FAQs

What is myNAS?

When you sign into the myNAS web portal, you can easily monitor all aspects of your NAS user account activity, including PBS jobs, resource allocations, and usage for the project group IDs (GIDs) you belong to. You can also check for upcoming downtimes and see the most recent HECC news—at a glance!

To get started, see Using the myNAS Portal.

How do I list all of my projects (GIDs)?

You can view the project group IDs (GIDs) that you belong to by logging into the myNAS portal or by running the `groups` command.

The myNAS portal shows all the GIDs you belong to, along with their project names and descriptions, and provides a central location where you can easily monitor your PBS jobs and check allocation and usage. For more information, see Using the myNAS Portal.

You can run the `groups` command with your username to list all the GIDs that you belongs to. The following example shows that user *zsmith* is a member of the groups a0800, a0907, and e0720:

```
%groups zsmith
zsmith : a0800 a0907 e0720
```

If you do not know the project names that the GID numbers represent, you can check the myNAS portal or contact the NAS Control Room at (800) 331-8737, (650) 604-4444, or support@nas.nasa.gov.

For more information about project groups and GID charges, see Charging to a Project Group ID (GID).

How do I find out how many hours I have used and/or have left?

To obtain resource usage information about all of the project group IDs (GIDs) that you belong to, you can:

- Log into the myNAS portal
- Run the job accounting utilities acct_ytd or acct_query

The myNAS portal shows all the GIDs you belong to and provides a central location where you can easily check allocation and usage and monitor PBS jobs. For more information, see Using the myNAS Portal.

To use the acct_ytd utility to view the number of hours remaining for all of your projects on all systems, run:

```
acct_ytd -c all
```

To view the number of hours remaining for a specific project across all systems, specify the GID. For example:

```
acct_ytd -c all a0800
```

You can also obtain detailed billing information, such as the number of SBUs that have been used in the current operating year, by using the acct_query utility.

For more information about how to use these utilities, see Job Accounting Utilities, **man acct_ytd**, and **man acct_query**.

Why won't my job start?

A job might not start for one of the following reasons:

- The queue has reached its maximum run limit
- Your job is waiting for resources
- Your mission share has run out
- The system is going into dedicated time
- Scheduling is turned off
- Your job has been placed on hold
- Your home filesystem or default /nobackup filesystem is down
- Your hard quota limit for disk space has been exceeded

You can often determine the reason a job does not start by running one of the following commands to view job status and information:

- To view job status and events that might specify the reason a job served by pbspl1 or pbspl4 failed to start, run `tracejob` *job_id* on the PBS server `pbspl1` or `pbspl4`

  Note: Users have no access to pbs05a which serves jobs submitted to run on Cabeus gh200 nodes.

- To view all available information about the job, including status or any comments added by the administrator or scheduler that may explain why the job didn't start, run `qstat -as` *job_id* on an appropriate front-end system for the compute resources requested by your job.
- To find out whether the system is in dedicated time, run `schedule all`.

See Common Reasons Why Jobs Won't Start for more detailed troubleshooting information.

How do I find my /nobackup (scratch) directory?

To find the /nobackup system that is assigned to you, type:

pfe*21*% ls -ld /nobackup*/*your_username*

In the following example, the output shows that the/nobackupp17 directory is assigned to user *zsmith*:

pfe*21*% ls -ld /nobackup*/zsmith*
lrwxrwxrwx 1d root root 19 Dec 23 2024 /nobackup/*zsmith* -> /nobackupp17/*zsmith*

For more information about how /nobackup directories are used, see NAS Lustre Filesystems.

What should I do when I reach my quota?

When the amount of data in your NAS compute resources home directory or your NAS /nobackup directory exceeds the soft quota, you will receive an email informing you of your current usage and how much grace period remains.

It is expected that your data will occasionally exceed the soft quota, as needed. However, if your data still exceeds the soft quota after 14 days—or if it exceeds the hard quota—you must delete unneeded files and archive infrequently used files until the amount of data is below the soft limit. To archive files, transfer them to the Lou mass storage system.

Once you exceed your hard quota, you will receive the following PBS error when attempting to submit a new job:

```
qsub: Filesystem quota exceeded! Please reduce your usage or request an increase before submitting.
```

If you have a long-term need for higher quota limits, send a justification to support@nas.nasa.gov. Your request will be reviewed by management for approval.

