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DAY 02 | PART 5

Connect to Linux with SSH, PuTTY and icacls

Convert the key, fix 'permissions too open', and fix the most common login errors.

PuTTYgen | .ppk | icacls | ssh -i

WHAT YOU WILL LEARN

Connect to Linux with SSH, PuTTY and icacls

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1. Convert a .pem key to .ppk with PuTTYgen
2. Log in using the ssh command and the .pem key
3. Fix 'permissions too open' on Windows using icacls
4. Read common SSH error messages
5. Know which user name to type

COMMAND LINE

Fix the key and connect from CMD

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Windows does not have chmod. icacls does the same job: remove inherited access, then grant yourself read only.

```
$ cd C:\Users\<you>\Downloads
$ icacls my-linux-key.pem /inheritance:r
$ icacls my-linux-key.pem /grant:r "%username%":R
$ ssh -i "my-linux-key.pem" ec2-user@<public-dns>
# type yes when asked about the fingerprint
```

Why it is needed

SSH refuses a key file that other users can read. The error says 'permissions too open'.

Check it

Run icacls my-linux-key.pem to list who can access the file.

PUTTY METHOD

Connect with PuTTY

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1. Open PuTTYgen, click Load, choose All files and select your .pem
2. Click Save private key and save it as my-linux-key.ppk
3. Open PuTTY. Host name: ec2-user@<public-dns>, Port 22
4. Connection > SSH > Auth > Credentials: browse to the .ppk
5. Back to Session, name it, click Save, then Open
6. Accept the host key prompt - you now see the Amazon Linux banner

TROUBLESHOOT

Login errors you will meet

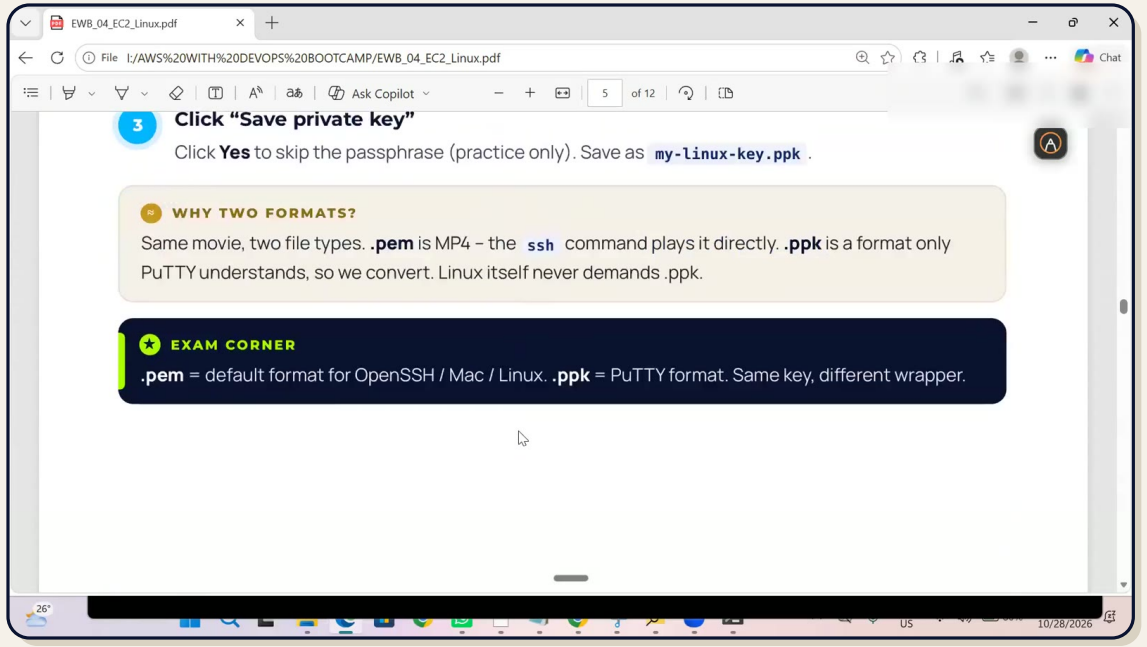
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ERROR MESSAGE	USUAL CAUSE	FIX
Permission denied (publickey...)	Wrong key or wrong user	Use the matching .pem and ec2-user
invalid format	Key file saved wrongly or wrong type	Re-download the key; check it starts with BEGIN RSA PRIVATE KEY
Permissions too open	File readable by others	Run the two icacls commands
Connection timed out	Port 22 closed or wrong IP	Edit the security group inbound rule

