

VPC 1 :

# Création VPC

```
aws ec2 create-vpc --cidr-block 10.0.0.0/16 --query Vpc.VpcId --output text
```

# Tag VPC

```
aws ec2 create-tags --resources vpc-0738142f5375712ec --tags Key=Name,Value=lilo-vpc1-cli
```

# Création Subnet Public

```
aws ec2 create-subnet --vpc-id vpc-0738142f5375712ec --cidr-block 10.0.1.0/24 --availability-zone us-east-1a --query Subnet.SubnetId --output text
```

# Tag Subnet Public

```
aws ec2 create-tags --resources subnet-0561dc3070c008c8 --tags Key=Name,Value=lilo-subnet-public-vpc1
```

# Création Subnet Private

```
aws ec2 create-subnet --vpc-id vpc-0738142f5375712ec --cidr-block 10.0.2.0/24 --availability-zone us-east-1a --query Subnet.SubnetId --output text
```

# Tag Subnet Private

```
aws ec2 create-tags --resources subnet-08df3732b34bb20fe --tags Key=Name,Value=lilo-subnet-private-vpc1
```

# Création Internet Gateway

```
aws ec2 create-internet-gateway --query InternetGateway.InternetGatewayId --output text
```

# Attacher la Gateway au VPC

```
aws ec2 attach-internet-gateway --vpc-id vpc-0738142f5375712ec --internet-gateway-id igw-05d3ce61881a91e6a
```

# Création Table de Routage

```
aws ec2 create-route-table --vpc-id vpc-0738142f5375712ec --query RouteTable.RouteTableId --output text
```

# Tag Table de Routage

```
aws ec2 create-tags --resources rtb-052bf47049505554f --tags Key=Name,Value=lilo-rtb-vpc1
```

# Création Route

```
aws ec2 create-route --route-table-id rtb-052bf47049505554f --destination-cidr-block 0.0.0.0/0 --gateway-id igw-05d3ce61881a91e6a
```

# Association de la Table de Routage à la Subnet

```
aws ec2 associate-route-table --route-table-id rtb-052bf47049505554f --subnet-id subnet-0561dcb3070c008c8
```

VPC 2 :

# Création VPC2

```
aws ec2 create-vpc --cidr-block 172.31.0.0/16 --query Vpc.VpcId --output text
```

# Tag VPC2

```
aws ec2 create-tags --resources vpc-08797c0cba497c1d3 --tags Key=Name,Value=lilo-vpc2-cli
```

# Création Subnet Private

```
aws ec2 create-subnet --vpc-id vpc-08797c0cba497c1d3 --cidr-block 172.31.1.0/24 --availability-zone us-east-1a --query  
Subnet.SubnetId --output text
```

# Tag Subnet Private

```
aws ec2 create-tags --resources subnet-011d691089eab90e5 --tags Key=Name,Value=lilo-subnet-private-vpc2
```

# Création Internet Gateway

```
aws ec2 create-internet-gateway --query InternetGateway.InternetGatewayId --output text
```

# Attacher la Gateway au VPC

```
aws ec2 attach-internet-gateway --vpc-id vpc-08797c0cba497c1d3 --internet-gateway-id igw-0602245a28d6707f1
```

# Création Table de Routage

```
aws ec2 create-route-table --vpc-id vpc-08797c0cba497c1d3 --query RouteTable.RouteTableId --output text
```

# Tag Table de Routage

```
aws ec2 create-tags --resources rtb-0d8e7fdf38aa8b9e1 --tags Key=Name,Value=lilo-rtb-vpc2
```

# Création Route

```
aws ec2 create-route --route-table-id rtb-0d8e7fdf38aa8b9e1 --destination-cidr-block 0.0.0.0/0 --gateway-id igw-  
0602245a28d6707f1
```

# Association de la Table de Routage à la Subnet

```
aws ec2 associate-route-table --route-table-id rtb-0d8e7fdf38aa8b9e1 --subnet-id subnet-011d691089eab90e5
```

