How-to: Restoring a deleted file or directory

How-to restore a directory or file from a snapshot

How can I restore a deleted file from my home or lab directory?

$LAB and **$HOME** directories are backed up with "snapshots" hourly for the last 23 hours and daily for the last 23 days. If you need to restore a file or directory to a previous version within the time constraints of snapshot, follow the instructions below.

Windows Mapped Drive

Windows makes it easy to restore a file or directory from your **$LAB** or **$HOME** directory, as long as it is mapped to your computer. Remember, you need to be connected to the VPN to access a mapped directory from off campus.

1. Navigate to the folder or directory file the Windows File Explorer
2. Right-click on the file, and click restore previous versions
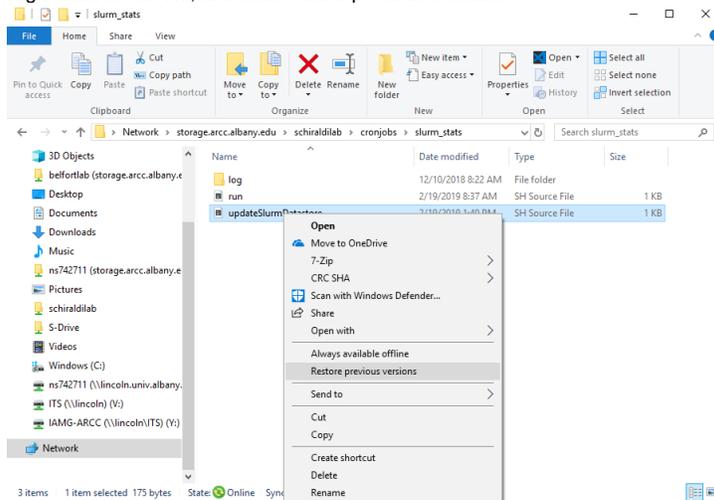
3. Navigate to the version you would like to restore, and hit Restore
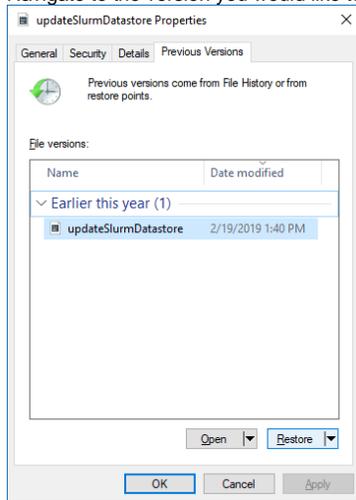
> ⊘ This will overwrite the existing file in the directory!

SSH Terminal

Snapshots can be accessed and restored from an SSH terminal from any operating system. Please follow How-to: Connect via SSH (PuTTY, macOS terminal, X2Go) for more information on connecting via SSH.

1. Open an SSH connection to head-01.arcc.albany.edu
2. Using the "cd" command, change directories to the file or directory that needs to be restored
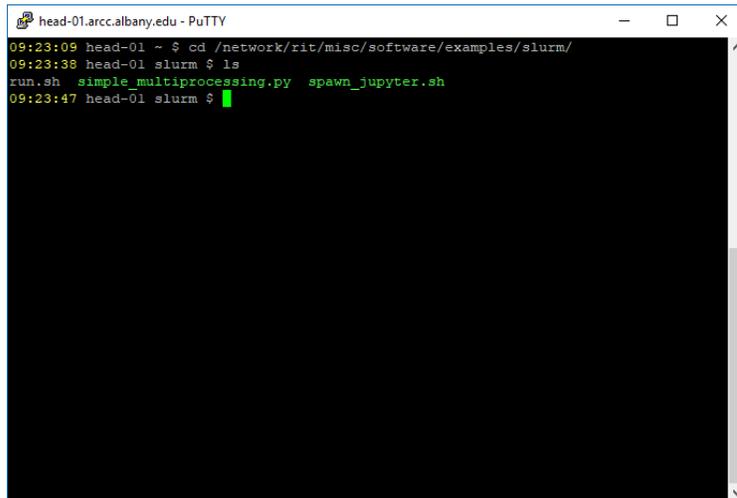
```
cd /network/rit/lab/[lab_directory]/[]
```

In this example, we will demonstrate with an example file

3. Use the "ls" command to check if the file is in the directory, here we will restore spawn_jupyter.sh

4. Now, "cd" into the ".snapshot" directory, and "ls" to see what snapshots are available. Note that the snapshots are additional directories.

