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	Luciana Diana	

JumpBox

Connect to an instance (EC2)

Ping it successfully (security group rules)

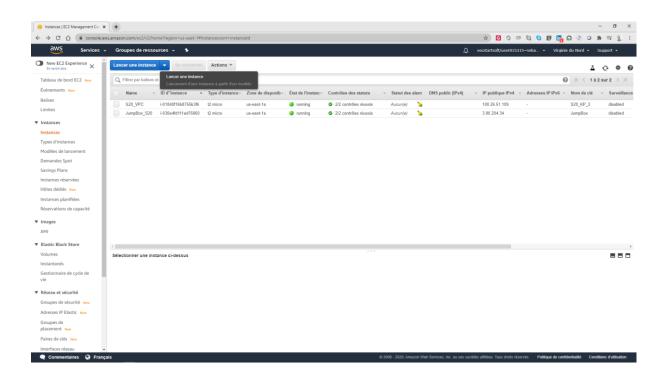
Create a jumpbox architecture :

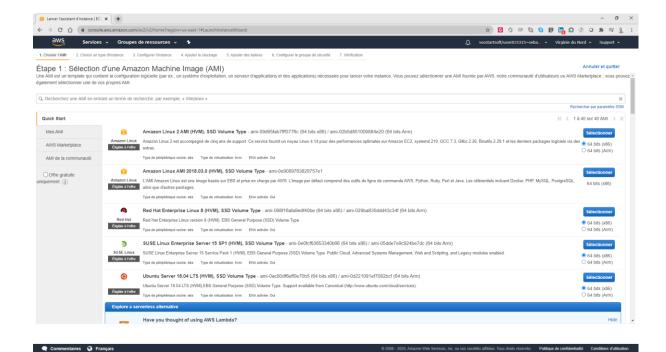
Access to the Jumpbox from Internet

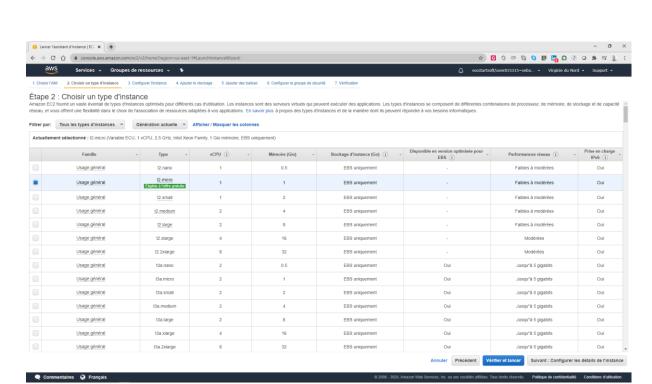
Access to instance from Jumpbox

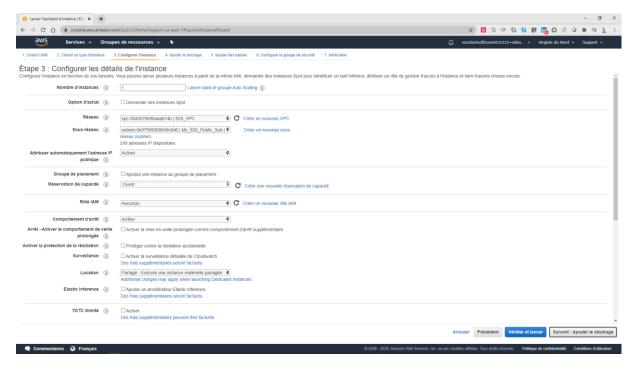
Ping successfully a website from the instance.

(NAT is concerned)





