Service Level Agreement

EMORY | UTS
University Technology Services

Enterprise Storage

This document outlines the Service Level Agreement (SLA) between University Technology Services (UTS) and our Customers for the delivery and support of Emory's Enterprise Storage service. The purpose of this agreement is threefold:

1. To clearly represent the capabilities of the service.
2. To establish a shared set of expectations regarding the operation and support of the service.
3. To provide a framework for bidirectional communication regarding overall satisfaction with the service.

Service Description

Enterprise Storage provides campus units with a low cost and highly available service to address their file management needs. Users can access their files securely from their office location or remotely just as if the file was saved locally on their laptop. The fact the files are maintained by the UTS Enterprise Storage service provides customers with administered and managed backup and restore services, taking this burden off the user and their local support provider.

Enterprise Storage is offered in the form of network-attached storage (NAS). A NAS system is essentially a self-contained computer connected to a network. Its sole purpose is to supply file-based data storage services to other devices on the network. The operating system and other software on the NAS unit provide the functionality of data storage, file systems storage, access to files, and the management of these functionalities. NAS is an enterprise offering   with a highly available and redundant architecture and proactive monitoring to assure high levels of availability.

Departments can request an unlimited amount of storage space and have 14 days of file recovery. Currently 220 terabytes of NAS are under management, which does not include backup storage.

Scope of the Agreement

The scope of this agreement includes the software, hardware, and infrastructure components (Configuration Items) operated and maintained by UTS to deliver the complete service.

Items included within the scope of this agreement	
Number of users / licenses	• Enterprise-wide
In-scope applications	• "Dart" Proprietary Operating System
Dependent infrastructure services	• Doman Name Services • Enterprise Authentication (LDAP) • VPN Access • Network • Internet

Hardware and software components	• EMC DMX3 (Storage Array)
	  ▪ Frame 536
	  ▪ Fiber Storage, all classes
	• EMC DMX1000 (Storage Array)
	  ▪ Frame 1239
	  ▪ Fiber Storage, Platinum replication target, Gold & Silver for WS data center
	• EMC Celera (Array)
	  ▪ NS80

	- NAS, NSF and ISCSI storage - SUN Fire X4500 Thumper (Array) - Sanback1 - Self Serve Archive - SUN Fire X4500 Thumper (Array) - Sanback2 - Self Serve Archive, Backup, ISCSI - SUN Fire X4500 Thumper (Array) - Sanback3 - Self Serve Archive, NAS Backup - SUN Fire X4500 Thumper (Array) - Sanback6 - Self Serve Archive, NAS Backup - TSM Server - Erato - TSM Backup - EMC Avamar (Primary) - Avamar1 - Avamar Backup - EMC Avamar (Primary) - Avamar1 - Avamar Backup - EMC Avamar (Replica) - Avamar2 - Avamar Backup

❑ Component refresh is included in UTS refresh budget

☑ Component refresh requires non-UTS funding

Items and functional areas that are outside the scope of this agreement include the components listed below.

Items NOT within the scope of this agreement	
Out-of-scope applications	• Restore
Infrastructure services	• Desktops and/or laptops used to connect to the service

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Assumptions

1. Enterprise Storage is a Tier 0 service. Please refer to http://it.emory.edu/itil-service/ for a description of service tiers.
2. Additional licenses and/or refreshed or additional hardware above what is listed in scope will require new funding.
3. VPN access is required to access files in the Enterprise Storage environment.
4. Currently the Enterprise Storage offering does not comply with HIPPA standards.

Legal Requirements

This service must comply with the following legal/compliance regulations:

☑ None   ❑ HIPPA   ❑ FERPA   ❑ SOX   ❑ Other: _____

Availability

Availability is the percentage of time the service is operational and ready for use. Some services can be designed for high availability by increasing the reliability, scalability, and fault tolerance of the individual components. Because high availability always comes at a cost in both money and additional complexity, organizations must make careful tradeoffs.

At times, services may be partially available, meaning that some customers are working and others or not. Or, it could be that some features are working while others are not. Adjusting for partial availability gives a more accurate reflection of how well the service is performing but is more complex to calculate. Refer to Attachment A for a description of the method(s) used to calculate availability.

