**🔧 Lab Steps – Commands and Descriptions**

**✅ 1. Prepare the environment**

As student on the **workstation**:

bash

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lab start perms-review

**✅ 2. Switch to serverb and become root**

bash

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ssh serverb

sudo -i

Password: student

**✅ 3. Create the shared directory**

bash

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mkdir /home/techdocs

**✅ 4. Change group ownership to techdocs**

bash

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chgrp techdocs /home/techdocs

**✅ 5. Set restrictive permissions first to test group restrictions**

bash

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chmod 770 /home/techdocs

(At this stage, only owner and group members can access)

You might also verify:

bash

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ls -ld /home/techdocs

**✅ 6. Apply the setgid bit**

bash

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chmod g+s /home/techdocs

This ensures all new files inside the directory inherit the group techdocs.

To confirm:

bash

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ls -ld /home/techdocs

You should see an s in the group execute spot: drwxrws---

**✅ 7. Log in as tech1 or tech2 to test writing a file**

bash

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su - tech1

cd /home/techdocs

touch testfile\_by\_tech1.txt

exit

Try the same with tech2.

**🚫 8. Try to create a file as database1 (should fail)**

bash

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su - database1

cd /home/techdocs

touch testfile\_by\_db1.txt

# This should be denied.

exit

**✅ 9. Modify umask in /etc/login.defs**

Edit the file:

bash

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nano /etc/login.defs

Find the line:

bash

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UMASK 077

Replace it with:

bash

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UMASK 007

This sets default permissions so that user and group can access files, but others cannot.

Save and exit (Ctrl+O, Enter, Ctrl+X).

**✅ 10. Grade your lab**

Back on the workstation as student:

bash

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lab grade perms-review

Take a screenshot of the output to paste into your document.

**✅ 11. Finish the lab to clean up**

bash

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lab finish perms-review