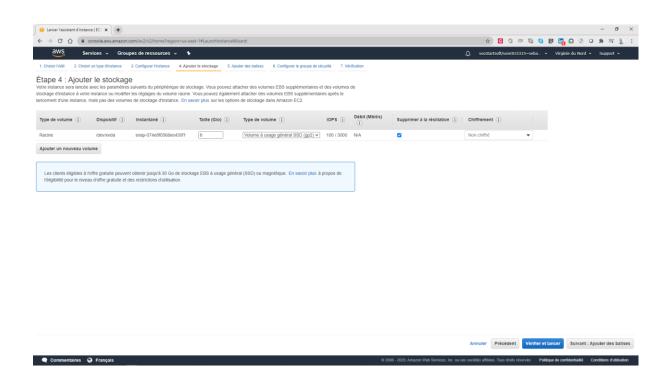


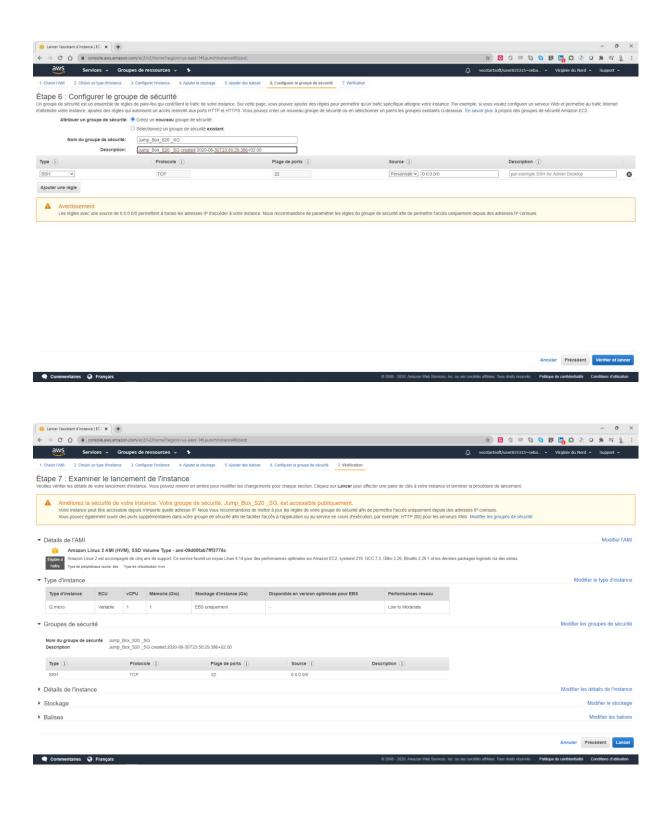


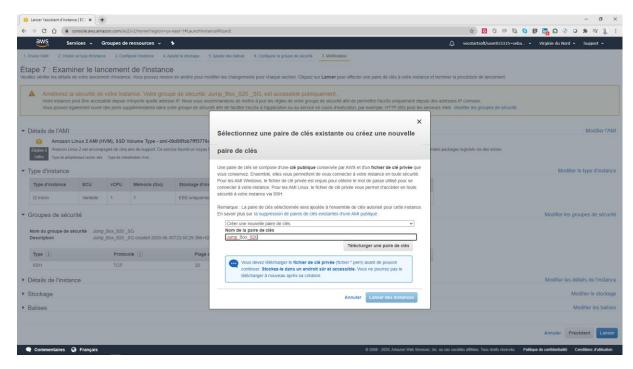
Réseau = VPC créé

ss-réseau = public subnet créé

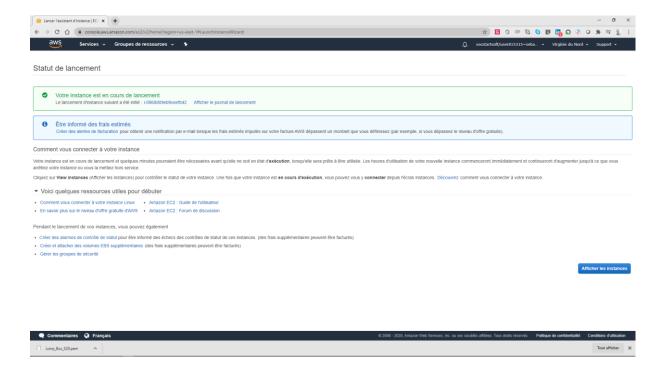
Attribuer IP auto: Activer







TELECHARGER une paire de clés !!!



Attente ...

