

# Handout Review (In Class Examples) Linux Search, Extract and Archiving Files

1. Launch Ubuntu: Make sure that you're in YOUR `/home/user` Directory. Enter **pwd** (present working directory) command.
2. **Search Files**
  - i. Use the following command sequence to create and search files.
  - ii. Create a file named search.txt **touch search.txt**
  - iii. **echo "There is a big bug in my bed" > search.txt**
  - iv. **cat search.txt**
  - v. The Next command will append additional text into the search.txt file without writing over existing file data (>>)
  - vi. **echo "It is next to the bag on the floor and bold" >> search.txt**
  - vii. **cat search.txt**
  - viii. You should now have two lines of text in the file search.txt
  - ix. Use the grep command to search for any words in the file that begin with letter b and end with the letter g and contains the letters i, e, or a).
  - x. **grep "b[iua]g" search.txt**
  - xi. The search results will be returned and highlighted in red, along with the entire line of text. Note that the grep search ignores the words bed and bold.
  - xii. **grep "b\*" search.txt**
  - xiii. This time the search results returned all words with the letter b in the file
  - xiv. We could also pipe the results to file.
  - xv. **grep "b\*" search.txt > results.txt**
  - xvi. **To view what was stored in results.txt, enter cat results.txt**
  - xvii. Use the wc (word count command) to display the number of lines, words and size (bytes) are in the file search.txt
  - xviii. **wc search.txt**
3. **Search Files with redirecting system error messages (2>)**
  - i. **grep -r eth0 /etc/\***
  - ii. Notice all the Permission denied response, these are system files are not accessible (only administrators)
  - iii. **grep -r eth0 /etc/\* 2> eth0error.txt**
  - iv. Only the valid search results are displayed, the errors or Permission denied results are stored in the eth0errot.txt file.
4. **Extract Files (Use the Cut Command) and Pipe (pause)**
  - i. **cat /etc/passwd**
  - ii. This will display local user account information, passwords are marked as x, actual passwords are stored in the etc/shadow files (encrypted)
  - iii. **cut -f 1 -d ":" /etc/passwd | less**
  - iv. This command will extract all data from the file up through the : (delimiter) for 1 field, then pause (| or pipe information) until a full page of results are displayed.
5. Using Search to identify all path for /usr/bin
  - i. What does the **echo \$PATH** command display
  - ii. The bin files store binary files or executable files issued by a user. This environmental variable informs the shell which directories to for executable files (ready to run programs)