Mosh

Roaming remote shell

CONCEPTS

SSH only logs in and starts mosh-server; the session itself runs over UDP, so it survives sleep, Wi-Fi changes and roaming.

mosh client local
↓ SSH (TCP 22)
Login starts mosh-server
↓ UDP 60000-61000
mosh-server your shell
↓ roams with you
Session survives IP changes

Only the visible screen is synced, so there is no scrollback. Run tmux or screen on the server for history.

CONNECT

mosh *<host>*
Connect to a host

mosh *<user>*@*<host>*
Connect as another user

mosh *<host>* **--** *<command>*
Run a command instead of the shell

mosh --ssh="ssh -p *<port>***"** *<host>*
Use a non-default SSH port

mosh --ssh="ssh -i *<keyfile>***"** *<host>*
Pass SSH options such as a key

mosh *<host>* **-- tmux new -As** *<name>*
Attach to or create a tmux session

mosh --server=*<path>* *<host>*
Path to mosh-server on the remote

mosh -4 *<host>*
IPv4 only

mosh -6 *<host>*
IPv6 only

PORTS AND FIREWALL

mosh -p *<port>* *<host>*
Use one server UDP port

mosh -p *<low>*:*<high>* *<host>*
Use a UDP port range

sudo ufw allow 60000:61000/udp
Open the mosh range in ufw

PORTS AND FIREWALL (cont.)

sudo firewall-cmd --add-port=60000-61000/udp --permanent
Open the range in firewalld

ESCAPE KEY

Ctrl+^ .
Kill the connection

Ctrl+^ Ctrl+Z
Suspend the client

MOSH_ESCAPE_KEY=*<char>* **mosh** *<host>*
Change the escape character

LOCAL ECHO

mosh --predict=adaptive *<host>*
Echo locally only on slow links (default)

mosh -a *<host>*
Always predict typing

mosh -n *<host>*
Never predict typing

SERVER

sudo apt install mosh
Install on Debian or Ubuntu

sudo dnf install mosh
Install on Fedora

sudo pacman -S mosh
Install on Arch

brew install mosh
Install on macOS

mosh-server --version
Check mosh-server is found

locale
Check a UTF-8 locale is set

export LC_ALL=en_US.UTF-8
Set a UTF-8 locale

pgrep -a mosh-server
List running sessions on the server

TROUBLESHOOTING

mosh-server new
Test it starts and prints a port and key

No UDP on the network (some hotels, corporate Wi-Fi) means no mosh. Fall back to plain SSH inside tmux.