Service Hours

In addition to regular maintenance, there are other time periods when a service may not be required. For instance, some non-critical services may only need to be up and running during office hours. Selecting service hours has implications for engineers and customer support personnel. Excluding maintenance, this service is available:

❑ Monday – Friday, 7:00 am – 9:00 pm, excluding Emory holidays

☑ 24x7x365

❑ Other: _____

Maintenance Windows

All services require regularly scheduled maintenance windows in order to:

1. Keep system components up-to-date and secure by applying recommended patches and updates
2. Keep applications and infrastructure current and up to vendor supported patch levels.

UTS makes every effort to minimize the impact of maintenance on the availability of the service. However, you should know that the service may be unavailable during a portion or the entire maintenance window.

The standard maintenance window occurs once per month and begins at 6:00 pm on Saturday and extends until 6:00 am on Sunday (12 hours). The schedule for the current academic year is listed on the Change Management Calendar at http://cm.serivce.emory.edu. Not every service undergoes maintenance every month. Specific service outage timeframes are listed on the Change Management calendar.

Mission critical services may be designed to remain operational during maintenance periods, although this arrangement typically incurs additional cost. UTS can provide quotes for this premium service as requested.

At times a mission critical service or infrastructure component may require an exception to the standard maintenance schedule. The maintenance agreement for this service is:

- ☑ Standard UTS monthly maintenance window
- ❑ Quarterly maintenance
- ❑ Other: _____

Service Changes

There may be times when you request new capabilities or other changes that are intended improve the service. All service changes (except for emergency situations) must be scheduled through the UTS Change Management process, described in Attachment B. Emergency changes are those required to restore the service to normal operations, such as dealing with an outage. These are executed as quickly as possible, without the need for a Change Review Board approval.

Availability Target

As a Tier 1 service, the target availability of the Emory Enterprise Storage service is 99.5 %.

Service Level Reporting

UTS will gather the information on regular intervals and will consolidate the results into reports that are shared with the customer on a regular basis. Service Level Reporting is important to provide regular open communications with the customer, identify areas of improvement, agree upon any corrective plans, and generally review and align the service with the customer and business requirements. The reporting cycle for this service is as follows:

❑ Monthly	❑ Quarterly	☑ Annual	❑ Other: _____

Service Performance Review

This document will be reviewed and amended based upon mutual agreement on an annual basis. This review will include updates to service level targets, effective dates, costs, and other specific items as required. The Business Relationship Manager is responsible for providing a service performance review with the customer. Refer to Attachment C for the BRM Assignment Matrix.

Service/Support Requests

The customer may request service or report a non-critical incident by directly entering their request at http://help.emory.edu or by calling the UTS Service Desk at 404-727-7777. The customer may also view and check on the status of their request at this location. Customers should call the Service Desk for any critical incident. The Service Desk is staffed to respond quickly to customer requests and escalate to the appropriate team to restore to normal service as quickly as possible.

All service requests are addressed during normal business hours (Monday-Friday, 8:00 am – 5:00 pm, excluding holidays). Refer to Attachment D for the list of requests and their associated response times for Enterprise Storage.

Incident Response Times

An Incident is any disruption to the normal operation of a service. UTS will accept and resolve incidents as defined in the UTS Incident Management process included in Attachment E.   The standard UTS Incident Response Service Level Agreement targets apply to services provided within this agreement. The response time targets are based on the priority assigned to the incident in the UTS IT Service Management System.

Contact Points & Escalation

The primary contact points for the service are listed in the table below. These contacts will be notified by the UTS Service Desk as depicted in the Escalation Procedure when responding to service outages or other critical service impacts.

UTS Escalation Contacts

Role	Contact	Phone (Office & Mobile)	Email
Service Owner/ Mgr	David Hauenstein	O: 404-727-2948 M: 404-556-4412	david.hauenstein@emory.edu
Director	Paul Petersen	O: 404-727-7686	paul.petersen@emory.edu

Escalation Procedure

The escalation process is managed by the UTS Service Desk. The customer may also escalate as needed by contacting the Service Desk or Service Owner as listed in the UTS Contacts to provide the necessary visibility and management attention to critical issues.