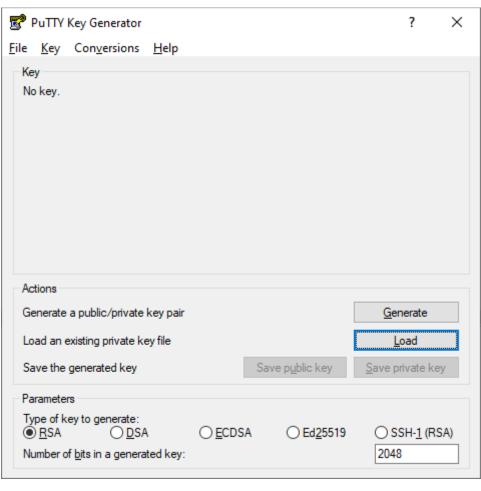
Contrôles des statuts : « initialisation en cours »

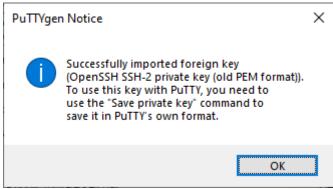
PuTTY

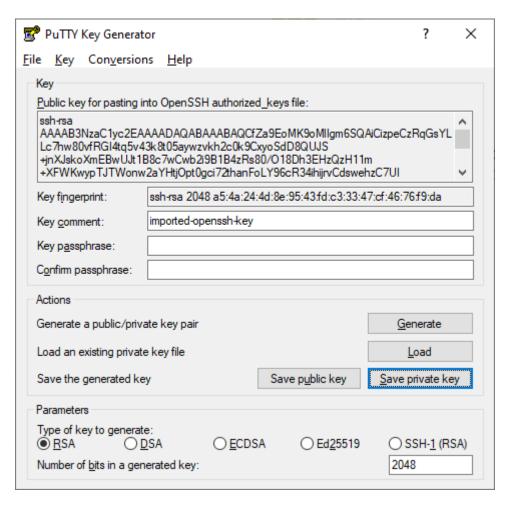
https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/putty.html?icmpid=docs_ec2_console

Conversion de la clé .pem en .pkk pour utilisation avec PuTTY

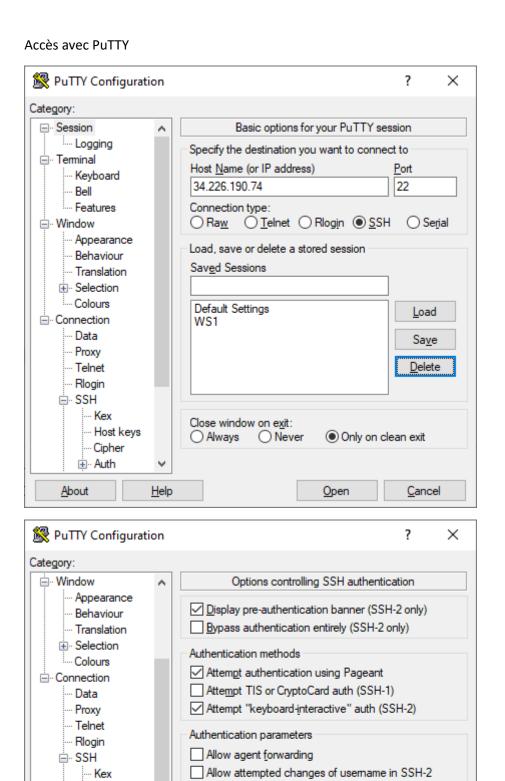
Lancer PuTTYgen







Same name, ext auto = ppk (ald pem)



Private key file for authentication:

TI-Cours\09 - AWS\Jump_Box_S20.ppk

Open.

Browse...