For more information, including quota limits, see:

- Quota Policy on Disk Space and Files
- NAS Compute Resources Home Filesystems
- NAS Lustre Filesystems
- Lou Mass Storage System

How do I find available software packages (pkgsrc)?

Software programs on NAS systems are managed as modules or packages. For a list of available modules and packages, see Software on NAS Systems.

To learn how to find detailed information about software packages in the pkgsrc collection, see Using Software Packages in pkgsrc.

What are the requirements for creating a password?

Passwords must:

- Have a minimum of 12 characters
- Be different from your previous 24 passwords
- Include characters from at least three of the following types:
  - Uppercase letters
  - Lowercase letters
  - Numbers
  - Special characters (e.g., $! @ #)

Passwords must not contain:

- Your name, Agency User ID (AUID), birth date, Social Security number, family member or pet's name, or any other personal information
- A division or branch name
- A dictionary word of any language
- The name of a sports team, automobile, vendor, contractor, product, or product nickname
- Repetitive characters or keyboard patterns (for example, "abc#ABC", "1234", "qwerty")

For more guidance, see Password Creation Rules.

When I change my NAS password, does it propagate to all systems?

Yes. When you change your password, the new password is propagated to all of the systems in the NAS high-performance computing (HPC) environment, including:

- All systems within the secure enclave
- Secure front-end (SFE) systems
- Secure Unattended Proxy (SUP)

The password change will propagate to all the systems within a few minutes. If a system continues to request a password change after approximately 15 minutes, or if you see an error message, contact the NAS Control Room at (800) 331-8737 or (650) 604-4444.

For more information, see the HPC Environment Overview.

Why is my code performing poorly?

There are many possible reasons for poor code performance. If your code is not performing well, seeOptimization/Troubleshooting > Code Development for articles that can help you troubleshoot the issue.

If you cannot determine the problem, send an email tosupport@nas.nasa.gov with the following information:

- The full path to the location of your source code and the makefile, if any
- Test case data and expected results
- The job submission script
- Any additional files that demonstrate poor performance, such as a log file that shows a runtime that is longer than expected

Your request will be acknowledged and routed to our code optimization specialists for resolution. For more information on HECC code optimization services, see Application Optimization Services.

How do I transfer files to/from NAS supercomputers?

You can use several methods to transfer files to and from the NAS supercomputers, depending on the size of your files, your system setup, and other considerations. See Remote File Transfer Commands for a list of these methods and how to use them.

TIP: We recommend using the Shift transfer tool to copy files from Lou or to extract tar files.

Why is it taking so long to copy my files from Lou?

Your files may have been migrated offline, from disk to tape. Depending on the size of the files and how busy the tape drive is, it might take a long time for the Data Migration Facility (DMF) to retrieve them from tape.

You can use the `dmget` command to transfer the files back online, from tape to disk. To learn how to use this command most effectively with your files, see Dealing with Slow File Retrieval.

TIP: Use the Shift transfer tool to copy files from Lou or to extract tar files. Shift automatically retrieves files from tape as part of the transfer operation.

See also:

- Data Migration Facility (DMF) Commands
- Shift Transfer Tool Overview

How can I find out whether my file is on tape or disk?

On the Lou mass storage system, the Data Migration Facility (DMF) manages disk space by moving unused files to storage on tape.

Use the dmls command on Lou to determine whether a file is on tape or disk. The output shows the state of each file. For example:

```
lou dmls -l
total 220
-rw-r-----   1 aeneuman madmag     20155 Mar  2 11:24 (REG) A
-rw-r-----   1 aeneuman madmag   1209300 Mar  3 11:24 (OFL) B
-rw-r-----   1 aeneuman madmag    201550 Mar  3 11:18 (DUL) C
```

In this example:

- File A is in REG (regular) state, which indicates it is on disk
- File B is in OFL (offline) state, which indicates it is on tape
- File C is in DUL (dual) state, which indicates that identical copies of the file exist on both disk and tape

When a file is in dual state, the online (disk) copy will persist if there is no demand for free space in its filesystem. When free space is needed, the online copy of the file is removed, leaving just the offline copy—in this case, the file state will change from DUL to OFL. If you make any change to a dual-state file, the offline copy becomes out of date and invalid—in this case, DMF will treat it as a completely new file and the file state will change from DUL to REG.

