun Server system disk backup.

## **1.6 Sun Server Installation Testing**

Sun shall perform a series of tests upon the Sun server(s) as described in the test plan to evaluate the reliability, availability and serviceability (RAS) features of the server(s) within the Customer's datacenter environment. Sun shall perform the tests in conjunction with the Customer's staff, document and hand over the results to the Customer.

### **1.6.1 Activity Prerequisite(s)**

- Test plan.

### **1.6.2 Activity Deliverable(s)**

- Completed and documented tests.

## **1.7 Sun Standard Edition i-Runbook Service Deployment**

Sun i-Runbook is a web-based collection of system administration procedures tailored to the Customer's datacenter components. The procedures that will be used are Sun preferred practice and cover topics such as startup and shutdown of components and applications, general administration tasks, maintenance tasks, troubleshooting and recovery tasks, and reference information. The procedures will be arranged in easy to navigate modules and supplemented with detailed end-user manuals and technical manual pages.

The Sun i-Runbook features a search mechanism, Explorer Reader (allowing web-viewing of Explorer system build reports), and a Java technology-based framework that enables the Customer to add content to the Sun i-Runbook. Instructions and templates will be included.

Deployment of the Sun i-Runbook includes:

- Sun i-Runbook modules that are appropriate to the hardware installation covered by this Service Listing.
- Configuration of the Sun i-Runbook to reflect the Customer's contact and service contract details.
- Demonstration of the features and functionality of the Sun i-Runbook to the Customer key staff.
- Transfer of information about how to use the Sun-provided templates and guidelines to add

content and documents to the Sun i-Runbook.

### **1.7.1 Activity Prerequisite(s)**

None.

### **1.7.2 Activity Deliverable(s)**

- Installed and configured Sun i-Runbook.  
One web-based Sun i-Runbook, which may be used as set forth in the "Service Items" license provision of the Assumptions section of this Service Listing.

## **1.8 Operational Handover**

Sun will back up the System configuration (where applicable) to the Customer-supplied media. Operational procedures for the System shall be demonstrated and passwords shall be handed over. Responsibility for the System operation and management shall then be transferred to the Customer and/or their designated support organization. The Customer shall sign the handover certificate which confirms that all essential installation activities are complete.

### **1.8.1 Activity Prerequisite(s)**

- Signed off test results.

### **1.8.2 Activity Deliverable(s)**

- System backups.
- Signed off handover certificate (where applicable).

## **1.9 Sun Application Readiness Service Closure**

A project closure meeting will be held between Sun and the Customer to:

- Confirm handover of all deliverables, including any amended by the PID and subsequent change control actions.
- Confirm that required support arrangements are in place.
- Confirm that all current project issues are either closed or there is an agreement that they will be managed subsequent to project closure.
- Sign off the Service Completion Form, which documents the completion of the Service.

### **1.9.1 Activity Prerequisite(s)**

- All activities complete.

### **1.9.2 Activity Deliverable(s)**

- Service Completion Form.

## **2 Customer Responsibilities**

The Customer shall provide Sun with the following:

- A project manager who is able to:
  - Provide direction and guidance to the Customer's personnel as required by Sun to maintain project momentum;
  - Provide information and resources in a timely manner as needed by Sun to enable Sun to provide the Service;

- Be readily available and on-site and when required by Sun for the duration of the Service;
- Coordinate all required project meetings with the Customer project personnel, as required.
- Receive any deliverables created as a result of this Service; and
- Provide any needed approvals for the Customer under the "Escalation Procedure" provision below.
- Adequate workspace for 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 Customer personnel, including business, IT and operational staff.
- Parking and access passes as required by Sun for Service delivery.
- Timely responses (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 the delivery of the Service
- 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 requests to review Service-related documentation.
- The Customer will provide Sun project staff with 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.
- The Customer will provide all necessary assistance to ensure timely access to third party vendors and other the Customer resources, as required by Sun.
- The Customer will provide Sun project staff with access to all project related documentation as required by Sun.
- The Customer will approve all requests for changes to scope in a reasonable and timely manner.
- 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").

### **3 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.

### **4 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 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 third party 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 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 Service 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 an authorized representative of Sun in writing.
- The implementation of any project recommendations resulting from the Service are beyond the scope of this Service Listing.
- The Customer will provide access to the Customer's datacenter and to all necessary documents and systems within 24 hours of commencement of the Service, or of Sun personnel's arrival onsite, whichever occurs first. If the Sun personnel do not have access to the datacenter or to all necessary documents within this time frame, the Customer will be charged at Sun's then-current T&M rates for each day or fraction thereof in which access to the datacenter or documents is not available. If it is necessary for the Sun personnel to leave and return to the site due to the Customer's failure to provide physical or document access, the Customer will be charged at Sun's then-current T&M rates for travel in both directions.
- All build specifications, design specifications, runbooks, operations guides, architecture reports, System Design documents, custom scripts, test plans, and/or any other

documentation (collectively, "Service Items") provided to the Customer contain Sun intellectual property, Sun confidential information and trade secrets, and are subject to the following:

- Sun grants the Customer a non-exclusive and non-transferable limited license to use and reproduce any Service Items for the Customer's own internal business purposes in the country identified above for this Service Listing. The license is limited to: (1) The Customer's internal running and servicing of only the hardware and software for which the Service Items were provided; (2) The Customer reproducing all Sun proprietary rights notices in an unmodified form; (3) The Customer making only one on-line copy of any runbooks, and for archival purposes only; (4) The Customer paying the corresponding fee for the number of copies and the number of users of any Service Items. Sun will also hold all rights, 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 all Service Items. The Customer will not sublicense, distribute, assign, resell or transfer any Service Items.
- Any Sun software required for the Service must be obtained by the Customer separately and is subject to separate licensing terms and conditions, including without limitation payment terms. No license to use any Sun software is granted under this Service Listing.
- Sun will provide no support, including but not limited to upgrades or updates, for the Service Items or any Sun software under this Service Listing.
- No license is granted for use of any Service Items on third-party sites, unless explicitly agreed to in writing by an authorized representative of Sun.
- To the fullest extent permitted by applicable law, the Customer is prohibited from modifying, decompiling, disassembling, decrypting, extracting, or otherwise reverse engineering any Service Items.
- Upon delivery, responsibility for administering any deliverables (including hardware and software) passes to the Customer. Subsequently, Sun will only work on the deliverables pursuant to Sun's responsibility under any support contract held by the Customer and subject to payment of any applicable fees.
- The Customer will sign Sun's Service Completion Form when Sun has completed all tasks and provided all deliverables set forth in this Service Listing; provided, however, that the Customer's failure to sign the Service Completion Form 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](http://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](http://www.sun.com/sales/salesterms), whichever applies.