

## CIS 90 - Spring 2012 - TEST 3 - 30 points

Timed Test (2 hours 50 minutes)

10 questions

1 extra credit question

### Honor Code:

This test is open book, open notes, and open computer. **HOWEVER, you must work alone. You may not share answers. You may not receive or give assistance to others.**

Name: \_\_\_\_\_

Download and save this test PDF to your computer. Then fill out the downloaded PDF, save it and email it as an attachment to **risimms@cabrillo.edu** using your regular (non-Opus) email. Please cc: yourself and verify you actually sent a non-blank, completed test to be graded.

Everyone should submit their test (completed or not) by the end of exam period.

**Highlighted** text differs from practice test

### Note to Mac users:

Make sure Adobe Reader doesn't strip preceding /'s from your answers in saved PDF file.

### Note to instructor:

Add borabora file on Sun

Print spool files on Sun

Add test03-broken script to class depot directory on Sun

## Navigate and Manage the UNIX/Linux File System

Automate and schedule tasks

Customize the shell environment

### Part 1 – Use Sun (a Fedora Linux system) in VLab for the following questions (3 points each)

Login to Sun, using your own username and VLab password:

- Use Putty from any of the classroom stations

[Q1] What is Benji's favorite character on Star Trek? To find out, you need to add the `/usr/local/bin/test03` directory to your path on Sun, run **borabora** and send it a **SIGHUP** signal.

[A1] \_\_\_\_\_

[Q2] There are two files buried in `/etc` on Sun that contain "**me gusta UNIX**". What are **the last modification dates** (month and day) of these two files?

[A2] \_\_\_\_\_

[Q3] Which user owns the files you found in Q2 above?

[A3] \_\_\_\_\_

[Q4] On Sun there is a file named *passwd* in the */etc* directory. What is the absolute pathname of this file?

[A4] \_\_\_\_\_

[Q5] On Sun, copy the file `/etc/samba/smb.conf` to your home directory. This is the Samba service configuration file. We are going to practice modifying this file to allow Sun users to share files on the network with Windows computers. Edit your copy of the `smb.conf` file with `vi` and make the following changes:

- Find the line containing: **workgroup = MYGROUP**  
and change **MYGROUP** to **WORKGROUP**
- Find the line containing: **server string = Samba Server Version %v**  
and change **Samba Server Version %v** to **The Coolest Samba Server on the Planet**
- Add the following lines to the end of your *smb.conf* file:  
**[depot]**  
**comment = Public files on Sun**  
**path = /var/shares/depot**  
**read only = yes**  
**guest ok = yes**

Save your changes and copy your modified *smb.conf* file to the *turnin* directory on Opus using:

```
scp smb.conf $LOGNAME@opus.cabrillo.edu:/home/rsimms/turnin/smb.conf.$LOGNAME
```

*Note: If we had modified the actual `smb.conf` file in `/etc/samba/`, opened ports 137-139, 445 in the firewall and restarted the `smb` service, then Windows users would be able to access files in a share named `depot` on Sun.*

What `ls` command on Opus could you use to verify your `smb.conf` file was submitted correctly?

[A5] \_\_\_\_\_

[Q6] On sun, examine the print queue and DELETE all print jobs that belong to you. Next, what is the **startup shell** of the user who has file "**PumpkinHead**" queued to print?

[A6] \_\_\_\_\_

Benji is having trouble getting his script below working. He has two syntax errors and one logic error which he needs your help to find and fix. He put a copy in the `/home/cis90/depot` directory on Opus.

```
/home/cis90/simben $ cat ../depot/test03-broken
#!/bin/bash
# Show information about random file (or directory)
#   Benji Simms
#   Spring 2012

# Clear screen, start in user's home directory
clear, cd

echo "I'm going to to pick a random file from the file tree for you"
read -p "Ready? (press Enter to continue)"

# Make a list of all files and select one randomly
find / > allfiles$$ 2> /dev/null          # Make list of filenames
numFiles=`cat allfiles$$ | wc -l`        # Count them
random=`cat /dev/urandom | od -N3 -An -i` # Get large random number
let "random %= numFiles"                 # Divide by numFiles save
remainder
file=`sed -n ${random}p allfiles$$`      # print random line of filename
list

# Show random file to user
echo; echo File $random of $numFiles is:
echo $file

# Show additional information about the file selected
echo; echo "Now I'm going to give your some more information on this file"
read -p "Ready? (press Enter to continue)"
directory=`dirname $file`
filename=`basename $file`
description=`file -b $file`
inode=`ls -il $file | cut -f1 -d" "`

echo; echo "Filename is:  $filename
echo "In directory: " $directory
echo "Description: " $description
echo "Inode: " $inode

# Clean up temp files (note $$ is the PID number)
rm allfiles$$
exit
```

[Q7] What are the two syntax errors in Benji's script?

[A7] \_\_\_\_\_

[Q8] (Harder than normal question) What is the logic error in Benji's script?

[A8] \_\_\_\_\_  
(Hint: fix both syntax errors then keep running script till you spot the logic error)

## Part 2 – Use Opus (a Red Hat Linux system) for the following questions

[Q9] On Opus, schedule a job to run at exactly **04:23 AM** tomorrow that emails me a copy of your favorite poem. Cc: yourself and make the email subject be the name of the poem. What command will confirm this job has been scheduled?

[A9] \_\_\_\_\_  
(I will check your answer above and check that the emailed poem was sent at the correct time)

[Q10] On Opus, how could you permanently modify your shell environment so that when you typed **checkmine**, it would display **just your** files in the `/home/rsimms/turnin` directory?

[A10] \_\_\_\_\_

## Extra Credit (3 points)

Fix Benji's script above on Sun and **scp** it to the `/home/rsimms/turnin` directory on Opus, naming it **test03-extra.\$LOGNAME**

## Wrap up

- Make sure you have deleted all print jobs on Sun. Each time you log into Sun again you will need to do this again!
- Use your new **show** command on Opus to validate you turned in files for Q5 and Extra Credit.
- Please provide your feedback on this course by taking a short, four question online survey at: <http://www.surveymonkey.com/s/3NGPBGM>
- Have a great break!