

# Environment

The Derecho HPC system uses a Linux operating system and, for scheduling jobs, Altair PBS Professional (PBS Pro). The system supports widely used shells on its login and compute nodes. Users also have several compiler choices. See [Compiling code on NCAR systems](#) for those details.

**Operating system:** Cray Linux Environment / SUSE Linux.

**Scheduler:** See [Starting and managing jobs with PBS](#) for documentation about scheduling jobs.

**Shells:** The default login shell for new Derecho users is **bash**. To change your default to **tcsh** or other available shell, use the Systems Accounting Manager ([SAM](#)). It may take several hours for a change to take effect. You can confirm which shell is set as your default by entering the following on your command line:

```
echo $SHELL
```

## Page contents

- [Logging in](#)
- [Environment modules](#)

## Logging in

To log in, start your terminal or Secure Shell client and run an **ssh** command as shown here:

```
ssh -X username@system_name.ucar.edu
OR
ssh -X username@system_name.hpc.ucar.edu
```

Some users (particularly on Macs) need to use **-Y** instead of **-X** when calling SSH to enable X11 forwarding.

You can use this shorter command if your username for the system is the same as your username on your local computer:

```
ssh -X system_name.ucar.edu
OR
ssh -X system_system_name.hpc.ucar.edu
```

After running the ssh command, you will be asked to authenticate to finish logging in.

## Environment modules

CISL provides an extensive set of **environment modules** to manage the Derecho system's environment variables, compilers, libraries, and other software. You can use some modules regardless of which compiler is loaded, while others are compiler-dependent.

See [Environment modules](#) for information about essential commands and how to set up and save customized environments for your work.