Cancel

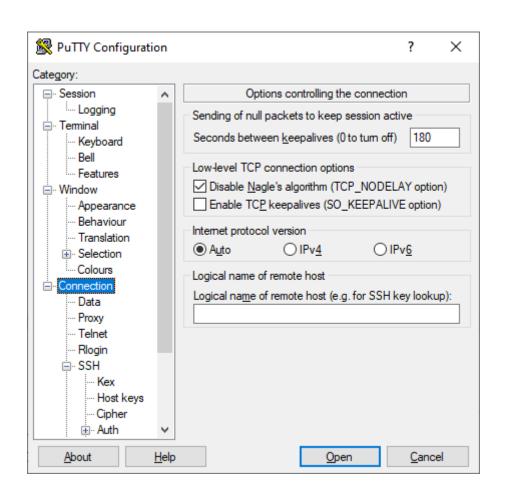
--- Host keys --- Cipher

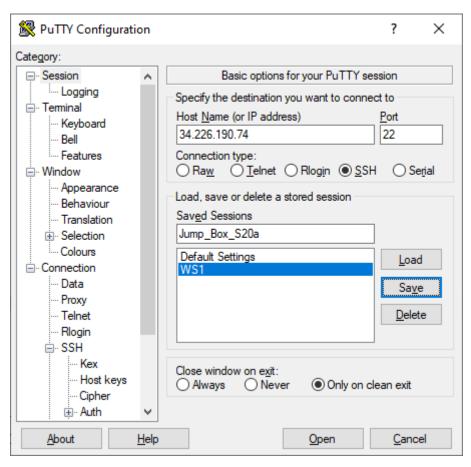
in Auth
TTY
TUP
Tup
Tup
Bugs
More bugs

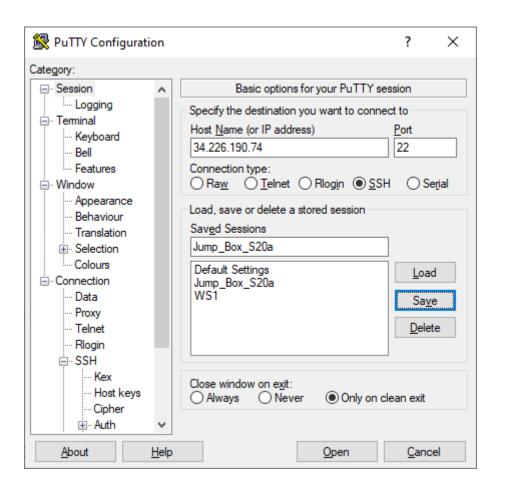
Serial

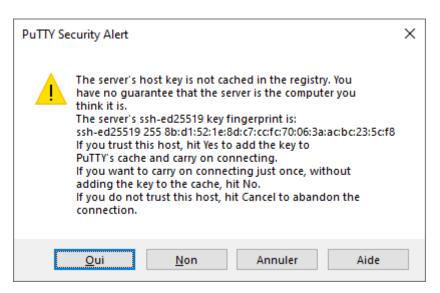
Help

About

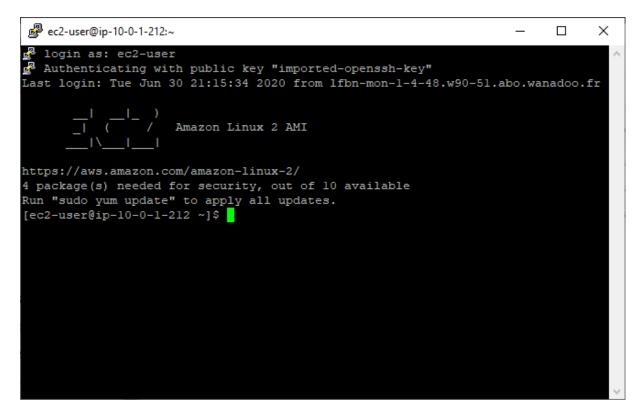




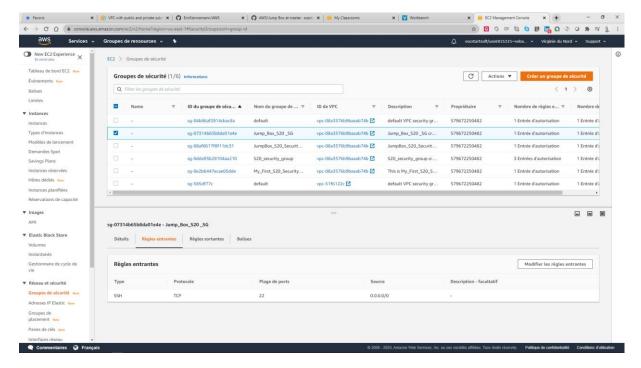






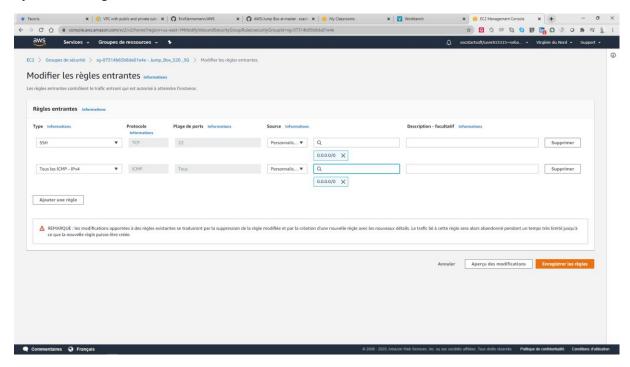


Autorisation ping dans un groupe de sécurité



Modifier les règles entrantes

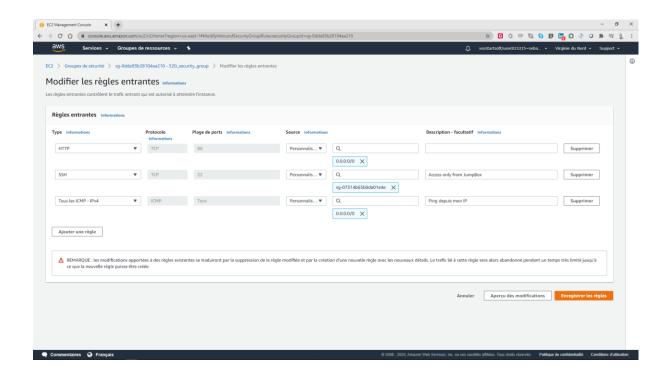
Ajouter une règle: Tous les ICMP



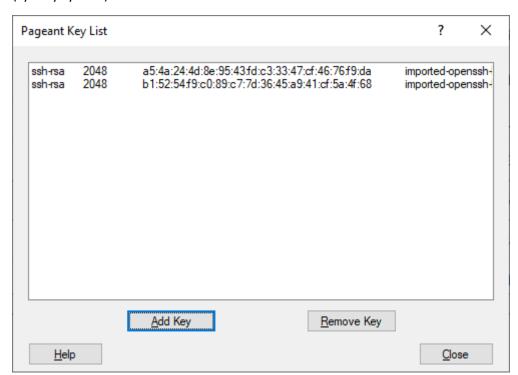
