Using Attic

For users who need long-term storage for large amount of data, HCC provides an economical solution called Attic. Attic is a reliable near-line data archive storage system. The files in Attic can be accessed and shared from anywhere using Globus Connect, with a fast 10Gb/s link. Also, the data in Attic is backed up between our Lincoln and Omaha facilities to ensure high availability and disaster tolerance. The data and user activities on Attic are subject to our HCC Policies.

Accounts and Cost

To use Attic you will first need an HCC account, and then you may apply for an Attic account. We charge a small fee per TB per year, but it is cheaper than most commercial cloud storage solutions. For the user application form and cost, please see the HCC Attic page.

Transfer Files Using Globus Connect

The easiest and fastest way to access Attic is via Globus. You can transfer files between your computer, our clusters ($HOME and $WORK on Crane, Tusker, and Sandhills), and Attic. Here is a detailed tutorial on how to set up and use Globus Connect. For Attic, use the Globus Endpoint **hcc#attic**. Your Attic files are located at `~`, which is a shortcut for `/attic/<groupname>/<username>`.

Transfer Files Using SCP/SFTP/RSYNC

The transfer server for Attic storage is named `attic.unl.edu`.

SCP Example

```
$ scp /source/file <username>@attic.unl.edu:~/destination/file
```

SFTP example

```
$ sftp <username>@attic.unl.edu
Password:
Duo two-factor login for <username>
Connected to attic.unl.edu.
sftp> pwd
Remote working directory: /attic/<groupname>/<username>
sftp> put source/file destination/file
sftp> exit
```

RSYNC Example

```
# local to remote rsync command
$ rsync -avz /local/source/path
<username>@attic.unl.edu:remote/destination/path

# remote to local rsync command
$ rsync -avz <username>@attic.unl.edu:remote/source/path
/local/destination/path
```

You can also access your data on Attic using our three high-speed transfer servers if you prefer. Simply use scp or sftp to connect to one of the transfer servers, and your directory is mounted at `/attic/<groupname>/<username>`.

Check Attic Usage

The usage and quota information for your group and the users in the group are stored in a filed named "disk_usage.txt" in your group's directory (`/attic/<groupname>`). You can use either Globus Connect or scp to download it. Your usage and expiration is also shown in the web interface (see below).

Use the web interface

For convenience, a web interface is also provided. Simply go to https://attic.unl.edu and login with your HCC credentials. Using this interface, you can see your quota usage and expiration, manage files, etc. **Please note we do not recommend uploading/downloading large files this way**. Use one of the other transfer methods above for large datasets.