# Création Groupe de Sécurité

```
aws ec2 create-security-group --group-name lilogroupcli2 --description "Groupe de securite via cli" --vpc-id vpc-08797c0cba497c1d3
```

# Tag Groupe de Sécurité

```
aws ec2 create-tags --resources sg-06823e7c163bfd40 --tags Key=Name,Value=lilo-sg-vpc2
```

# Autorisation Port 22

```
aws ec2 authorize-security-group-ingress --group-id sg-06823e7c163bfd40 --protocol tcp --port 22 --cidr 0.0.0.0/0
```

# Autorisation Port 80

```
aws ec2 authorize-security-group-ingress --group-id sg-06823e7c163bfd40 --protocol tcp --port 80 --cidr 0.0.0.0/0
```

VPC 3 :

# Création VPC3

```
aws ec2 create-vpc --cidr-block 20.0.0.0/16 --query Vpc.VpcId --output text
```

# Tag VPC3

```
aws ec2 create-tags --resources vpc-0ce83e5d3bacdc64c --tags Key=Name,Value=lilo-vpc3-cli
```

# Création Subnet Private

```
aws ec2 create-subnet --vpc-id vpc-0ce83e5d3bacdc64c --cidr-block 20.0.1.0/24 --availability-zone us-east-1a --query  
Subnet.SubnetId --output text
```

# Tag Subnet Private

```
aws ec2 create-tags --resources subnet-099489ca19d8540c9 --tags Key=Name,Value=lilo-subnet-private-vpc3
```

# Création Internet Gateway

```
aws ec2 create-internet-gateway --query InternetGateway.InternetGatewayId --output text
```

# Attacher la Gateway au VPC

```
aws ec2 attach-internet-gateway --vpc-id vpc-0ce83e5d3bacdc64c --internet-gateway-id igw-0f7918bec9b89b5eb
```

# Création Table de Routage

```
aws ec2 create-route-table --vpc-id vpc-0ce83e5d3bacdc64c --query RouteTable.RouteTableId --output text
```

# Tag Table de Routage

```
aws ec2 create-tags --resources rtb-035a64adf6e77665f --tags Key=Name,Value=lilo-rtb-vpc3
```

# Création Route

```
aws ec2 create-route --route-table-id rtb-035a64adf6e77665f --destination-cidr-block 0.0.0.0/0 --gateway-id igw-  
0f7918bec9b89b5eb
```

# Association de la Table de Routage à la Subnet

```
aws ec2 associate-route-table --route-table-id rtb-035a64adf6e77665f --subnet-id subnet-099489ca19d8540c9
```

# Création Groupe de Sécurité

```
aws ec2 create-security-group --group-name lilogroupcli3 --description "Groupe de securite via cli" --vpc-id vpc-0ce83e5d3bacdc64c
```

# Tag Groupe de Sécurité

```
aws ec2 create-tags --resources sg-04e1f532d02d433ad --tags Key=Name,Value=lilo-sg-vpc3
```

# Autorisation Port 80

```
aws ec2 authorize-security-group-ingress --group-id sg-04e1f532d02d433ad --protocol tcp --port 80 --cidr 0.0.0.0/0
```

# Autorisation Port 22

```
aws ec2 authorize-security-group-ingress --group-id sg-04e1f532d02d433ad --protocol tcp --port 22 --cidr 0.0.0.0/0
```

Instances :

# Création Instance VM1 VPC1

```
aws ec2 run-instances --image-id ami-0c7217cdde317cfec --count 1 --instance-type t2.micro --key-name mykeylb --security-group-ids sg-00619b47ec1ff00c4 --subnet-id subnet-0561dcb3070c008c8
```

# Tag Instance VM1 VPC1

```
aws ec2 create-tags --resources i-04528ef937903ecc4 --tags Key=Name,Value=lilo-vm-nginx-vpc1
```

# Création Instance VM2 VPC2

```
aws ec2 run-instances --image-id ami-0c7217cdde317cfec --count 1 --instance-type t2.micro --key-name mykeylb --  
security-group-ids sg-06823e7c163bfd40 --subnet-id subnet-011d691089eab90e5
```

