

CSE 399-004 Unix/Linux Skills

Spring 2006

Administrative

- Final exam
 - Due on Friday, 3/3 (note: this was changed)
- No lab on Friday

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Goal I: Broad Background

- Recall: 1st goal to give a good background in Unix/Linux
- For this reason, covered many topics (broken into 4 parts)
 - Part I: Shell
 - Part II: Emacs
 - Part III: Scripting
 - Part IV: Important applications

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Part I: Shell

For manipulating files and directories

- Similar to Windows Explorer
 - But shell textual not graphical
 - Shell is extensible
 - Users can define their own custom commands
- Learned many basic commands
 - Ex: cd, ls, mv, cp, rm, ...
- Three powerful commands: find, grep, and sed
 - find = tool for locating files and directories
 - grep = tool for searching files
 - sed = tool for editing streams
 - All three commands have support for regular expressions

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Part II: Emacs

For editing files

- No really good equivalent software in Windows
- Has great support for programming
 - Understands structure of most programming Languages
 - Can do smart highlighting and tabbing
- Has great support for regular expressions
 - Useful for finding or replacing text
- Can define macros to make custom operations
- Many different modes
 - Can edit a file, debug a program, use the shell all within emacs

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Part III: Scripting

For building new custom commands

- Shell scripting
 - Can place complex set of command in a shell script
 - Make script generic using command-line arguments
- Makefiles
 - For complex compilation can build a Makefile
 - Contains dependency information about each generated file
- Perl
 - Shell script can be awkward, need high-level language like Perl
 - Shell scripts only hav simple string variables, can only use bash commands
 - Great support regular expressions

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Part IV: Important Applications

Unix/Linux has many important applications

- Some are similar to Windows applications
 - Browsing the web: Firefox
 - Browsing email: Thunderbird
 - Office (word, excel, powerpoint): OpenOffice
- Others do not have a good equivalent Windows application
 - Latex - For building documents
 - Not what-you-see-is-what-you-get: file contains text and formatting commands
 - Must compile file to build document
 - Good for complex docs. (scientific papers), great support for math equations
 - CVS - Gives version control, concurrent programming control
 - Records the history of your source files
 - Allows multiple programmers to simultaneously work on the same project

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Goal 2: Make You “Dangerous”

- Recall: 2nd goal to give you tools to do more advanced stuff
- We learned about a number of resources:
 - man pages
 - Google
 - Links to some nice tutorials (which can be found with google)
 - Add these links to your own webpage for easy access

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Try New Things

You're now prepared to go off and try more advanced stuff

- Look for ways to use regular expressions
 - Next time you need to extract data from a file
- Force yourself to start writing scripts
 - Rather than continually typing some set of complex commands
- Use latex to do your next homework in another class
- Use CVS for your next programming project
 - Even if it is an individual project

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Goal 3: Make You More Efficient

- 3rd goal is to make you more efficient computer users
 - Although, I didn't mention this goal in first class
- Many of you will spend good portion of the your life in front of a computer
 - Being efficient is important

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Goal 4: Have Fun!

- Hopefully, you had fun in this course
- I definitely enjoyed teaching this course

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Thanks!

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