For a list of other possible file states, see Data Migration Facility (DMF) Commands.

How do I retrieve my files from tape?

You can use the dmget command to retrieve files that have been archived to tape. For more information about using thedmget command, and further explanation of data migration and storage, see Data Migration Facility (DMF) Commands.

I accidentally deleted some files. Can I get them back?

Yes, you can recover deleted files if you deleted them from your home directory on the NAS compute resources or Lou. Call NAS User Services at (800) 331-8737 or (650) 604-4444, or send an email to support@nas.nasa.gov with the filenames, paths, and the dates they were last modified.

If you deleted the files from a /nobackup directory, the files cannot be restored. For more information on filesystem management, see NAS Lustre Filesystems.

How do I request longer wall time, higher priority, or larger disk quota?

You can make special requests for various job-related changes, such as longer wall-clock time, higher job priority, or increased disk quotas.

- To request longer wall time or higher priority placement in the job queue, call the NAS Control Room at (800) 331-8737 or (650) 604-4444.
- To request a larger disk quota, send an email to support@nas.nasa.gov with a justification for the quota increase and an estimate of the amount needed. Your request will be routed to HECC management for approval.

For more information about how job priority and quotas are determined, see How PBS Schedules Jobs and Quota Policy on Disk Space and Files.

Only principal investigators (PIs) can make allocation requests.

If you want to add more hours to your account, contact your PI.

For PIs: See Requesting an Allocation.

How do I activate and use my RSA SecurID token?

Depending on the type of RSA SecurID token you have, see one of the following articles for step-by-step instructions.

- Enabling Your RSA SecurID Hard Token (Fob)
- Enabling Your RSA SecurID Soft Token (Mobile App)

If you have any difficulty using your RSA SecurID token, contact the NAS Control Room at (800) 331-8737 or (650) 604-4444.

I can't log in/My password is not working/My account is locked

In general, when you have problems logging in with your NAS password or RSA SecurID passcode, call the NAS Control Room at (800) 331-8737 or (650) 604-4444.

- If you are a current user with an existing account on a NAS system, and you are approved to get an account on another machine, your password on the new machine is the same as your current NAS password. If you don't remember this password, call the Control Room. The staff will provide you with a new default password.
- If you are a new user and you do not know your default NAS password, call the Control Room. To learn more about first-time login steps, which include obtaining your default password and enabling your RSA SecurID token, see Logging Into NAS Systems for the First Time.

Note: Due to security requirements, Control Room staff will confirm your identity by asking you the security question that you submitted with your account request form, or by calling you back at your work phone number on record. If your phone number has changed due to office moves or reorganizations, the Principal Investigator (PI) for your project must contact the Control Room and provide the reason for the change, either by phone or by sending an email to support@nas.nasa.gov. If your PI is unavailable, your branch chief or division chief may do this for you.

You will be prompted to change your default password when you log in to a NAS system. See Password Creation Rules for guidance.

How do I acknowledge the use of NASA computing resources in my publication?

When you publish your research based on the use of NAS-provided high-end computing resources, please include the following language in your acknowledgments:

High-end computing (HEC) resources supporting this work were provided by the NASA Advanced Supercomputing (NAS) Division at Ames Research Center.

How do I check my quotas?

To check the disk quota on your NAS compute resources home directory (or nobackupnfs2 directory), run the `quota -vs` command.

To check the file quota on your Lou home directory, run the `quota -vs` command from a Lou front-end system (lfe).

To check the disk quota on your NAS Lustre (/nobackup) directory, use `lfs quota` as follows:

```
% lfs quota -hu your_username /nobackup/your_username
```

You can also check quotas and usage for both $Home and Lustre (nobackupp) filesystems on the **Data** page in the **myNAS portal**. For more information, see Using the myNAS Portal.

For more information about these filesystems and about quota policies, see the following articles:

- NAS Compute Resources Home Filesystem
- NAS Lustre Filesystems
- The Lou Mass Storage System

How do I profile my Python code?

To profile a Python application on a NAS system, we recommend using Intel's VTune software package.

For information about how to use VTune, see Finding Hotspots in Your Code with the Intel VTune Command-Line Interface.