**Linux challenges Cheatsheet**

1. **Create a linux user with non interactive shell**

* At first login  to respective mentioned server in task. Mine is ssh Steve@stapp02
* 1st check user is existed on the server  by below command
* **sudo  id ravi**
* If user not found then **you create a user with non-interactive shell** like
* **sudo adduser ravi  -s /sbin/nologin**
* **Validate** user is created successfully as per the task request.
* **sudo  id ravi**
* **sudo  cat /etc/password |grep ravi**

1. **Create a group name and add the user chiran into that group**

* Switch to  root user :  **sudo su -**
* Create Group named given in your task by below command
* **groupadd admin\_users**
* Check user is already present, if not then create user first
* **Sudo Id chiran**
* **Cat /etc/passwd |grep chiran**
* Now create a user  adding in to newly created group
* **Sudo adduser –G admin\_users chiran**

1. **Create a user named javed in App Server 1 without a home directory**

* Check user is already present, if not then follow below step
* create a user javed with below commands
* **useradd -M javed**
* Validate : **ll  /home**

[The Complete Guide to "useradd" Command in Linux - 15 Practical Examples](https://www.tecmint.com/add-users-in-linux/#:~:text=To%20create%20user's%20without%20their,shilpi'%20without%20a%20home%20directory.)

1. **Open all incoming connection on 8083/tcp port. Zone should be public Firewall on  Backup Server**

* 1st check firewalld service status and existing rules for public zone
* **sudo firewall-cmd --zone=public --list-all**
* According to your task check the application port and add the below rule.
* **sudo firewall-cmd --permanent --zone=public --add-port=8083/tcp**
* Reload the firewall rules & restart the firewall services.
* **sudo firewall-cmd --reload**
* **sudo systemctl restart firewalld**
* Validate firewall rule implemented successfully as per the task request
* **sudo firewall-cmd --zone=public --list-all**

[How to Configure FirewallD in RHEL, CentOS and Fedora](https://www.tecmint.com/configure-firewalld-in-centos-7/)

[Useful 'FirewallD' Rules to Configure and Manage Firewall in Linux](https://www.tecmint.com/firewalld-rules-for-centos-7/)

1. **Replace all occurrences of the string About to Cloud on the XML file /root/nautilus.xml located in the backup server.**

* Switch to  root user :  **sudo su -**
* **Pull out the string About** on the XML file /root/nautilus.xml
* **cat /root/nautilus.xml  |grep About  | wc -l**
* **Replace the string**  About  to Cloud with the help **of sed command**
* **sed -i 's/About/Cloud/g' /root/nautilus.xml**
* **Confirm the changes**
* **cat /root/nautilus.xml  |grep Cloud  | wc –l**

[15 Useful 'sed' Command Tips and Tricks for Daily Linux System Administration Tasks](https://www.tecmint.com/linux-sed-command-tips-tricks/)

1. **Need to install cronie and create a cron  job for all APP linux server**.

* Switch to  root user :  **sudo su -**
* **Install cronie package** on the app server :**yum install cronie**
* **Start cron** service:**systemctl start crond.service**
* Check cron service **status**:**systemctl status crond.service**
* **Create a cronjob** by typing : **crontab -e**
* **Write** the cron job:  **\*/5 \* \* \* \* echo hello  >  /tmp/cron\_text**
* Check cron job **for root**: **crontab -u root –l**
* **Validate**  cron\_text : **ll /tmp/cron\_text**

1. **Create a user and Set UID to 1120 and its home directory to /var/www/anita**

* useradd -u 1120 anita
* usermod -d /var/www/anita -m  anita

1. **Linux User expiry – create a user named chiran on App server 1 and set expiry date to 2021-04-15**

* One log into App server 1 - sudo su –
* Check if user exist
* id chiran
* chage –l chiran
* If user don’t exist
* adduser chiran
* chage –l chiran
* chage – E 2021-04-05 chiran
* validate : chage –l chiran

[How to Manage User Password Expiration and Aging in Linux](https://www.tecmint.com/manage-user-password-expiration-and-aging-in-linux/)

1. **Apache troubleshooting**

Use this command **httpd -t -f /etc/httpd/conf/httpd.conf** to find errors on all app servers. It will show error along with line number. Then use **vi /etc/httpd/conf/httpd.conf** to fix the error on particular line. Restart the apache service **systemctl restart httpd** when you get Syntax OK message. **Make sure to check the port on which HTTPD is running**. **ss –tlpn |grep httpd**