Sur l'autre instance EC2, modifier les règles entrantes du groupe de sécurité associé à cette instance :

SSH / source le groupe de sécurité de jumpbox

ICMP pour autoriser ping

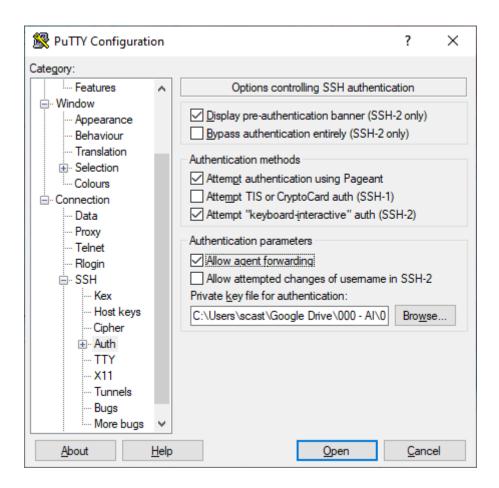


Utiliser Pageant Key List (associé à PuTTY) : clic droit dans la barre des applis en tâche de fond (systray system)



Ajouter les clés de la jumpbox et de l'autre instance

Avec PuTTY, cocher «Allow agent forwarding », avant de se connecter à la jumpbox.

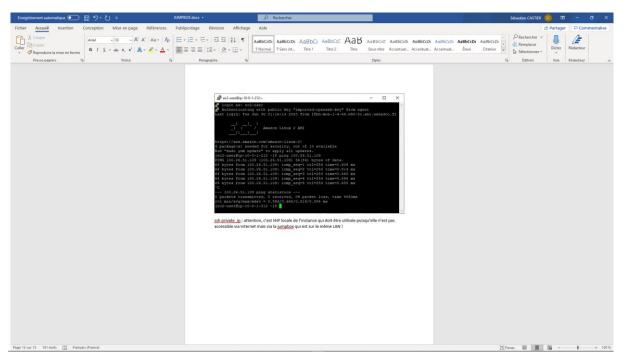


L'autre instance est devenu accessible depuis la jumpbox (uniquement).

