Managed Storage
Service Level Agreement (SLA)

Vanderbilt Information Technology Services

1.   Parties to the Agreement

This service level agreement is valid from the start date to the end date listed below.

Table 1: Agreement Period

Start Date:	End Date:

By signing below, all parties agree to the terms and conditions described in this agreement.

Service Provider(s) Signatures

Table 2: Service Providers

Name (print)	Department	Telephone	Date	Signature

Customer Signatures

Table 3: Service Level Agreement Customers

Name (print)	Department	Telephone	Date	Signature

Table 4: Document Version and Revision

Date	Name	Version
06/01/07	Scott Hogan/ Kevin McDonald/ Esfandiar Zafar	1.0
07/18/07	Scott Hogan	1.1
01/11/07	Kevin McDonald/Chris Marshall/John Osborne	1.2
01/14/08	John Osborne	1.2
1/23/08	John Osborne/Mike Tompkins	1.3
2/6/08	John Osborne	1.4
2/12/08	John Osborne	1.5
2/19/08	John Osborne/Kevin McDonald	1.6
2/27/08	John Osborne/Mike Tompkins	1.7

2.   Agreement

This Agreement defines Managed Storage services provided to a Customer. Typically, services definitions include hours, availability, support levels or duration, and restrictions on support.

This Service Agreement (this Agreement) is effective July 1, 2007 between Vanderbilt Information Technology Services (ITS) (hereafter referred to as Service Provider) and Departments that have purchased this service (hereafter referred to as Customer) and establishes a commitment for providing managed disk storage (Service) as detailed in this Agreement. This document clarifies both parties' responsibilities and procedures to ensure Customer needs are met in a timely manner.

2.1   Services Provided

The following service(s) are provided to the Customer by this agreement.

- The Customer will be provided storage in increments of gigabytes (GBs) by the Service Provider on either Storage Area Network (SAN) or Network Attached Storage (NAS) devices in a RAID 5 configuration as a minimum.
    a. Tiers of Storage;
        i. Tier 1 (15k RPM) – $10.80/GB/Year
        ii. Tier 2 (10K RPM) – $6.00/GB/Year
        iii. Tier 3 (7.2K RPM) – $3.00/GB/Year
           Note: RPM is revolutions per minute.

      Access Methods
        i. SAN
            1. Dual attached Host Bus Adapters (HBA) required per host
                a. HBA and firmware must be supported by storage vendor.
            2. Load balancing software required (PowerPath preferred)
    b. NAS
            1. Fault Tolerant Network Connection

Note: The base Managed Storage service does not include additional services such as backup, or disaster recovery.

- The Service Provider will monitor the Managed Storage for the Customer and establish notifications on an opt-in basis.
- The Service Provider will communicate outages affecting the service to the contacts provided.

The following services are not provided under this Agreement:

- information lifecycle management
- capacity management of Customer storage
- backup or restoration of data

2.2   Service Objectives

Processes outlined herein are in effect during normal service hours of 8:00 AM to 5:00 PM Monday through Friday.   Incident response is worked 24 hours a day, seven days a week.

The standard maintenance window is on Sunday from 12:01 AM – 9:00 AM. Most planned outages will occur during this window. Any other planned outages will be scheduled during the nights and weekends following consultation with Customers.

The Managed Storage availability goal is **99.8%** during the defined service hours, excluding scheduled maintenance downtime or disasters outside of the Service Provider's control.

2.2.1 Requesting Service, Service Calls and Incident Reporting

2.2.1.1 Incident Management and Service Goals

The Service Provider's designate or other knowledgeable staff member will respond by email or telephone to the Customer's incident within:
- 4 hours for issues classified as urgent.
- 1 business day for issues classified as normal priority, service request, or business inquiry.

2.2.1.2 Service Categories

Table 5: Service Categories and Escalation

Impact	Categories	Escalation and Procedure
Urgent	A component, application or critical feature is down and no work can be performed as a result.	Contact ITS Network Operation Center @ 322-2954 (24x7)(365)
Normal Priority	Anomalous system behavior or system problem that does not prevent work on the system.	Contact ITS Partner Support @ 936-4877 (8am – 5pm) Monday-Friday.
Service Request	Routine request for Maintenance.	Contact ITS Partner Support @ 936-4877 (8am – 5pm) Monday-Friday.
Business Inquiry	A question regarding a change to (new increased/decreased, disconnected) the contracted service.	Contact your Service Delivery Manager .

2.2.1.3 Service Acquisition

The Service Provider agrees to fulfill requests for additional Managed Storage for **existing** Customers. Requests for additional storage by new Customers will be handled on a case-by-case basis.

Acquire the service by contacting your ITS Service Delivery Manager.

2.2.1.4 Service Availability

The Service Provider will make the service available 24 hours per day, all days of the year, with the exception of necessary planned interruptions for service, upgrades, and reconfiguration. The Service Provider will minimize the number and duration of these interruptions. The Service Provider will attempt to coordinate with all affected Customers to schedule the interruptions for times least disruptive to the Customers. The Service Provider will, except in cases of great urgency, provide the Customer with at least 3 business days prior notice of the interruption.

All Customer requests for service and service calls should go through Partner Support at 936-4877. The reporting of urgent incidents should be communicated through the ITS Network Operations Center at 322-2954.

