

CS 114 Unix Tools – Fall 2004

Assignment 2: Shell configuration

Handed out: Fri 1 Oct

Due: Fri 8 Oct, 12:20pm

The intent of this assignment is to verify that you know how to:

- Change your shell.
- Configure your shell.
- Edit files.
- Manipulate permissions.

The assignment will be graded out of 15 points.

1. (2 points) Use `chsh` to change your shell on turing to a shell *other than* `sh` and `csh`. Popular choices are `bash` and `tcsh`. If you want to use a different shell, that's okay too (as long as it's not `sh` or `csh`), but there will be less configuration help in what follows and the submission script may not work.
2. (2 points) Depending on your shell, create the shell initialization files (rc files) as follows:
 - If using `bash`, copy `/usr/share/skel/bashrc:SunOS.5` to `~/.bashrc:SunOS.5` and copy `/usr/share/skel/profile:SunOS.5` to `~/.profile:SunOS.5`.
 - If using `tcsh`, copy `/usr/share/skel/cshrc:SunOS.5` to `~/.cshrc:SunOS.5` and copy `/usr/share/skel/login:SunOS.5` to `~/.login:SunOS.5`.

If using another shell, you're on your own.

3. (3 points) Use `emacs` or `vi` (or `vim`) to edit `.bashrc:SunOS.5` or `.cshrc:SunOS.5` as follows:
 - (1 point) Set the `EDITOR` and `VISUAL` environment variables to the editor of your choice. This probably just requires uncommenting the appropriate line in the file.
 - (0 points) Set the `PAGER` or `PATH` environment variables to suit your taste.
 - (2 point) Set your prompt. In `tcsh`, you can use the `set prompt` command. In `bash` you need to set the `PS1` environment variable. Read the man page for your shell for more information (warning: these man pages are *huge*).
4. (3 points) If it does not already exist, create a file `~/.aliases`. Add at least three aliases to the file. You may use the aliases in the lecture nodes, or come up with your own. Note that the syntax for the `alias` command varies depending on your shell.

5. (1 point) If not already present, include a line in your `.cshrc:SunOS.5` or `.bashrc:SunOS.5` file to “source” the `.aliases` file. The syntax depends on your shell. See the notes for Lecture 4 for help.
6. (2 points) Ensure the rc files and also `.aliases` are readable and writable by you *only* and not executable.
7. (2 points) In your `.login:SunOS.5` or `.profile:SunOS.5` file, set your `umask` to so that, by default, you have no access restrictions, members of the group cannot write files, and all others have no access.

Submitting your assignment

No later than the due date, run the program `~cs114/bin/submit-hw2`. Be sure you are logged in using the *new* shell. When you run the script. This script will check your rc files for the above changes and email the files and the results to me. Only the *first* submission counts, so check your work before you submit. If the script fails to run, contact me.

Late submissions

After the submission deadline, the following penalties apply, unless you get permission from the instructor *first*:

- 10% penalty if you submit within 6 hours of the deadline.
- 25% penalty if you submit within 12 hours of the deadline.
- 50% penalty if you submit within 72 hours of the deadline.
- 100% penalty if you submit more than 72 hours after the deadline.

Getting help

You are free to discuss this assignment with others in the class, but your work should be your own. If in doubt, err on the side of caution, or ask the instructor. In particular, copying other peoples files (or portions of their files), even if they give you permission to allow it, is prohibited.

If you need help, you should (in order):

1. Take a look at the man pages, lecture notes, and suggested reading.
2. If you have more than just a simple question, please consider coming to my office hours.
3. Go to `cornell.class.cs114` newsgroup and see if your question is already answered. If not, post it there. I will be happy to answer any questions posted to the newsgroup, not only HW-related ones.
4. If you want to keep your question private, e-mail me at `cs114@cs.cornell.edu`.