Ping 100.26.51.109

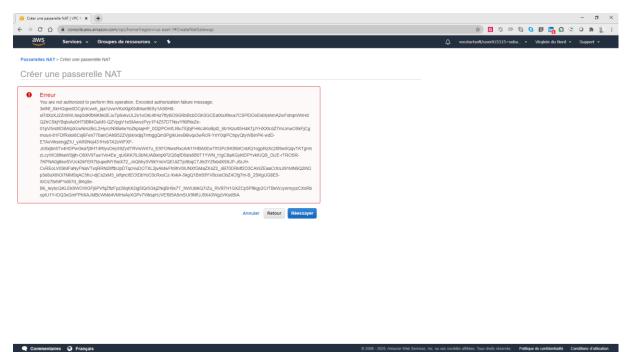
```
ec2-user@ip-10-0-1-212:~
                                                                              X
🛂 login as: ec2-user
Authenticating with public key "imported-openssh-key" from agent
Last login: Tue Jun 30 21:16:13 2020 from lfbn-mon-1-4-48.w90-51.abo.wanadoo.fr
                      Amazon Linux 2 AMI
https://aws.amazon.com/amazon-linux-2/
4 package(s) needed for security, out of 10 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-10-0-1-212 ~]$ ping 100.26.51.109
PING 100.26.51.109 (100.26.51.109) 56(84) bytes of data.
64 bytes from 100.26.51.109: icmp_seq=1 tt1=254 time=0.608 ms
64 bytes from 100.26.51.109: icmp_seq=2 ttl=254 time=0.814 ms
64 bytes from 100.26.51.109: icmp_seq=3 ttl=254 time=0.665 ms
64 bytes from 100.26.51.109: icmp_seq=4 ttl=254 time=0.586 ms
64 bytes from 100.26.51.109: icmp_seq=5 ttl=254 time=0.655 ms
--- 100.26.51.109 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4080ms
rtt min/avg/max/mdev = 0.586/0.665/0.814/0.084 ms
[ec2-user@ip-10-0-1-212 ~]$
```

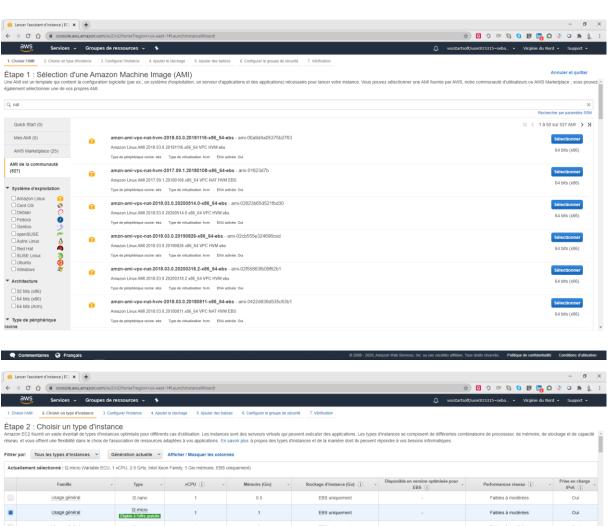
ssh private_ip : attention, c'est l4IP locale de l'instance qui doit être utilisée puisqu'elle n'est pas accessible via Internet mais via la jumpbox qui est sur le même LAN!

