What data storage space is available on the unified Linux systems?

**Scope**

This document provides information about accounts on the Unified Linux Systems managed by the School of Informatics and Computing. There are many other standalone Linux systems in the school that are not part of the unified configuration and, therefore, this document does not apply to accounts on those systems. If you have any questions about Linux systems within the school, please contact us.

**Local Storage Space**

There are a number of different classes of data storage available on the SoIC unified linux systems.

1. **Home Directory** - All users will get a home directory on a central SoIC file server. The server and allocated disk quota will depend on which account(s) you have. These home directories are on high performance, high reliability RAID arrays and are backed up nightly. See How do I get detailed information about my Linux accounts? for information about the specifics of your home directory, including quotas and remote access.

   You should always reference your home directory using the path /u/username. You may see your home directory referenced using paths like /nfs/servername/home but you should never use paths of this type. These types of path reflect the physical location of your home directory and may change over time. If you use such paths, it may break if your home directory is moved to another disk array or server. By using /u/username your references should always work.

2. **/nobackup Space** - This space is available to anyone with a SoIC unified linux account by simply running the makenobackup command. This provides a larger disk quota than available in your home directory but it is NOT BACKED UP. Since it is on redundant, high availability RAID arrays we expect it to be extremely reliable. However, multiple hardware failures or accidental removal by the user could cause loss of data so you are advised to only store data here that has been backed up by other means, is easily recreated, or is non-critical. For example, you might want to use it to archive files that have already been backed up by some other means, for large experimental data sets that can be recreated, or files that can be downloaded from other sources if lost. This space is available via the path /nobackup/username after you run the makenobackup command.

   If you want to back up files in your nobackup area yourself, you could manually copy files to the UITS MDSS. Please see How do I access the IU SDA (aka MDSS) from the unified Linux systems? for more information about accessing this system.

3. **/scratch Space** - Scratch space is available from all SoIC unified linux accounts by simply running the makescratch command. This provides a relatively large amount of disk space without quotas for temporary storage. Files placed in scratch are not backed up and are auto-deleted after 1 month without being accessed. This is a great place to store large temporary files with the understanding that they will be auto-deleted. This space is available via the path /scratch/username after you run the makescratch command.

   Since there are no quotas on /scratch, please be considerate when using this space. Using multiple GB of space for short periods of time is acceptable but you should never run automatic jobs to access files in your scratch directory to circumvent the 1 month auto-deletion.

4. **Central Research Space** - Additional space is available for research projects under /research. This is housed on a RAID disk array and provides large amounts of storage for a variety of projects. Portions of this space are backed up and portions are not so arrangements can be made for backups as needed. In order to get space on this array please contact us with details about your requirements.

5. **Research Group Space** - Many research groups in the school have their own disk space and servers for support of their research. This storage space is purchased with faculty funds (ie. grants, startup funds, etc) and is maintained by the school. If you need additional disk space for faculty-sponsored research, talk to the faculty member to see if they have additional storage space you can use.

6. **Local Disk Space** - Depending on your needs, it may be possible for us to make local disk space on a server or workstation available to you. This space would only be accessible from this one system and not via the network on other systems and the space would not be backed up. If this is something you want to pursue, please contact us. In your request, please let us know the name or IU Tag number of the linux system you are using.

**IU/UIITS resources**

IU provides access to a variety of storage systems to the entire IU community. Here is a list of some you may find useful:

1. **Box at IU** - See the Box at IU KB Page for details about the unlimited storage available on Box. For information about accessing this space from Linux, please see Using Box under Linux.

2. **Scholarly Data Archive (SDA)** - The SDA provides massive amounts of near-line storage space to IU researchers. Please see How do I access the IU SDA (aka MDSS) from the unified Linux systems? for more information about accessing this system.

3. **Slashtmp** - The IU Slashtmp service provides a great way to temporarily store and share files. Just keep in mind that files uploaded to this system are auto-deleted after 30 days.