1. **Linux TimeZones Setting**

* First check the existing time zone set for the server

**timedatectl**

* To see other commands in timedatectl model in detail

**timedatectl –h**

* To update/set the timezone

**timedatectl set-timezone America/Blanc-Sablon**

**https://www.tecmint.com/check-linux-timezone/**

1. **Linux Archives (Make a jim.tar.gz compressed archive of /data/jim directory and move the archive to /home directory on Storage Server.)**

* **tar –czvf  jim.tar.gz  /data/jim**
* Move the  tar file to /home

**mv jim.tar.gz  /home**

* Validate - **ll /home**

1. **Linux file Permission (All users should be able to execute the script)**

* **Ls –lrt /tmp/xscript.sh**
* **chmod o+rx /tmp/xscript.sh**
* To validate the execution  **sh /tmp/xscript.sh**

<https://unix.stackexchange.com/questions/34202/can-a-script-be-executable-but-not-readable>

<https://www.linux.com/training-tutorials/understanding-linux-file-permissions/>

1. **Linux User Files(find the files owned by Tom and copy them to the parent directory)**

* To find only files of user Tom at /home/usersdata
* **find /home/userdata/ -type f –user Tom |wc -l**
* To Copy the files to the parent directory
* **find /home/usersdata/ -type f -user kirsty -exec cp --parents {} /media \;**

[Linux: Find User Files - nixCraft](https://www.cyberciti.biz/faq/linux-finding-user-group-files/)

1. **Postfix troubleshooting**

* systemctl status postfix
* systemctl restart postfix
* vi /etc/postfix
* vi main.cf (add # infront of last inet)
* Restart the service
* ss –tulpn |grep LISTEN or ss –tulpn |grep 25
* telnet localhost 25

15. **NFS troubleshooting**

* Verify the status of NFS & RPC  service :
* **systemctl status nfs-server && systemctl status rpcbinde**
* Edit the  **/etc/exports**  file
* Start service: **systemctl start nfs-server && systemctl start rpcbind**
* After  changes  **exportfs –av**
* Validate the export list  by   **showmount -e ststor01**
* Now Login to the the APP Server and mount the file system
* Start service: **systemctl start nfs-server && systemctl start rpcbind**
* Validate the export list  by   **showmount -e ststor01**
* Mount  the filesystem  **mount -t nfs ststor01:/opt   /var/www/html**
* Validate  mount point  mounted successfully **df -h**

**16. Linux Run Levels**(On all App servers in Stratos Datacenter change the default runlevel so that they can boot in GUI (graphical user interface) by default.)

* Check the default run-level
* **systemctl get-default**
* To change the run level to graphical.target
* **systemctl set-default graphical.target**
* Post set default start graphical service & validate  the status
* **systemctl start graphical.target && systemctl status graphical.target**

**17. Disable root login**

* **sudo sed -i 's/#PermitRootLogin yes/PermitRootLogin no/g' /etc/ssh/shd\_config**

**18. Linux Banner**

* **ll –lsd /tmp/nautilus\_banner**
* **scp -r /home/thor/nautilus\_banner tony@stapp01:/tmp**
* **ssh -t tony@stapp01 'sudo mv /tmp/nautilus\_banner /etc/motd'**
* **For DB**
* **sudo yum install openssh-clients -y**
* **scp -r /home/thor/nautilus\_banner** peter@stdb01**:/tmp**
* **ssh -t** peter@stdb01 **'sudo mv /tmp/nautilus\_banner /etc/motd'**

**19. Linux Access Control List** (<https://www.nbtechsupport.co.in/2021/06/linux-access-control-list.html>)

* **getfacl  /etc/hostname**
* **id anita && id eric**
* **setfacl -m u:anita:-,eric:r /etc/hostname**

20 . Haproxy LBR Troubleshooting

21. Linux NTP Setup

22. Linux String Substitute (sed)

Click on ✔ and Do Task Again

vi ansible.cfg

inventory = ./inventory

remote\_user = thor

Your Dockerfile (after fixing the typo):

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FROM ubuntu

RUN apt-get update

ENV DEBIAN\_FRONTEND=noninteractive

RUN apt-get install -y apache2

RUN sed -i 's/80/8089/g' /etc/apache2/ports.conf

EXPOSE 8089

CMD ["/usr/sbin/apache2ctl", "-D", "FOREGROUND"]