EWB COURSES

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DAY 03 | PART 5

Users, sudo and File Permissions (chmod)

Who you are, how to become root, and how r, w and x control access.

sudo | su | chmod | ls -l

WHAT YOU WILL LEARN

Users, sudo and File Permissions (chmod)

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1. Switch user with su and use sudo
2. Read the permission string from ls -l
3. Set permissions with numbers (777, 644...)
4. Set permissions with letters (u+x, g-w...)

REFERENCE

Users, sudo and the date

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COMMAND	MEANING
whoami	Shows your user name (for example ec2-user)
sudo su root	Switch to root (the admin user)
sudo	Super user do - run one command as root without a password
su ec2-user	Switch back to the normal user
date / cal	Show current date and time / this month's calendar

Permission numbers

NUMBER	MEANING	SHOWN AS
0	No permission	---
1	Execute	--x
2	Write	-w-
4	Read	r--
6	Read + write (4+2)	rw-
7	All three (4+2+1)	rwx

REMEMBER Three digits = owner, group, others. chmod 644 file = rw- r-- r--.

Way 2 - symbolic mode

u = owner, g = group, o = others, a = all. + adds, - removes, = sets.

```
$ ls -l aws
$ chmod 777 aws
$ chmod 444 aws
$ chmod u+x aws
$ chmod g-w aws
$ chmod o=r aws
```

Read ls -l

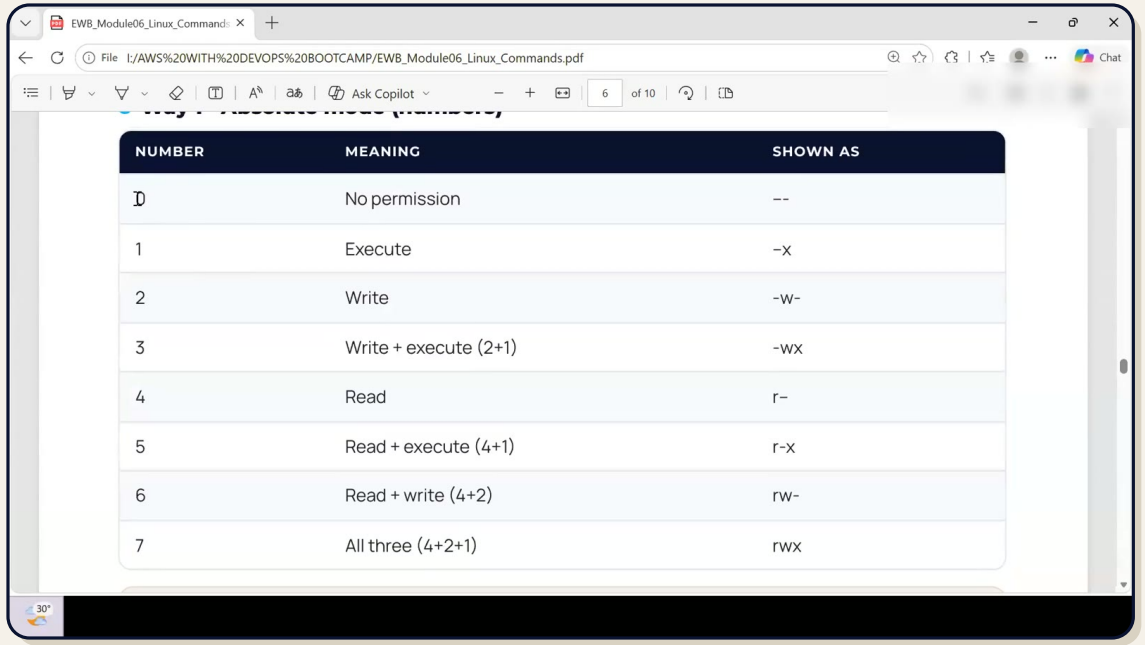
-rw-r--r-- : first dash = file, then owner, group, others.

Careful

chmod 777 gives everyone full control - avoid it on real servers.

