How to restart Marmoset buildservers during a term

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The Marmoset buildservers are special programs that do the work of testing student submissions to the Marmoset submitserver (https://marmoset.student.cs.uwaterloo.ca) safely in the linux.student.cs environment. Due to the unpredictable nature of student code and instructor supplied tests, sometimes the buildservers hang or experience problems.

You can see the status of currently running buildservers at
https://marmoset.student.cs.uwaterloo.ca/status/QueryBuildServerStatus

A reasonable solution during hanging situations is to simply restart the buildservers. This article outlines the steps you need to take to restart a course's Marmoset buildservers.

Keep in mind, that restarting the buildservers stops any testing that might have been going on at the time. This means students will see no results for submissions. That submission would either have to be re-tested (which is tricky) or simply ignored and the student would have to re-submit.

As an example, let's restart cs241's buildservers.

Step 1: Log into cs241t@linux.student.cs from the cs241 account.

```
ubuntu1204-002:~> whoami
cs241
ubuntu1204-002:~> ssh cs241t@linux.student.cs
You have mail.
Last login: Sat Mar 15 20:45:49 2014 ...
ubuntu1204-002:~> whoami
cs241t
ubuntu1204-002:~>
```

Step 2: Take a look inside the "buildserver" directory :
Note: The "buildserver" directory is very important and you shouldn't modify it in any way.

```
ubuntu1204-002:~> ls ~/buildserver
bs10.cs241t.ubuntu1204-004.student.cs
bs1.cs241t.ubuntu1204-004.student.cs
bs4.cs241t.ubuntu1204-004.student.cs
bs7.cs241t.ubuntu1204-004.student.cs  CRONTAB.sh
```

```
bs10.cs241t.ubuntu1204-006.student.cs
bs1.cs241t.ubuntu1204-006.student.cs
bs4.cs241t.ubuntu1204-006.student.cs
bs7.cs241t.ubuntu1204-006.student.cs  uptimeDaemon
bs11.cs241t.ubuntu1204-004.student.cs
bs2.cs241t.ubuntu1204-004.student.cs
bs5.cs241t.ubuntu1204-004.student.cs
bs8.cs241t.ubuntu1204-004.student.cs
bs11.cs241t.ubuntu1204-006.student.cs
bs2.cs241t.ubuntu1204-006.student.cs
bs5.cs241t.ubuntu1204-006.student.cs
bs8.cs241t.ubuntu1204-006.student.cs
bs12.cs241t.ubuntu1204-004.student.cs
bs3.cs241t.ubuntu1204-004.student.cs
bs6.cs241t.ubuntu1204-004.student.cs
bs9.cs241t.ubuntu1204-004.student.cs
bs12.cs241t.ubuntu1204-006.student.cs
bs3.cs241t.ubuntu1204-006.student.cs
bs6.cs241t.ubuntu1204-006.student.cs
bs9.cs241t.ubuntu1204-006.student.cs
ubuntu1204-002:~>
```

The above shows us that the cs241 buildservers, although running from the “cs241t” account, are actually running on two hosts, i.e., “ubuntu1204-004” and “ubuntu1204-006”.

The remaining steps will have to be repeated on each of the hosts you’ve determined the buildservers are running on. Let’s start with “ubuntu1204-004”.

Step 3: Re-login to cs241t@ubuntu1204-004.

```
ubuntu1204-002:~> whoami
cs241t
ubuntu1204-002:~> ssh ubuntu1204-004
You have mail.
Last login: Tue Mar 18 10:50:43 2014 from …
ubuntu1204-004:~> whoami
cs241t
ubuntu1204-004:~>
```

Step 4: Kill all cs241t buildservers running on ubuntu1204-004

```
ubuntu1204-004:~> pkill -u cs241t java
```

Technical aside for those interested: (if not, just skip to Step 5)

The “pkill” command kills processes that match the pattern indicated in this example, i.e., “java”, because buildservers are actually java programs.

The “-u cs241t” option, although not strictly necessary, forces “pkill” to only examine and kill processes owned by “cs241t”. If you were to leave it out, “pkill” would still kill the right processes, but it would attempt to do so for other users as well and will simply report “Operation not permitted” in that case.

Step 5: Restart cs241t buildservers on ubuntu1204-004

```
ubuntu1204-004:~> ~cs_build/bin/restartbuildservers
```

Now repeat steps 3-5 on the other hosts that you know are running cs241 buildservers, i.e., “ubuntu1204-006”.

Note: The above instructions assume that the “buildserver” directory contains buildserver data for the current term. To install buildservers for a new term, you will need an additional set of instructions, i.e., **the above will not be sufficient to start buildservers for a new term for your course.**