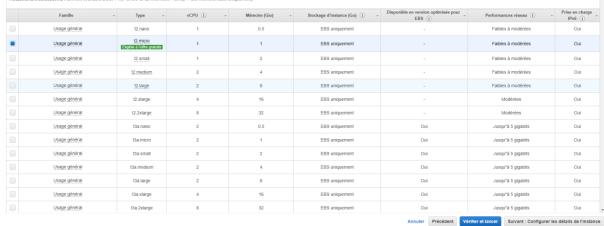


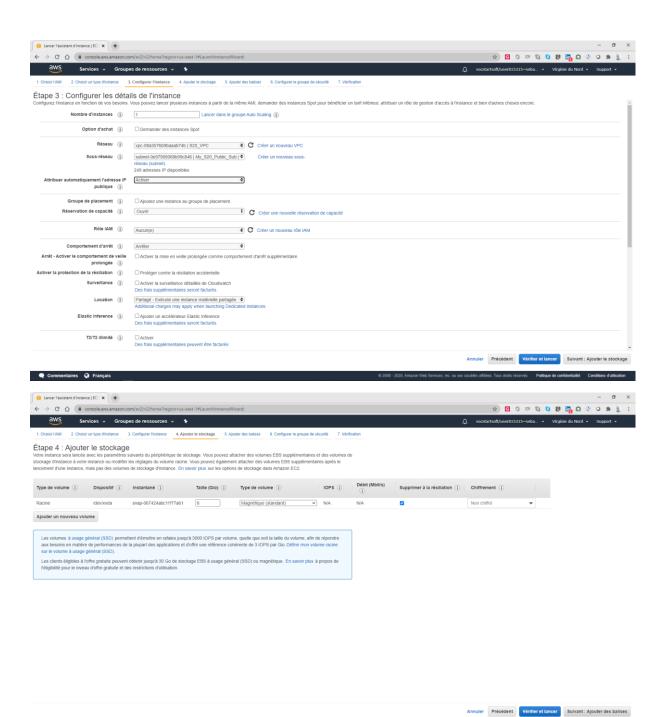
```
ec2-user@ip-10-0-1-173:~
                                                                         X
[ec2-user@ip-10-0-1-212 ~]$
[ec2-user@ip-10-0-1-212 ~]$ ssh 10.0.1.173
The authenticity of host '10.0.1.173 (10.0.1.173)' can't be established.
ECDSA key fingerprint is SHA256:776bAG+PyBFirbDGiAvfVIjaSvd6SERZAZp+y7fGV+k.
ECDSA key fingerprint is MD5:9e:b7:af:fa:f6:43:26:3a:c4:c1:f7:f1:2e:21:53:81.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '10.0.1.173' (ECDSA) to the list of known hosts.
Last login: Tue Jun 30 11:07:29 2020 from lfbn-mon-1-4-48.w90-51.abo.wanadoo.fr
                     Amazon Linux 2 AMI
https://aws.amazon.com/amazon-linux-2/
4 package(s) needed for security, out of 10 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-10-0-1-173 ~]$
```

RMQ : créa nat gateway impossible avec abont student => créa instance gateway à la place !