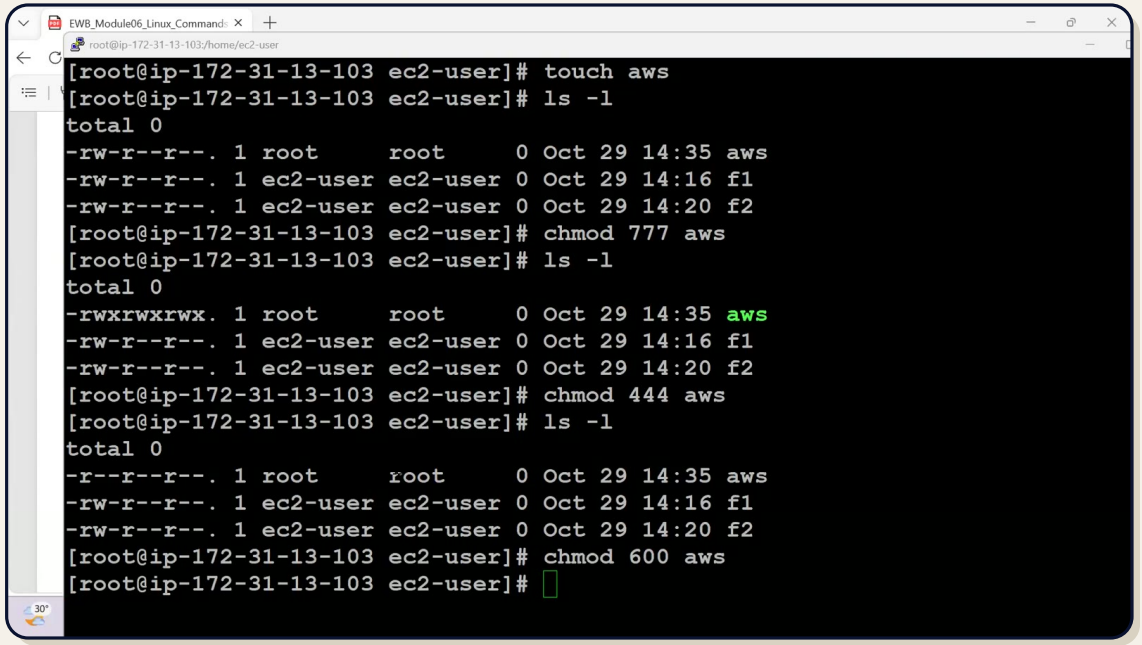
FROM THE CLASS

Permissions on screen



NUMBER	MEANING	SHOWN AS
0	No permission	--
1	Execute	-x
2	Write	-w-
3	Write + execute (2+1)	-wx
4	Read	r-
5	Read + execute (4+1)	r-x
6	Read + write (4+2)	rw-
7	All three (4+2+1)	rwx

