# Bash Shell Scripts

Note

All labs rely on previous courseware and lab information.

## Scenario

Mrs. Y has identified that you are right behind the front runner for the promotion, and it all depends on your shell scripting ability. You are tasked with creating a shell script that will create a backup of the company folder structure, conduct a cksum on the backup and compare it against the most recent backup file, and if and only if it is different, transfer the file to IA.

## Objective

In this lab, you will:

* Create a bash script that will automate the backup and submit it to IA

## Exercise 1: Write a Shell Script

This is it, automation at its best, promotion on the line. Automate the backup, transfer, and removal of a local backup file using a shell script. Ensure to change the permissions for execution.

Helpful Hint

You may have to use **sudo** to complete this exercise if you are not root.

### TODO

1. Create a bash shell script called **backup.sh** as a base template with only the shebang inside; then change it to be executable.
2. Edit the backup.sh file to include the following variables:

* **DAY**: Holds the current date
* **IA**: Holds the remote scp command to the **IA** folder
* **BACKUP**: Holds the string to the name of the backup

### Steps

1. Validate your present working directory is your current home folder by typing **pwd** and pressing ENTER.
2. Create a generic shell script called **backup.sh** by typing touch backup.sh and pressing ENTER.
3. Change the file privilege to make **backup.sh** be executable by typing **sudo chmod 755 backup.sh** and pressing ENTER.
4. Using your preferred text editor, open the **backup.sh** file for editing.
5. On line 1 of the script, add the shebang line by typing **#!/bin/bash** and pressing ENTER to go to the next line.
6. Create a variable for the current date by typing **DAY=”$(date +%Y*%m*%d)”** and pressing ENTER to go to the next line.
7. Create a **SAVE** variable as input to the **scp** command for sending your backup file to the original **SAVE=”labsuser@127.0.0.1:/tmp”** and pressing ENTER to go to the next line.
8. Create a variable for the backup file for the day by typing **BACKUP=”/home/labsuser/$DAY-backup-companyA.tar.gz”** and pressing ENTER to go to the next line.
9. On the next line, type **sudo tar -csvpzf $BACKUP /home/labsuser/companyA** and press ENTER.
10. On the final two lines, type **scp $BACKUP $SAVE** to send the file to the student folder and r**m $BACKUP** to remove the backup from the original location.

#!/bin/bash

DAY="$(date +%Y\_%m\_%d)"

SAVE="labsuser@127.0.0.1:/tmp"

BACKUP="/home/labsuser/$DAY-backup-companyA.tar.gz"

sudo tar -csvpzf $BACKUP /home/labsuser/companyA

scp $BACKUP $SAVE

rm $BACKUP

1. With your current text editor, save your script and exit from the editor. Execute **backup.sh** by typing **./backup.sh** and pressing ENTER.

[labsuser@centos ~]$ ./backup.sh

tar: Removing leading `/' from member names

/home/labsuser/companyA/

/home/labsuser/companyA/Management/

/home/labsuser/companyA/Employees/

/home/labsuser/companyA/Roster.csv

/home/labsuser/companyA/.CEO/

/home/labsuser/companyA/.CEO/CompanyAudit.csv

/home/labsuser/companyA/HR/

/home/labsuser/companyA/HR/Management/

/home/labsuser/companyA/HR/Management/Losses.csv

/home/labsuser/companyA/HR/Management/Orders.csv

/home/labsuser/companyA/HR/Management/Sections.csv

/home/labsuser/companyA/HR/Management/Repairs.csv

/home/labsuser/companyA/HR/Management/Profits.csv

/home/labsuser/companyA/HR/Management/Managers.csv

/home/labsuser/companyA/HR/Management/Schedule.csv

/home/labsuser/companyA/HR/Employees/

/home/labsuser/companyA/HR/Employees/YearlyAssessments.csv

/home/labsuser/companyA/HR/Employees/MonthlyAssessments.csv

/home/labsuser/companyA/HR/Employees/Layoffs.csv

/home/labsuser/companyA/HR/NewHires/

/home/labsuser/companyA/HR/NewHires/Assessments.csv

/home/labsuser/companyA/HR/NewHires/TrialPeriod.csv

/home/labsuser/companyA/HR/Finance/

/home/labsuser/companyA/HR/Finance/Salary.csv

/home/labsuser/companyA/HR/Finance/Hourly.csv

/home/labsuser/companyA/HR/Finance/IncomeGeneration.csv

/home/labsuser/companyA/HR/Finance/ProfitAndLossStatements.csv

/home/labsuser/companyA/securecopy.txt

/home/labsuser/companyA/Shipping/

/home/labsuser/companyA/IA/

/home/labsuser/companyA/IA/backup.companyA.tar.gz

/home/labsuser/companyA/IA/filteredAudit.csv

/home/labsuser/companyA/Sales/

/home/labsuser/companyA/SharedFolders/

/home/labsuser/companyA/SharedFolders/processes.csv

/home/labsuser/companyA/SharedFolders/logins.csv

/home/labsuser/companyA/SharedFolders/CompanyAudit.csv

/home/labsuser/companyA/SharedFolders/backups.csv

/home/labsuser/companyA/SharedFolders/filteredAudit.csv

/home/labsuser/companyA/FolderListing.csv

labsuser@127.0.0.1's password:

2019\_08\_25-backup-companyA.tar.gz 100% 7214 28.5MB/s 00:00

rm: remove write-protected regular file ‘/home/labsuser/2019\_08\_25-backup-companyA.tar.gz’? y

[labsuser@centos ~]$

## STOP

You have successfully completed this lab.