Create VMs / Transfer files

- You need the public address to connect to the VM
- The private IP address is displayed when inputting the ip a command

```
Last login: Tue Dec 14 16:56:59 on ttys002
(base)
0 ~
[joegriffin@wumbus: cd ~/Downloads
(base)
0 ~/Downloads
[joegriffin@wumbus: chmod 400 JG_data_54000.pem
(base)
0 ~/Downloads
[joegriffin@wumbus: ssh -i "JG_data_54000.pem" ec2-user@ec2-3-139-233-179.us-east-2.compute.amazonaws.com
Last login: Tue Dec 14 22:57:26 2021 from wumbus.fsm.northwestern.edu

      __|  __|_  )
      _|  (     /   Amazon Linux 2 AMI
     ___|\___|___|

https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-172-31-10-183 ~]$ ip a
[1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 9001 qdisc pfifo_fast state UP group default qlen 1000
    link/ether 02:1c:78:a1:41:0c brd ff:ff:ff:ff:ff:ff
    inet 172.31.10.183/20 brd 172.31.15.255 scope global dynamic eth0
       valid_lft 2545sec preferred_lft 2545sec
    inet6 fe80::1c:78ff:fea1:410c/64 scope link
       valid_lft forever preferred_lft forever
[ec2-user@ip-172-31-10-183 ~]$
```

Instances (2) Info   C   Connect   Instance state ▼   Actions ▼   **Launch instances** ▼

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	Name	▽	Instance ID	Instance state	▽	Instance type	▽	Status check	Ala
☐	–		i-08cca031c8f977626	⊘ Running ⊕⊖		t2.micro		⊘ 2/2 checks passed	No
☐	–		i-0e808470809458016	⊘ Running ⊕⊖		t2.micro		⊘ 2/2 checks passed	No

```
Last login: Tue Dec 14 16:52:51 on ttys000
(base)
0 ~
[joegriffin@wumbus: cd ~/Downloads                                          ]
(base)
0 ~/Downloads
joegriffin@wumbus: chmod 400 JG_data_54000.pem
(base)
0 ~/Downloads
[joegriffin@wumbus: scp -i JG_data_54000.pem  JG_data_54000.pem   ec2-]
user@3.139.233.179:/tmp
The authenticity of host '3.139.233.179 (3.139.233.179)' can't be est
ablished.
ECDSA key fingerprint is SHA256:0zTUIc3BEEW1drMAUCtX4LRSTCaqJbsLWeKLj
ZyxWEo.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '3.139.233.179' (ECDSA) to the list of kno
wn hosts.
JG_data_54000.pem
      100% 1700    151.0KB/s    00:00
(base)
0 ~/Downloads
[joegriffin@wumbus: exit                                                    ]
logout
Saving session...
...copying shared history...
...saving history...truncating history files...
...completed.

[Process completed]
```

```
[[ec2-user@ip-172-31-10-183 tmp]$ echo "You can do it" > testfile.txt          ]
[ec2-user@ip-172-31-10-183 tmp]$ cat testfile.txt
[You can do it                                                                  ]
[ec2-user@ip-172-31-10-183 tmp]$ scp -i JG_data_54000.pem testfile.txt ec2-
user@3.145.70.218:/tmp
testfile.txt
          100%   14    10.1KB/s   00:00
[ec2-user@ip-172-31-10-183 tmp]$ echo "Num 2" > test2.txt
[ec2-user@ip-172-31-10-183 tmp]$ echo "Num 3" > test3.txt
[ec2-user@ip-172-31-10-183 tmp]$ cat test2.txt
Num 2
[ec2-user@ip-172-31-10-183 tmp]$ cat test3.txt
Num 3
[ec2-user@ip-172-31-10-183 tmp]$ scp -i JG_data_54000.pem test2.txt ec2-use
r@3.145.70.218:/tmp
test2.txt
          100%    6     4.6KB/s   00:00
[ec2-user@ip-172-31-10-183 tmp]$ scp -i JG_data_54000.pem test3.txt ec2-use
r@3.145.70.218:/tmp
test3.txt
          100%    6     4.3KB/s   00:00
[[ec2-user@ip-172-31-10-183 tmp]$                                              ]
[[ec2-user@ip-172-31-10-183 tmp]$                                              ]
[[ec2-user@ip-172-31-10-183 tmp]$                                              ]
[[ec2-user@ip-172-31-10-183 tmp]$ exit                                         ]
logout
Connection to ec2-3-139-233-179.us-east-2.compute.amazonaws.com closed.
(base)
0 ~/Downloads
[joegriffin@wumbus: exit                                                       ]
logout
Saving session...
...copying shared history...
...saving history...truncating history files...
...completed.

[Process completed]█
```

```
[[ec2-user@ip-172-31-8-159 ~]$ cd /tmp
[[ec2-user@ip-172-31-8-159 tmp]$ ll
 total 4
 drwx------ 3 root      root       17 Dec 14 22:52 systemd-private-52e735c9
 108aa4c1492c1f424c3-chronyd.service-1wqyGU
 -rw-rw-r-- 1 ec2-user ec2-user 14 Dec 14 23:18 testfile.txt
[[ec2-user@ip-172-31-8-159 tmp]$ ll
 total 12
 drwx------ 3 root      root       17 Dec 14 22:52 systemd-private-52e735c9
 108aa4c1492c1f424c3-chronyd.service-1wqyGU
 -rw-rw-r-- 1 ec2-user ec2-user  6 Dec 14 23:26 test2.txt
 -rw-rw-r-- 1 ec2-user ec2-user  6 Dec 14 23:26 test3.txt
 -rw-rw-r-- 1 ec2-user ec2-user 14 Dec 14 23:18 testfile.txt
[[ec2-user@ip-172-31-8-159 tmp]$
[[ec2-user@ip-172-31-8-159 tmp]$
[[ec2-user@ip-172-31-8-159 tmp]$ exit
 logout
 Connection to ec2-3-145-70-218.us-east-2.compute.amazonaws.com closed.
 (base)
0 ~/Downloads
[joegriffin@wumbus: exit
 logout
 Saving session...
 ...copying shared history...
 ...saving history...truncating history files...
 ...completed.

 [Process completed]
```

