sudo Run as another user

CONCEPTS

sudo runs one command with another identity (root by default) if the sudoers rules allow it, and asks for your own password, not root's.

You run sudo command + options
↓ checks rules
/etc/sudoers who, where, as whom, what
↓ allowed?
Password cached for a few minutes
↓ runs
Command as target user

Redirections happen in your shell before sudo starts, so sudo echo x > /etc/f still writes as you.

RUNNING COMMANDS

sudo *<command>*
Run a command as root

sudo -u *<user>* *<command>*
Run as another user

sudo !!
Repeat the last command with sudo

SHELLS

sudo -i
Root login shell with root's environment

sudo -s
Root shell keeping your environment

sudo -iu *<user>*
Login shell as another user

PRIVILEGES AND PASSWORD CACHE

sudo -l
List what you may run here

sudo -v
Refresh the cache without running anything

sudo -k
Invalidate the cache for this session

ENVIRONMENT

sudo -E *<command>*
Keep your environment variables

ENVIRONMENT (cont.)

sudo *<VAR>*=*<value>* *<command>*
Set a variable for one command

PATH is replaced by secure_path on many systems, so tools in your own PATH may not be found under sudo.

EDITING FILES

sudo -e *<file>*
Edit a copy and write it back as root

REDIRECTION AND PIPES

echo '*<text>***' | sudo tee** *<file>*
Write a root-owned file

echo '*<text>***' | sudo tee -a** *<file>*
Append to a root-owned file

sudo sh -c '*<command>* **>** *<file>***'**
Redirect inside a root shell

SUDOERS RULES

sudo visudo
Edit /etc/sudoers with a syntax check

sudo visudo -f /etc/sudoers.d/*<name>*
Edit a drop-in file

sudo visudo -c
Check the syntax only

Rule: who where = (as whom) what

Part	Example	Meaning
`user or %group`	`alice, %admin`	who may run it
`host`	`ALL`	on which machine
`(runas)`	`(root), (ALL)`	as which user
`tags: commands`	`NOPASSWD: /usr/bin/apt`	what, and options

%wheel ALL=(ALL) ALL
Full rights for a group

alice ALL=(root) NOPASSWD: /usr/bin/systemctl restart *<svc>*
One command without a password

Never edit /etc/sudoers with a plain editor: one syntax error can lock out every sudo user. Keep a root shell open while testing.