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

Permissions on /etc/shadow should allow only root read and write access.

Command to inspect permissions: ls -l /etc/shadow

Command to set permissions (if needed): sudo chmod 600 /etc/shadow

Permissions on /etc/gshadow should allow only root read and write access.

Command to inspect permissions: ls -l /etc/gshadow

Command to set permissions (if needed): sudo chmod 600 /etc/gshadow

Permissions on /etc/group should allow root read and write access, and allow everyone else read access only.

Command to inspect permissions: ls -l /etc/group

Command to set permissions (if needed): sudo chmod 644 /etc/group

Permissions on /etc/passwd should allow root read and write access, and allow everyone else read access only.

Command to inspect permissions: ls -l /etc/passwd

Command to set permissions (if needed):sudo chmod 644 /etc/passwd

**Step 2: Create User Accounts**

Add user accounts for sam, joe, amy, sara, and admin.

Command to add each user account (include all five users):

sudo adduser sam

sudo adduser joe

sudo adduser amy

sudo adduser sara

sudo adduser admin

Ensure that only the admin has general sudo access.

Command to add admin to the sudo group:sudo usermod -aG sudo admin

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

Add an engineers group to the system.

Command to add group: groupadd Engineers

Add users sam, joe, amy, and sara to the managed group.

Command to add users to engineers group (include all four users):

usermod -g Engineers sam

usermod -g Engineers joe

usermod -g Engineers amy

usermod -g Engineers sara

Create a shared folder for this group at /home/engineers.

Command to create the shared folder: sudo mkdir -p /home/Engineers

Change ownership on the new engineers' shared folder to the engineers group.

Command to change ownership of engineer's shared folder to engineer group:

sudo chown -R :Engineers /home/Engineers/

**Step 4: Lynis Auditing**

Command to install Lynis: sudo apt-get update -y | sudo apt-get install -y lynis

Command to see documentation and instructions: man lynis

Command to run an audit: sudo lynis audit system

Provide a report from the Lynis output on what can be done to harden the system.

Screenshot of report output: ! Version of Lynis is very old and should be updated [LYNIS]

<https://cisofy.com/controls/LYNIS/>

! Multiple users with UID 0 found in passwd file [AUTH-9204]

<https://cisofy.com/controls/AUTH-9204/>

! Multiple accounts found with same UID [AUTH-9208]

<https://cisofy.com/controls/AUTH-9208/>

! No password set for single mode [AUTH-9308]

<https://cisofy.com/controls/AUTH-9308/>

! Found some information disclosure in SMTP banner (OS or software name) [MAIL-8818]

<https://cisofy.com/controls/MAIL-8818/>