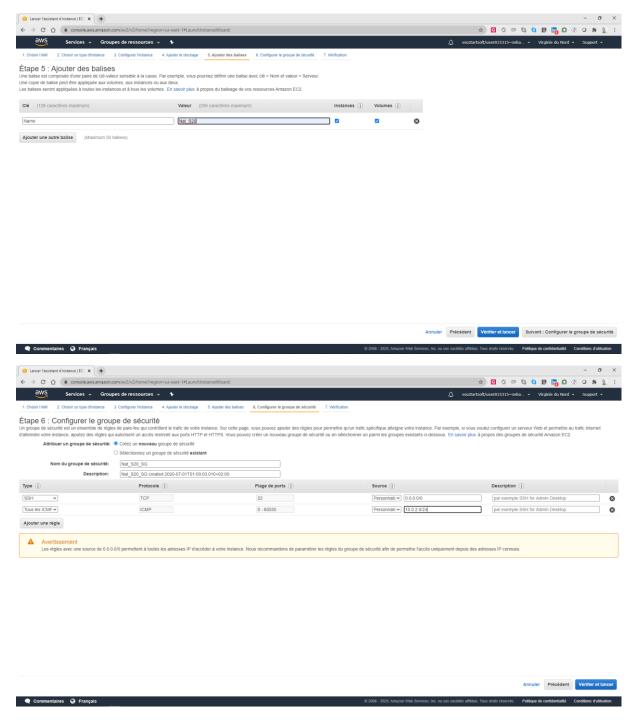




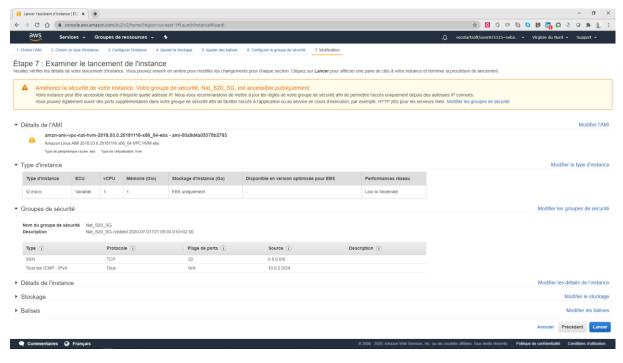


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Commentaires 😯 Français

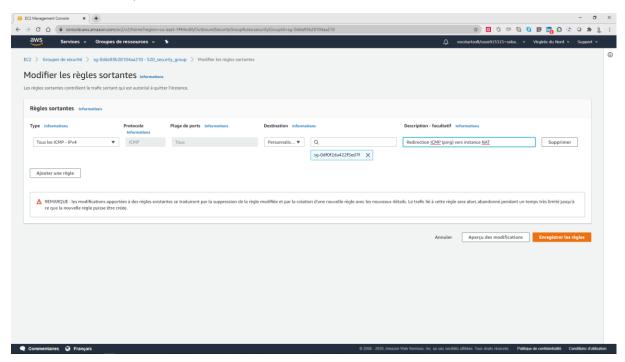


Security group avec ICMP OK depuis private sub: 10.0.2.0/24

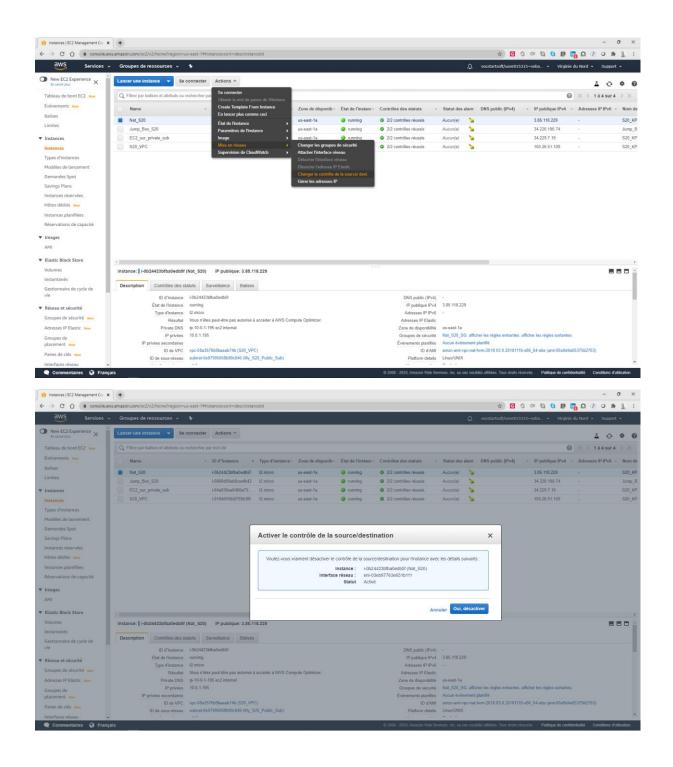


Clés ...

Modif Sec group de l'instance private (qui n'a pas d'accès direct à Internet) pour redirection ICMP vers l'instance NAT qui a accès à Internet.



Sur instance NAT:



MAJ table routage privée pour ajout d'une route orientant le traffic 0.0.0.0/0 vers le NAT.

Le ping de google.com depuis l'instance private devient possible!

```
ec2-user@ip-10-0-2-53:~
                                                                         ×
ECDSA key fingerprint is MD5:d5:lf:3c:af:03:fe:ad:66:ab:b8:06:eb:2b:4b:af:2c.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '10.0.2.53' (ECDSA) to the list of known hosts.
                     Amazon Linux 2 AMI
https://aws.amazon.com/amazon-linux-2/
[ec2-user@ip-10-0-2-53 ~]$ ping google.com
PING google.com (172.217.9.206) 56(84) bytes of data.
64 bytes from iad30s14-in-f14.le100.net (172.217.9.206): icmp seq=1 tt1=113 time
=1.23 ms
64 bytes from iad30s14-in-f14.le100.net (172.217.9.206): icmp seq=2 tt1=113 time
=1.19 ms
64 bytes from iad30s14-in-f14.le100.net (172.217.9.206): icmp seq=3 tt1=113 time
=1.16 ms
64 bytes from iad30s14-in-f14.1e100.net (172.217.9.206): icmp_seq=4 ttl=113 time
=1.38 ms
--- google.com ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3004ms
rtt min/avg/max/mdev = 1.167/1.247/1.384/0.086 ms
[ec2-user@ip-10-0-2-53 ~]$
```