## Tag Instance VM2 VPC2

```
aws ec2 create-tags --resources i-05671f37f62bbcb5f --tags Key=Name,Value=lilo-vm2-vpc2
```

# Création Instance VM3 VPC3

```
aws ec2 run-instances --image-id ami-0c7217cdde317cfec --count 1 --instance-type t2.micro --key-name mykeylb --  
security-group-ids sg-04e1f532d02d433ad --subnet-id subnet-099489ca19d8540c9
```

## Tag Instance VM3 VPC3

```
aws ec2 create-tags --resources i-0f7004d7b12e9b905 --tags Key=Name,Value=lilo-vm3-vpc3
```

## Bastion :

```
ssh -i .ssh/mykeylb.pem -t ubuntu@18.233.150.123 ssh -i .ssh/mykeylb ubuntu@20.0.1.77 ssh -i .ssh/mykeylb  
ubuntu@172.31.1.146
```

Nginx Ubuntu :

## Installation de Nginx

```
sudo apt update sudo apt install nginx
```

## Démarrer le service Nginx

```
sudo systemctl start nginx
```

# Activer le démarrage automatique de Nginx au démarrage du système

```
sudo systemctl enable nginx
```

## Création du contenu HTML

```
sudo nano /var/www/html/index.html
```

index.html

Welcome to my Nginx site!

This is a simple HTML page served by Nginx on Ubuntu.

[Visit My AWS S3 Website \(http://lilo-mybucket-vpc1.s3-website-us-east-1.amazonaws.com\)](http://lilo-mybucket-vpc1.s3-website-us-east-1.amazonaws.com)

## Configuration du serveur virtuel Nginx

```
sudo nano /etc/nginx/sites-available/default
```

## Vérifier la syntaxe de la configuration Nginx

```
sudo nginx -t
```



# Redémarrer le service Nginx

```
sudo systemctl restart nginx
```

Peering (ne pas oublier de modifier dans la table de routage les routes, destination du vpc, cible : connexion d'apportage avec l'ID : pcX-xiiix) :

## Création de la connexion de peering de VPC1 à VPC2

```
aws ec2 create-vpc-peering-connection --vpc-id vpc-0738142f5375712ec --peer-vpc-id vpc-08797c0cba497c1d3
```

## Résultat commande

VpcPeeringConnection: AcceptorVpcInfo: OwnerId: '336749236319' Region: us-east-1 VpcId: vpc-08797c0cba497c1d3  
ExpirationTime: '2024-01-12T15:38:09+00:00' RequesterVpcInfo: CidrBlock: 10.0.0.0/16 OwnerId: '336749236319'  
Region: us-east-1 VpcId: vpc-0738142f5375712ec Status: Code: initiating-request Message: Initiating Request to  
336749236319 VpcPeeringConnectionId: pcx-0beb661d5e6b63867

## Création de la connexion de peering de VPC1 à VPC3

```
aws ec2 create-vpc-peering-connection --vpc-id vpc-0738142f5375712ec --peer-vpc-id vpc-0ce83e5d3bacdc64c
```

## Résultat commande

VpcPeeringConnection: AcceptorVpcInfo: OwnerId: '336749236319' Region: us-east-1 VpcId: vpc-0ce83e5d3bacdc64c  
ExpirationTime: '2024-01-12T15:54:40+00:00' RequesterVpcInfo: CidrBlock: 10.0.0.0/16 OwnerId: '336749236319'  
Region: us-east-1 VpcId: vpc-0738142f5375712ec Status: Code: initiating-request Message: Initiating Request to  
336749236319 VpcPeeringConnectionId: pcx-079393ba99985c5bb

Nous sommes heureux de vous informer que le projet a été mené à terme avec succès. Toutes les étapes ont été complétées, les configurations sont en place, et le système est opérationnel. Merci pour votre encadrement tout au long du projet.