The following flow diagram depicts the workflow used when a service incident is not following the standard guidelines for resolution according to service tier and priority. The Service Desk monitors incidents for timelines and milestones and may escalate the priority of any incident as warranted.
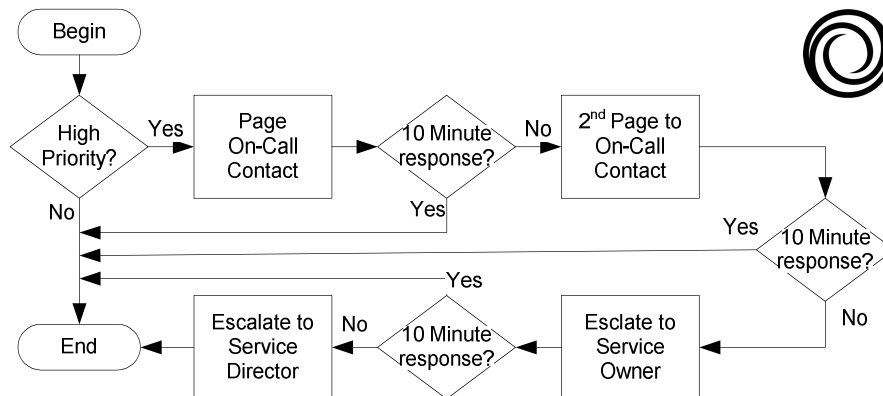
Cost of Service

The costs of many UTS services are met through the University allocation model. Some services with a delimited user base also have an additional cost.

- ❑   All costs paid through the standard University allocation model
- ☑   Additional costs are assessed for this service (details included in Attachment F)

Approval

Name	Title	Date	Signature
[Specific Customer if applicable]	Customer		
David Hauenstein	Service Owner		
Hans Sarju	Business Relationship Manager		
Paul Petersen	Director, Infrastructure		
Brett Coryell	Deputy CIO		
		Document Version: v4.0 Effective Date: September 1, 2009	

Attachment A – Availability

The availability target of this service is a measure based on SIR (Service Impact Report) data. Unplanned Downtime for each service is captured as part of the standard SIR process. Regularly scheduled maintenance and incidents that do not impact service availability are excluded from the Downtime calculation. The formula used to calculate availability is:

Availability = (365-Unplanned Downtime)/365

Attachment B - Change Management

The UTS Change Management procedure is described in the document posted at: http://it.emory.edu/itil-change

Attachment C – BRM Assignment Matrix

Sheila Ackie	Tina Crum	Jeff Fennell	Val LaManna	Carol Livsey	Hans Sarju
EUH	President	WHSCAB	EVP F&A	College	EHc IS
Midtown	Provost	SOM	Finance	Law	UTS
Wesley Woods	General Counsel	SON	HR	Graduate School	Security
TEC	Communications	SPH	Investment	B-School	R&HS
	DAR	Yerkes	Audit	Theology	
	Campus Life		Campus Services	Oxford	
	Affiliates		Research Admin	Libraries	

Attachment D – Service Requests

Service Request	Target*	In Scope	Out of Scope
New storage area	5 days	14 days of online file recovery	• Restore of data from 14 day snapshot is responsibility of customer • Storage capacity monitoring • Administration of users access and auditing • Large orders of more than 1 TB may require additional time
Increase storage capacity	5 days	14 days of online file recovery	• Restore of data from 14 day snapshot is responsibility of customer • Storage capacity monitoring • Administration of users access and auditing • Large orders of more than 1 TB may require additional time
Increase file retention period	5 days	14 days of online file recovery	• Restore of data from 14 day snapshot is responsibility of customer • Storage capacity monitoring • Administration of users access and auditing • Large orders of more than 1 TB may require additional time
Remove Storage Area	5 days	Removal of area	• Retention of day • Large orders of more than 1 TB may require additional time

*Note: Response times are normal business days M-F, excluding Emory holidays

Attachment E – Incident Management

The UTS Incident Management procedure is described in the document posted at: http://it.emory.edu/itil-incident

Attachment F – Detailed Cost of Service

The cost of the service is $1.50 per gigabyte per year.

The following checklist must be completed before the SLA is forwarded for approval.

Reviewed by: Initial/Date

Business Relationship Manager: HS /1-07-09

Service Owner: DH/1-05-09

Director ITSMO: KJ/12-07-09