

CCV uses the **Secure Shell (SSH)** protocol for access to its systems. To connect to a CCV system, you must use an SSH client.

### Linux, UNIX, and Mac OS X

These operating systems typically come with a command-line SSH client already installed. Open a terminal window, and type:

```
[user@localmachine ~]$ ssh
usage: ssh [-1246AaCfGkMnQsTtVvXxY] [-b bind_address] [-c cipher_spec]
        [-D [bind_address:]port] [-e escape_char] [-F configfile]
        ...
```

### Windows

There are several free clients available for Windows, including a GUI client called PuTTY (<http://www.chiark.greenend.org.uk/~sgtatham/putty/>) and a command-line client that is part of Cygwin (<http://www.cygwin.com/>), a Linux-like environment for Windows.

### Connecting

Connect to CCV's "ssh" server using the command-line client:

```
[user@localmachine ~]$ ssh ccvuser@ssh.ccv.brown.edu
ccvuser@ssh's password:
Last login: Wed Oct 13 19:01:52 2010 from some.domain.name
-bash-3.2$
```

Or in PuTTY, enter **ssh.ccv.brown.edu** in the "Host Name" field, select "Connect", and enter your username and password when prompted.

Once you are logged in to the SSH server, connect to Oscar with:

```
-bash-3.2$ ssh oscar
ccvuser@oscar's password:
Last login: Wed Oct 13 20:01:37 2010 from ssh1.ccv.brown.edu
#### Welcome to the oscar system interactive login environment.
#### Please use this system for application development and
#### debugging, as well as job submission and monitoring, and for other
#### low-CPU interactive use. Please do not use it for CPU-intensive,
#### long-running computing. CPU-intensive, long-running interactive
#### and large-memory processes should be run on smp006 and smp007, which have
#### been reserved for time-shared interactive use.
####
#### LONG-RUNNING CPU-INTENSIVE PROCESSES ON THIS NODE WILL BE KILLED
#### in order to preserve interactive performance for all users.
[ccvuser@login001 ~]$
```

You are now connected to one of the Oscar login nodes (**login001** or **login002**), where you can compile and load software, access and modify files, and submit and manage batch jobs.

You can also connect to other systems from Oscar, for instance one of the interactive "smp" nodes:

```
[ccvuser@login001 ~]$ ssh smp001
ccvuser@smp001's password:
[ccvuser@smp001 ~]$
```