5. "cd" into the appropriate snapshot directory. Here we are restoring the backup from 0825 on 15 Apr 2019
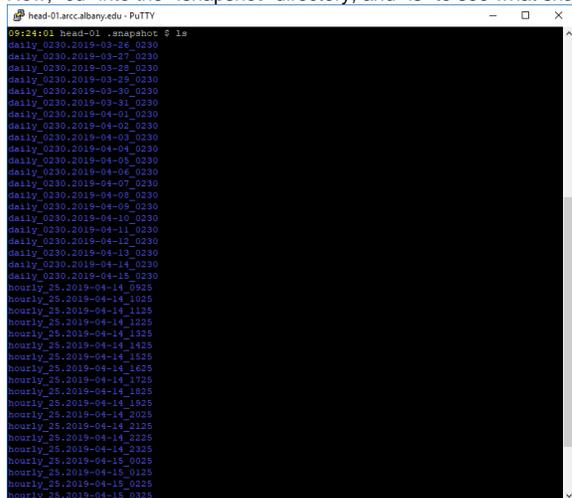
```
09:25:22 head-01 .snapshot $ ls
daily_0230.2019-03-26_0230    hourly_25.2019-04-14_1225
daily_0230.2019-03-27_0230    hourly_25.2019-04-14_1325
daily_0230.2019-03-28_0230    hourly_25.2019-04-14_1425
daily_0230.2019-03-29_0230    hourly_25.2019-04-14_1525
daily_0230.2019-03-30_0230    hourly_25.2019-04-14_1625
daily_0230.2019-03-31_0230    hourly_25.2019-04-14_1725
daily_0230.2019-04-01_0230    hourly_25.2019-04-14_1825
daily_0230.2019-04-02_0230    hourly_25.2019-04-14_1925
daily_0230.2019-04-03_0230    hourly_25.2019-04-14_2025
daily_0230.2019-04-04_0230    hourly_25.2019-04-14_2125
daily_0230.2019-04-05_0230    hourly_25.2019-04-14_2225
daily_0230.2019-04-06_0230    hourly_25.2019-04-14_2325
daily_0230.2019-04-07_0230    hourly_25.2019-04-15_0025
daily_0230.2019-04-08_0230    hourly_25.2019-04-15_0125
daily_0230.2019-04-09_0230    hourly_25.2019-04-15_0225
daily_0230.2019-04-10_0230    hourly_25.2019-04-15_0325
daily_0230.2019-04-11_0230    hourly_25.2019-04-15_0425
daily_0230.2019-04-12_0230    hourly_25.2019-04-15_0525
daily_0230.2019-04-13_0230    hourly_25.2019-04-15_0625
daily_0230.2019-04-14_0230    hourly_25.2019-04-15_0725
daily_0230.2019-04-15_0230    hourly_25.2019-04-15_0825
hourly_25.2019-04-14_1025    hourly_25.2019-04-15_0925
hourly_25.2019-04-14_1125    vserverdr.2.48c4299a-ff9a-11e7-9207-00a098573595.2019-04-15_061500
09:25:22 head-01 .snapshot $ cd hourly_25.2019-04-15_0825
09:25:59 head-01 hourly_25.2019-04-15_0825 $ ls
run.sh  simple_multiprocessing.py  spawn_jupyter.sh
09:26:00 head-01 hourly_25.2019-04-15_0825 $
```

6. You can check the file with the "more" command, or other command of your choice

```
09:26:50 head-01 hourly_25.2019-04-15_0825 $ more spawn_jupyter.sh
#!/bin/bash

#SBATCH --cpus-per-task=1
#SBATCH --mem=4000
#SBATCH -p batch
#SBATCH -o jupyter.%j.log
#SBATCH -t 02:00:00

unset XDG_RUNTIME_DIR

echo "USER ${SLURM_JOB_USER} was granted ${SLURM_CPUS_PER_TASK} cores and ${SLURM_MEM_PER_CPU}
MB per node on ${SLURM_NODELIST}.
The job is current running with job #${SLURM_JOB_ID}."

/network/rit/misc/software/jupyterhub/miniconda3/bin/jupyter --no-browser --ip=0.0.0.0

09:26:51 head-01 hourly_25.2019-04-15_0825 $
```
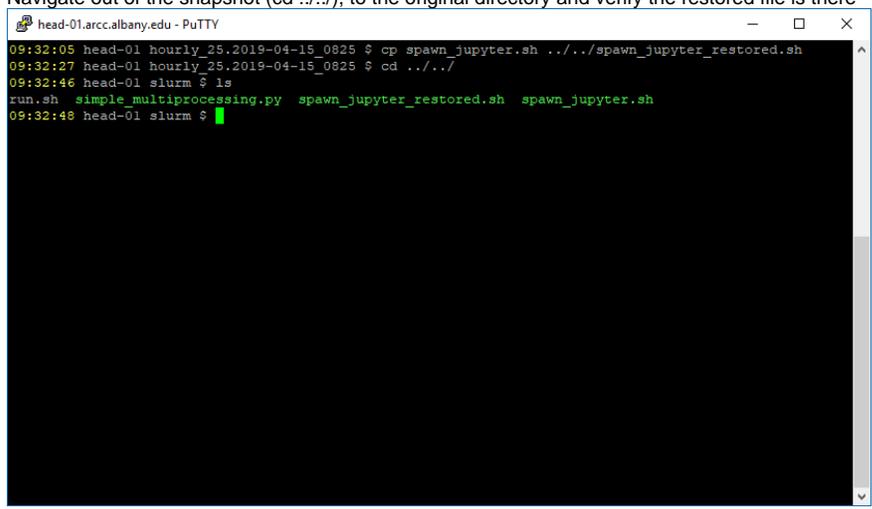
7. Next, "cp" the file two directories up (../../) and rename it if you'd like to. Here, we append _restored so the files can be further compared

```
09:32:05 head-01 hourly_25.2019-04-15_0825 $ cp spawn_jupyter.sh ../../spawn_jupyter_restored.sh
```

8. Navigate out of the snapshot (cd ../../), to the original directory and verify the restored file is there


```
09:32:05 head-01 hourly_25.2019-04-15_0825 $ cp spawn_jupyter.sh ../../spawn_jupyter_restored.sh
09:32:27 head-01 hourly_25.2019-04-15_0825 $ cd ../../
09:32:46 head-01 slurm $ ls
run.sh  simple_multiprocessing.py  spawn_jupyter_restored.sh  spawn_jupyter.sh
09:32:48 head-01 slurm $
```