2.2.2 Exclusions

The Service Provider cannot guarantee timeframes for the following situations:

- issues that are referred to a third party service provider
- systems in a disaster recovery state
- Issues that involve troubleshooting the operating system, applications, or content of systems attached to the Managed Storage.

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2.2.3   Escalation Procedures

During normal business hours, the Customer should contact Partner Support for all urgent and non-urgent incidents. After regular business hours, for urgent issues the Customer should contact the Network Operation Center (NOC). If the situation is not responded to in a reasonable amount of time, the Customer should contact the NOC manager. If still unsatisfied with the response, the Customer should contact their Service Deliver Manager (SDM).

2.2.4   Outage Notifications

The Service Provider will communicate planned service outages to affected Customers. Depending on the breadth and impact of the outage, notification may be by phone or by email. Notification will occur per contact information provided by the Customer.

2.2.4.1 Planned Outages

When possible, the Service Provider will communicate planned outages to Customers by phone call or email at least 3 business days before the outage. If a planned outage becomes necessary in less than 3 days, the Service Provider will communicate soon after the outage necessity is determined.

2.2.4.2 Unplanned Outages

The Service Provider will communicate unplanned outages as time permits, to the first available Customer contact by phone (or, if unavailable, email) within two hours of the outage.

2.2.5   Scheduled Maintenance

To meet specified service availability and service level objective, regularly scheduled maintenance is necessary. When possible, maintenance will be performed from 12:01 a.m. to 9 a.m. However, much Data Center maintenance must occur during normal business hours. This work usually does not cause a Customer outage.

2.2.6   Constraints

The Service Provider contacts Customers using the data in our contact database. The Service Provider will attempt to contact one person, trying the site owner first and, if that person is unavailable, the alternate contact. The Customer must notify the Service Provider when a contact changes, provide a new contact person, and provide contact information. The Service Provider is not responsible if the Customer fails to update contact information.

2.2.7   Security

Physical access to the data center is managed by the Service Provider's Network Operations Center. Access is restricted to authorized personnel and those escorted by authorized personnel.

Two additional areas of security apply to the Managed Storage service:
1. Access to the data volume is managed by the Service Provider.
2. Data Security is the responsibility of the Customer.

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2.2.8 Backup and Recovery

Customers are responsible for the backup and recovery of data on the Managed Storage.
The Service Provider is not responsible for the Customer's failure to implement a working backup and recovery plan.
Each Customer is responsible for developing, implementing, testing and maintaining a Business Continuity Plan.

2.2.9 Costs

<u>Services and Pricing</u>

      A. Standard Pricing per Tier
- i.   Tier 1 – $10.80/Gbyte/Year
- ii. Tier 2 – $6.00/Gbyte/Year
- iii. Tier 3 – $3.00/Gbyte/Year

<u>Billing</u>

The Customer will be billed for Service for the entire Term on the Effective Date. The Customer's bill will be prorated from the time they take ownership until the last day of the fiscal year.
Payment for the entire year will be due the first day of the next fiscal year. The fiscal year is from July 1 to June 30th of the next year.

3.   Services Overview

This Service Level Agreement (SLA) between [Customer] and the Service Provider establishes a commitment for Managed Disk Service as detailed in this Agreement.

3.1   Scope

The following services are provided to the Customer by this agreement.

- The Customer will be provided appropriate Managed Storage for data.
- The Service Provider will monitor the Managed Storage for the Customer and establish notifications on an <u>opt-in</u> basis, which is strongly recommended.
- The Service Provider will communicate outages affecting the servers to the contacts provided by the Customer.

The following services are not provided under this Agreement:

- Information Lifecycle Management
- Capacity Management of Customer storage
- Backup or Restoration of data
- Updating Customer-provided contacts. This is solely the Customer's responsibility.

3.2   Customers

Any university department or division may request Managed Storage.

3.3   Objectives

The primary goal of this Agreement is to obtain mutual agreement that the proper procedures, requirements, and service levels are in place to provide consistent service support and delivery to the Customer by the Service Provider.

The objectives of this agreement are to:

- clarify service ownership, accountability, roles and/or responsibilities
- Present a clear, concise and measurable description of the services offered to the Customer
- Match perceptions of expected service offerings with actual service support and delivery.

3.4   Service Level Reviews

This agreement will be reviewed at an interval no greater than one year by the Service Provider.

3.5   Service Requirements

3.5.1 Service Provider

The Service Provider will

- Maintain appropriately trained staff
- Communicate in writing issues regarding service levels, change management, etc.
- Meet response and resolution times
- Maintain storage hardware within standard life-cycle
- Maintain SAN and NAS environment software according to recommendation set by vendor

3.5.2 Customer

The Customer will

- Adhere to the Electronic Communications Policy (HR-025)
- Be responsible for maintaining data security
- Be responsible for maintaining their OS for compatibility with Storage Environment.
- Follow appropriate procedures and requirements from the Network Security team
- Be responsible for providing accurate contact information to Service Provider

The Customer should

- Implement some form of Information Lifecycle Management (ILM) process

3.6   Agreement Changes and the Dispute Resolution Process

All requests for changes to this agreement will be done using the following process:

Change and Dispute Resolution Process

Customer proposes change to Service Delivery Manager

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Service provider reviews proposed change for approval

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Approved?

—Yes→ Make required changes to documentation

—No→ Customer notified; process ends.

Make required changes to documentation → Customer or service provider implements change.

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End

Customer notified; process ends. → End