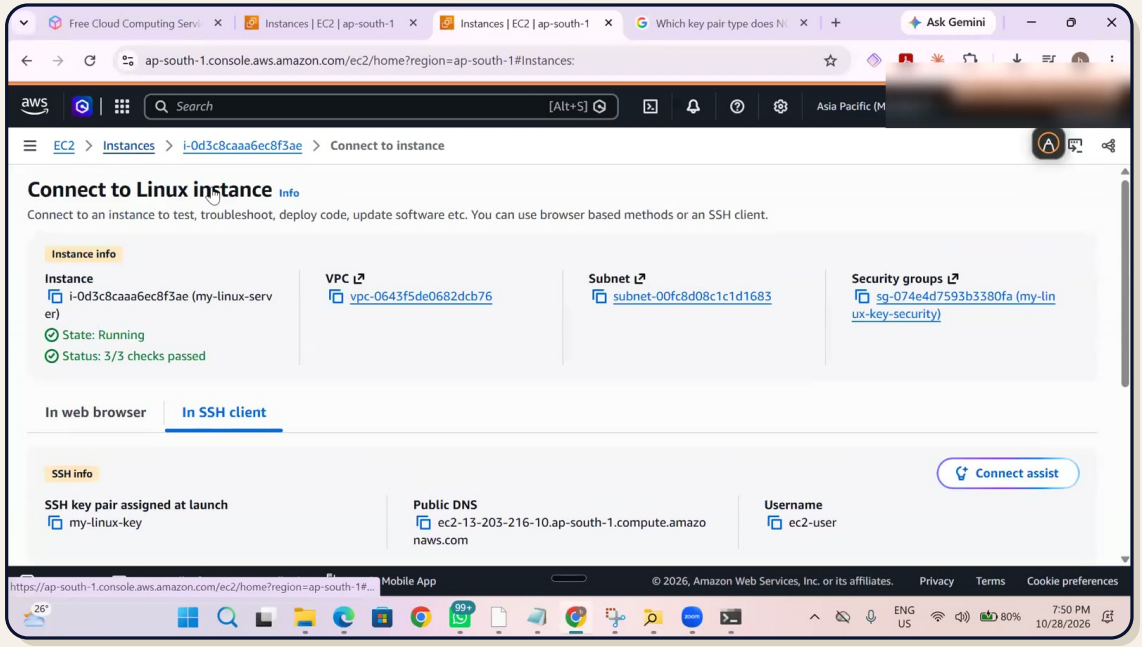
REMEMBER If you terminate and relaunch, the Public IP / DNS changes - update your command or PuTTY session.