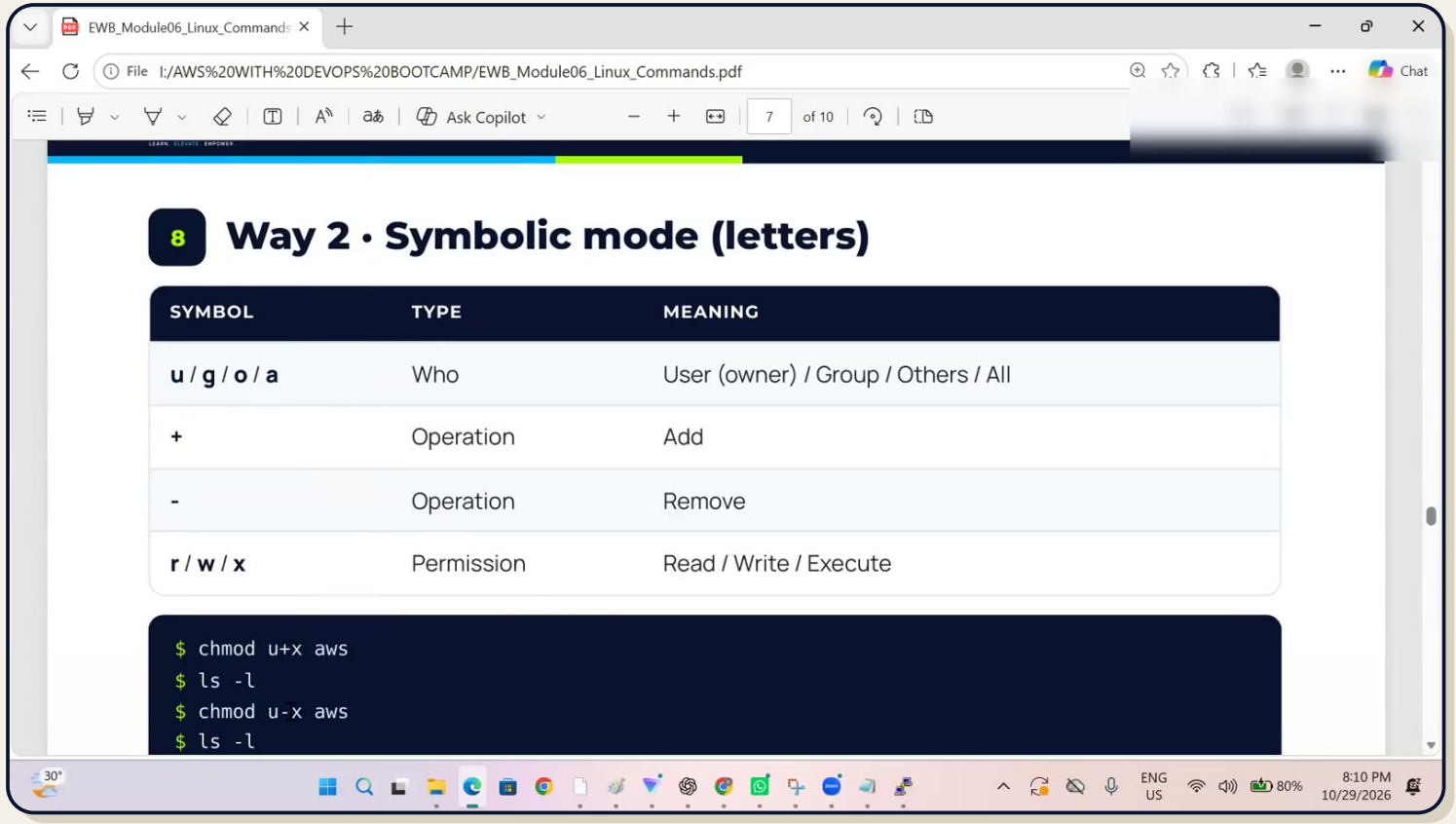
Permission numbers and what they mean



chmod 777 and ls -l before and after

FROM THE CLASS

Way 2 - symbolic mode



A moment from the recording for this part.

u g o a

User (owner), group, others, all.

+ - =

Add, remove or set exactly.

QUICK RECAP

What to remember

- sudo runs a command as root
- r=4, w=2, x=1 - add them up
- ls -l shows owner, group and others
- chmod changes permissions by number or letters

PRACTICE

Practice questions

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Q1 What does chmod 755 give the owner?

A. r only
B. rw only
C. rwx
D. nothing

Q2 Which command shows permissions?

A. ls -l
B. cat
C. pwd
D. cp

Q3 What does sudo do?

A. Deletes files
B. Runs a command as root
C. Copies files
D. Shuts down

Q4 What does u+x do?

A. Remove execute from user
B. Add execute for the owner
C. Delete the user
D. Nothing

PRACTICE

Practice questions - answers

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Q1 What does chmod 755 give the owner?

Answer: C. rwx

7 = 4+2+1 = rwx.

Q2 Which command shows permissions?

Answer: A. ls -l

ls -l.

Q3 What does sudo do?

Answer: B. Runs a command as root

Super user do.

Q4 What does u+x do?

Answer: B. Add execute for the owner

u+x adds execute for the owner.