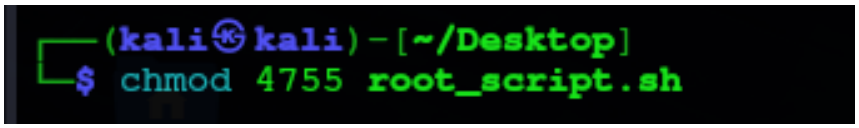
Task 4

SUID & Privilege Escalation

Setup:

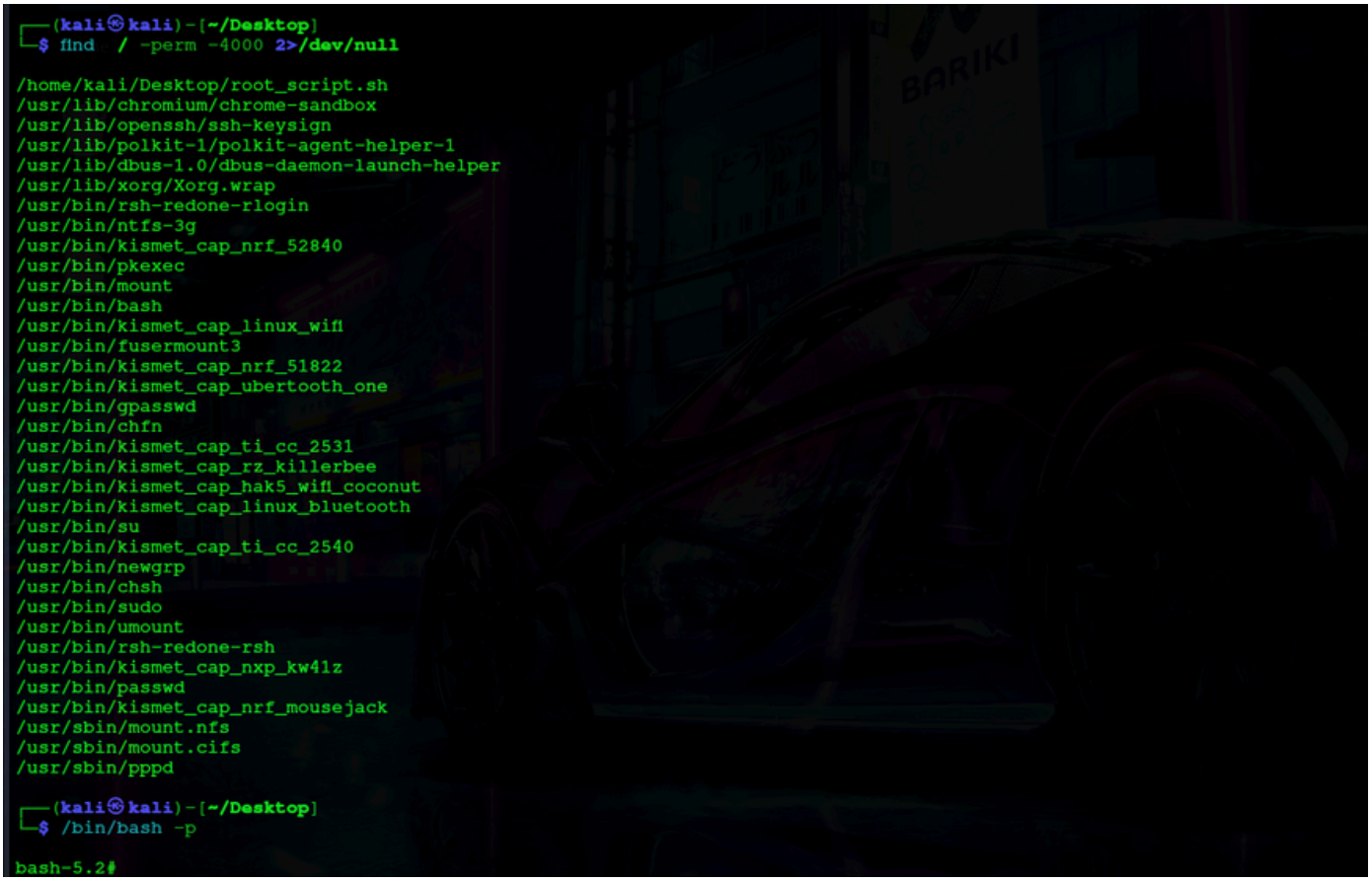
- The command sets the SUID (Set User ID) bit on `/bin/bash`, enabling it to execute with the owner's (root) privileges.



Create a script with root privileges ➤ The `4755` permission setting ensures the following:

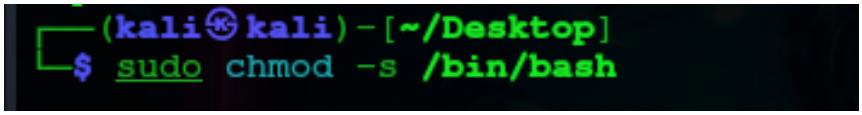
- **4** ▤ Sets the SUID (Set User ID) bit.
- **7** ▤ Grants the owner read (`r`), write (`w`), and execute (`x`) permissions.
- **5** ▤ Grants the group read (`r`) and execute (`x`) permissions.
- **5** ▤ Grants others read (`r`) and execute (`x`) permissions.

Exploit



To identify SUID misconfigurations, use the command `find / -perm 4000 2/dev/null`, which lists files with the SUID bit set while suppressing error messages from inaccessible directories. To escalate privileges to root, execute `/bin/bash -p`, where the `-p` flag ensures the shell retains elevated privileges, granting root access.

Mitigation



To enhance security, remove unnecessary SUID permissions using `chmod -s /bin/bash`, and restrict script execution to specific users by adjusting file ownership with `chown root:trusted_user root_script.sh` and configuring the sudoers file for stricter control.