Unix Interview Q&A

1. What are soft and hard links in unix?

Soft links are like windows shortcuts where the original file is moved then the link might not work and hard links reference the same physical location of the file hence moving the file doesnt invalidate the link.

Ln [original filename] [link name] ---hard link

Ln -s [original filename] [link name] ---soft link

1. Command to delete all files and subdirectories from current dir.

Rm -rf ./\*

1. What is the difference between grep and egrep?

Egrep is an extended version of grep used to handle regular expressions

Example:

Ls | egrep ‘.env|.json’

searches for files with extension as env or json

1. How can you change the ownership, permission and group of the file?

Using chown, chmod and chgrp

1. How can you run commands in background?

Using nohup

1. Difference between nohup and ampersand?

Nohup can catch hangup signal which is triggered while exiting the shell, and ignore it thus continuing the execution of the command, but ampersand cannot catch this signal and will terminate the execution.

1. Change permissions for owner, group and others resp.

Chmod u+rwx file

Chmod g+rwx file

Chmod o-rwx file

1. What is shebang and why is shebang needed?

Shebang is used to tell the kernel which interpreter should be used to run the commands present in the file.

1. What are the commonly used network commands?

telnet: This is used for remote login and for communication with another hostname.

ping: This is used for checking network connectivity.

hostname: This gives the IP address and domain name.

nslookup: This performs a DNS query.

xtraceroute: This is used to determine the number of hops and response time required to reach the network host.

netstat: This provides information about system and ports, routing tables, interface statistics, etc.

tcpdump: This provides info about both incoming and outgoing network traffic.

1. What is the use of alias command?

It can be used as a shortcut for long repetitive commands.

1. How can you make inplace substitutions in a file?

Using sed -i or gawk -i inplace if gnu awk 4.1 is available

1. Command you used to fetch the namespace from xml file.

Head -c 5000 $filename | grep -oP ‘xmlns[^”]\*(?=”)’ | sed -nr ‘s/.\*xmlns:(.\*)=.\*/\1/p’ > patterns.txt

1. Command to replace namespaces with null in the xml file.

Awk ‘NR=FNR {map[$1] = $2; next } {for (old in map) {gsub(old”:”, NULL)} print}’ patterns.txt $filename > tmp\_$filename && mv tmp\_$filename $filename

1. Command to append new lines to xml file after specific tags

Awk ‘BEGIN{RS=”<Un>”} {gsub(“<Hdr”, “\n<Hdr”); gsub(/\/Hdr>/, “\/Hdr>\n”); if (NR !=1 ) {print RS} printf “%s”, $0}’ < $filename > tmp\_$filename && mv tmp\_$filename $filename

1. Command to extract a tag and the tag following it.

Awk ‘/Sct/{found=1} found{print; if (/<\/CutDt/) exit }’ $filename > new\_$filename

1. Command to split a file based on a specific tag and given split number

Awk -v splitnum=”$1” ‘BEGIN{i=1}/<UndrlygXpsrRcrd>/{counter++}counter=splitnum+1{i++;counter=1}{file=sprint(“Filename\_%02d\_’$filename’”, i) ;print > file} END{filename=sprint(“lastfile.txt”); printf “%s\n”, file > filename;}’ $filename

1. Command to extract text between 2 tags in xml

Awk ‘/<tagname>/,/<\/tagname>/’ $filename

1. Command to delete all lines after a matching tag

Sed -i ‘/tagname.\*/,$d’ $filename

1. Command to delete all lines before a matching tag

Sed -i ‘/tagname.\*/,$!d’ $filename

1. Command to delete all empty files from current directory

Find . -name “\*$filename” -size 0 | xargs rm

1. Command to long list only the files in a directory

Ls -ltr | grep ^-.

1. Explain the $ variables

$? – exit status of last command

$# - number of arguments passed to the script

$\* - list of arguments passed to the script

$$ - get the pid of the current process