Modify security group / instance type

- SSH disconnects when SSH inbound rule is deactivated
- SSH reconnects when SSH inbound rule is reactivated

⊘ Instance type changed successfully

Instances (2) Info   ⟳

🔍 Search

☐	Name	▽	Instance ID	Instance state	▽	Instance type	▽
☐	–		i-08cca031c8f977626	⊖ Stopped ⊕ ⊖		t2.2xlarge	
☐	–		i-0e808470809458016	⊖ Stopped ⊕ ⊖		t2.micro	

Adding additional volumes

✓ Successfully created volume vol-02b69441b45073409. ✕

Volumes (3)

🔍 Filter volumes

	Name	▽	Volume ID	▽	Type	▽	Size	▽	IOPS	▽	Throughput	▽
☐	–		vol-0d4b70925505f80e0		gp2		8 GiB		100		-	
☐	–		vol-0dfa3006d6385a06c		gp2		8 GiB		100		-	
☐	–		vol-02b69441b45073409		gp2		10 GiB		100		-	

Instances (1/2) Info

Connect | Instance state ▼ | Actions ▼ | **Launch instances** ▼

🔍 Search

	Name	▽	Instance ID	Instance state	▽	Instance type	▽	Status check	Alarm status	Availability Zone	▽	Public IPv4 DNS
☑	–		i-08cca031c8f977626	⊘ Running	⊕⊖	t2.micro		⊘ 2/2 checks passed	No alarms ＋	us-east-2a		ec2-3-139-233-179.us-
☐	–		i-0e808470809458016	⊘ Running	⊕⊖	t2.micro		⊘ 2/2 checks passed	No alarms ＋	us-east-2a		ec2-3-145-70-218.us-e

Instance: i-08cca031c8f977626 ✕

Details | Security | Networking | **Storage** | Status checks | Monitoring | Tags

▼ **Root device details**

Root device name	Root device type	EBS optimization
🗐 /dev/xvda	EBS	disabled

▼ **Block devices**

🔍 Filter block devices

Volume ID	Device name	Volume size (GiB)	Attachment status	Attachment time	Encrypted	KMS key ID
vol-0d4b70925505f80e0	/dev/xvda	8	⊘ Attached	Mon Dec 13 2021 12:23:53 …	No	–
vol-0aa3d35b7668edee1	/dev/sdf	1	⊘ Attached	Tue Dec 14 2021 18:18:05 …	No	–