**Step 1: Ensure/Double Check Permissions on Sensitive Files**

1. Permissions on /etc/shadow should allow only root read and write access.
   * (In /etc) ls -l | grep shadow
   * sudo chmod 600 /etc/shadow
2. Permissions on /etc/gshadow should allow only root read and write access.
   * (In /etc) ls -l | grep gshadow
   * sudo chmod 600 /etc/gshadow
3. Permissions on /etc/group should allow root read and write access and allow everyone else read access only.
   * (In /etc) ls -l | grep group
   * sudo chmod 644 /etc/group
4. Permissions on /etc/passwd should allow root read and write access and allow everyone else read access only.
   * (In /etc) ls -l | grep passwd
   * sudo chmod 644 /etc/passwd

**Step 2: Create User Accounts**

1. Add user accounts for sam, joe, amy, sara, and admin.
   * sudo useradd sam
   * sudo useradd joe
   * sudo useradd amy
   * sudo useradd sara
   * sudo useradd admin
2. Ensure that only the admin has general sudo access.
   * sudo usermod -a -G sudo admin

**Step 3: Create User Group and Collaborative Folder**

1. Add an engineers group to the system.
   * sudo addgroup engineers
2. Add users sam, joe, amy, and sara to the managed group.
   * sudo usermod -a -G engineers sam
   * sudo usermod -a -G engineers joe
   * sudo usermod -a -G engineers amy
   * sudo usermod -a -G engineers sara
3. Create a shared folder for this group at /home/engineers.
   * sudo mkdir /home/engineers
4. Change ownership on the new engineers' shared folder to the engineers group.
   * (In /home/engineers) chown –from=currentowner:engineers

**Step 4: Lynis Auditing**

1. Command to install Lynis: sudo apt-get install lynis
2. Command to see documentation and instructions: sudo lynis --help
3. Command to run an audit: sudo lynis audit system
4. Provide a report from the Lynis output on what can be done to harden the system.

A screenshot of a computer

Description automatically generated

**Bonus**

1. Command to install chkrootkit: sudo apt install shktoolkit
2. Command to see documentation and instructions: sudo chktoolkit --h
3. Command to run expert mode: sudo chktoolkit -x
4. Provide a report from the chrootkit output on what can be done to harden the system.
   * Screenshot of end of sample output