FROM THE CLASS

Connecting and fixing errors



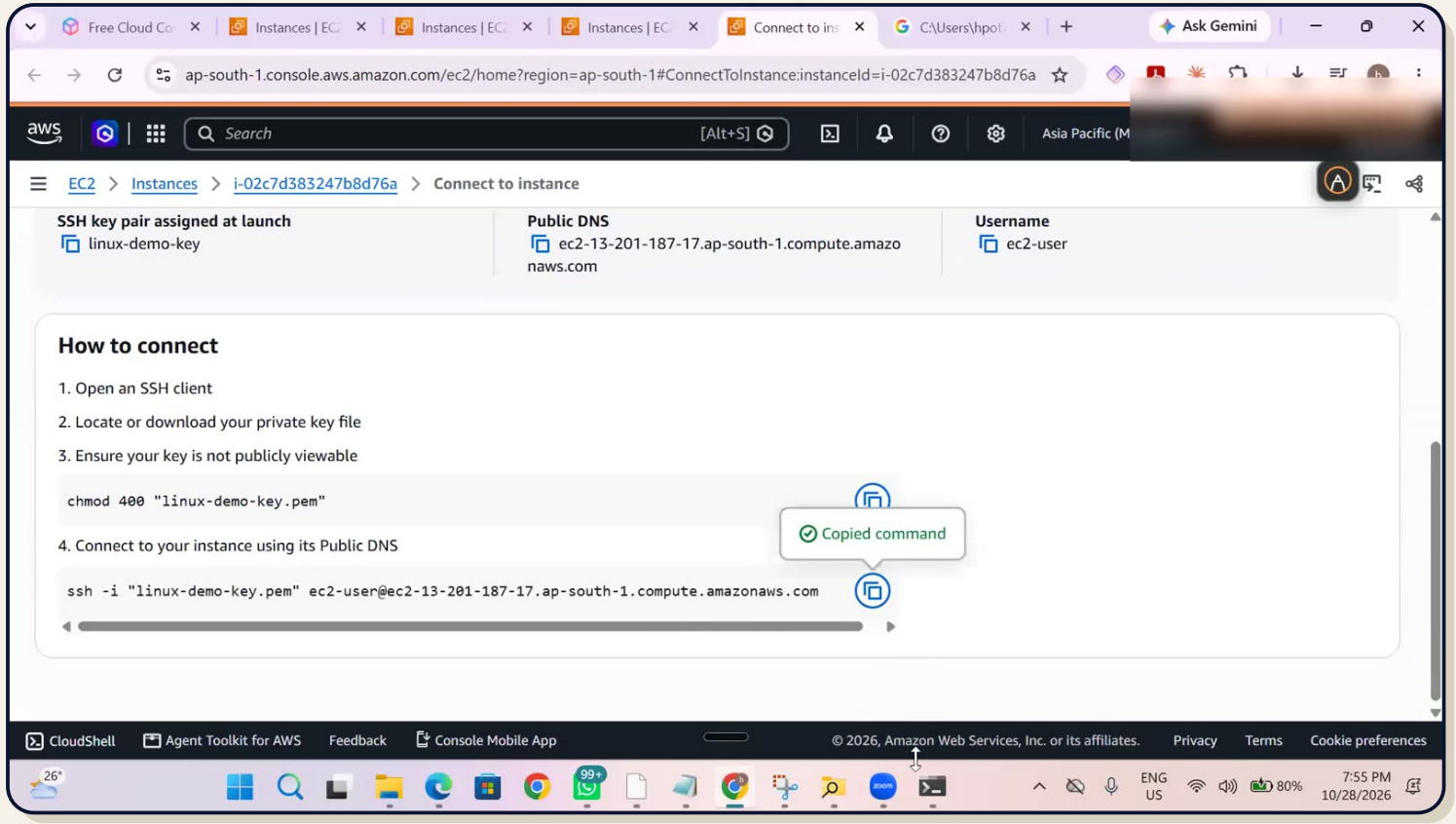
icacls and the ssh command in the notes



Command Prompt showing SSH errors while we debugged

FROM THE CLASS

A successful login



A moment from the recording for this part.

Amazon Linux banner

The ASCII banner and the ec2-user prompt show you are inside the server.

Debug by reading

Each error message tells you what is wrong - read it slowly.

QUICK RECAP

What to remember

- PuTTY needs .ppk, ssh command needs .pem
- icacls fixes 'permissions too open' on Windows
- User name on Amazon Linux: ec2-user
- Check ports, key and user when login fails

PRACTICE

Practice questions

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Q1 **Which command fixes key permissions on Windows?**

A. chmod
B. icacls
C. ls
D. pwd

Q2 **Which tool converts .pem to .ppk?**

A. PuTTYgen
B. Paint
C. Excel
D. Zoom

Q3 **What does 'Connection timed out' usually mean?**

A. Wrong password
B. Port closed / blocked
C. Server deleted
D. Typing error

Q4 **Which user logs in to Amazon Linux?**

A. root
B. administrator
C. ec2-user
D. admin

PRACTICE

Practice questions - answers

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Q1 Which command fixes key permissions on Windows?

Answer: B. icacls

icacls edits the file's access list.

Q2 Which tool converts .pem to .ppk?

Answer: A. PuTTYgen

PuTTYgen loads the .pem and saves a .ppk.

Q3 What does 'Connection timed out' usually mean?

Answer: B. Port closed / blocked

Check the security group inbound rule.

Q4 Which user logs in to Amazon Linux?

Answer: C. ec2-user

ec2-user is the default.