

Virtual Storage Manager Implementation Base Service

India

1. Scope

This Service provides Customer with the installation and configuration of the Virtual Storage Manager (VSM) software in Customer's Multiple Virtual Systems (MVS) environment for use with Sun StorageTek model 9x40 high capacity tape systems (Service). Service includes the installation and customization of the VSM suite of tape automation and virtual tape solutions into an existing automated tape library environment and initial set-up of Customer's tape environment to utilize VSM functionality. This service is a fixed price and fixed scope service with tasks and deliverable's as defined in this Service Listing.

2. Sun's Tasks and Deliverables

- **Service Initiation.** Sun will conduct a project kick-off meeting with key Customer contacts to:
 - Verify hardware is installed and fully operational.
 - Verify all necessary software is licensed and on-site including, but not limited to:
 - Operating system software.
 - Virtual Storage Manager (VSM) software.[The names of particular deliverables should not be capitalized when used in text unless the name of the deliverable has been approved through the trademark department in a capitalized form OR it is a term that has been defined in the Service Listing.]
 - Required license keys have been obtained and are on-site.
 - Validate availability of network connectivity.
 - Establish roles, responsibilities, and implementation schedule.
 - Establish a mutually agreed list of tests and results for completion. Scope of testing will not exceed basic product functionality which includes read and write to tape functionality and tape movement within the library.

Implementation: Sun will perform the following implementation tasks:

- Software installation and configuration.
- Host Component Software (HCS), and Virtual Tape Component Software (VTCS) components installation, configuration, and testing.
- Expert Library Manager (ExLM) 6.0, as required.
- Survey software requirements and review tape-related third party software.
- Verify Tape Management Component (TMC) updates for Multiple Volume Cartridge (MVC) and Virtual Tape Drive (VTD) ranges are complete.
- Create the HSC Libgen and MVS Hardware Configuration Dialog (HCD) gen changes, as appropriate
- Install HSC 6.0 and VTCS 6.0 software on initial system..
- Configure VTCS software.
- Setup Control Data Set (CDS) to support virtual tape.

- Configure HSC to support virtual tape.
- Determine allocation method.
- Migrate the software, as appropriate, onto other MVS images.
- Assist Customer personnel and begin migrating application files into the VSM subsystem.
- If applications need to be excluded from the virtual system, the applications will be documented and TAPEREQ statements implemented to accomplish their exclusion. Sun will train Customer personnel on how to continue directing work into the VSM subsystem.
- Create a new MVS tape esoteric if required.
 - Create and test 9x40 drive esoteric, if required.
 - Direct Hierarchical Storage Manager (HSM) migration output to 9x40 tape drives.
 - Monitor the HSM recycle process.
 - Change all Job Control Language (JCL) and procedures for SAR and other applications to use 9x40 tape drives.

- **Functional Testing**
 - Scope will not exceed basic product functionality.
 - Identify a short list of data sets to be used during operational testing.
 - Perform operational testing based on pre-agreed upon criteria.

- **Knowledge Transfer:**
 - After the hardware and software installation is completed, Sun will provide two (2) half-day (4 hour) operations training classes to include:
 - Hardware overview.
 - Operation of the equipment.
 - Manual intervention resolution and planning.
 - Media handling and recognition of media types.
 - Trouble shooting.
 - Sun support information.
 - Definition of terms.
 - Explanation of commands and messages.
 - How to respond to messages.
 - Trouble shooting techniques.
 - Shutdown procedures.
 - Hands-on familiarization.
 - VSM operations.
 - VTCS commands.
 - VTCS commonly seen messages and codes.
 - VTCS trouble shooting.
 - Product functionality & testing review.
 - Documentation review.
 - Operational training.

- **Service Closure.** Sun will conduct a formal meeting with Customer to review the tasks and deliverables for this Service which Sun completed, obtain Customer sign-

off on the Service Completion Form. Any outstanding issues will be reviewed at this time.

- **Service Completion Form.** Customer will sign Sun's service completion form provided Sun has completed all tasks and provided all deliverables set forth in this SOW. Customer's failure to sign the Service Completion Form has no bearing on acceptance of the Service.

3. Customer Responsibilities

- **System down time.** System down time will be available upon reasonable notice to allow installation of Virtual Storage Manager (VSM) software components required for completion of this project.
- **Hardware installation.** All library hardware is installed and working as necessary for Virtual Storage Manager (VSM) software implementation
- **Software and firmware levels.** All host systems are at an OS patch level supported by Sun, host bus adaptor vendors, disk controller vendors, and switch vendors.
- **Availability of ports.** Enough fiber channel and/or internet protocol ports are installed and available on all switch(es)/router(s) to support this solution if applicable.
- **Network configuration documentation.** Customer will provide a copy of network the configuration for host server and storage systems.
- **Backup design documentation.** Backup strategies and design validation has already been performed and results are documented. (Integration with the backup and recovery environment is considered outside the scope of this project).
- **Backup of current data.** Customer has current backup copies of critical data, copies of this data will be available for all systems connected to this solution prior to any implementation services beginning.
- **Access to personnel and facilities.** Providing appropriate access to Customer management, staff, data center facilities, and resources identified as essential to complete work activities. This includes appropriate work areas with desks, chairs, terminal access, system access including remote logon capabilities, and access to authorized data sets, as may be required to complete work activities.
- **Project coordinator.** Designate a Project Coordinator who will interface directly with the Project Manager and direct requests for assistance in this project to the Project Manager.
- **Notification of special conditions.** Notifying Sun of any system, application, or equipment modifications known to be potential problems, or deviations from industry standard practices.
- **Third party software licenses.** Customer will have current valid and fully supported software licenses for all software products associated with Services provided herein and not provided by Sun under this Service Listing.
- **Third party products.** Execute all applicable agreements and have possession of and accessibility to all required third party products by the project start date.

4. Additional Provisions.

- **Services not included in Scope.**

- Disaster Recovery (DR) implementation.

In the event that Customer purchases the above-described Services from Sun, this Service Listing or SOW is incorporated by reference in and subject to the terms of the current agreement under which Customer may order products and services from Sun ("Agreement") or, if there is none and the Services are nevertheless delivered by Sun, the delivery of those Services will be governed by the Sun General Terms and its Purchasing Exhibit together with all applicable Appendices thereto. Sun is not obligated to perform the Services described in this Service Listing or SOW unless Customer has an Agreement with Sun and has received an order confirmation from Sun accepting Customer's purchase order or electronic order for the Services. This Service Listing or SOW does not constitute an offer by or invitation to contract with Sun. The Services described above are subject to availability and unless otherwise stated, are only available within the above-referenced country or geography. Any reference to "Customer" in this Service Listing refers to the party that enters into the Agreement with Sun. Such party may be referred to in the Agreement as "Company," "Customer" or other appropriate term.

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