**VPC**

**AWS CLI Instructions**

**Create VPC, subnets and IGW**

* Create VPC

aws ec2 create-vpc --cidr-block '10.10.0.0/16'

* Create subnets

aws ec2 create-subnet --vpc-id vpc-a360e3c6 --cidr-block '10.10.1.0/24'

aws ec2 create-subnet --vpc-id vpc-a360e3c6 --cidr-block '10.10.2.0/24'

**Run and configure instances**

**Publicly available EC 2 instances**

* Run instance in subnet

aws ec2 run-instances \

--image-id ami-08842d60 \

--key-name devops\_ed\_aws \

--instance-type t2.micro \

--user-data file://../compute-resources/scripts/instance\_bootstrap.sh \

--subnet-id subnet-df2ae986 \

--security-group-ids sg-5d343638

* Create Internet Gateway

aws ec2 create-internet-gateway

* Attach IGW to VPC

aws ec2 attach-internet-gateway \

--internet-gateway-id igw-9a7fa1ff \

--vpc-id vpc-a360e3c6

* Create route table

aws ec2 create-route-table --vpc-id vpc-a360e3c6

* Add route to IGW

aws ec2 create-route \

--route-table-id rtb-58b23e3d \

--gateway-id igw-9a7fa1ff \

--destination-cidr-block 0.0.0.0/0

* Associate with subnet

aws ec2 associate-route-table \

--subnet-id subnet-df2ae986 \

--route-table-id rtb-58b23e3d

**Manual EIP association**

* Assign EIP

aws ec2 associate-address \

--allocation-id eipalloc-a4e1fccb \

--instance-id i-ec8ca801

* Test

ssh -i ../../AWS/devops\_ed\_aws.pem ec2-user@54.208.83.74

**Auto EIP assosiation**

* Map EIPs automatically setting

aws ec2 modify-subnet-attribute \

--map-public-ip-on-launch \

--subnet-id subnet-df2ae986

* Run instance

aws ec2 run-instances \

--image-id ami-08842d60 \

--key-name devops\_ed\_aws \

--instance-type t2.micro \

--user-data file://../compute-resources/scripts/instance\_bootstrap.sh \

--subnet-id subnet-df2ae986 \

--security-group-ids sg-5d343638

* Test

aws ec2 describe-instances \

--instance-ids i-af634442

ssh -i ../../AWS/devops\_ed\_aws.pem ec2-user@54.86.238.215

curl 54.86.238.215

**Private instances under NAT**

* Run instance in subnet

aws ec2 run-instances \

--image-id ami-08842d60 \

--key-name devops\_ed\_aws \

--instance-type t2.micro \

--user-data file://../compute-resources/scripts/instance\_bootstrap.sh \

--subnet-id subnet-ce2ae997 \

--security-group-ids sg-5d343638

* Test

scp -i ../../AWS/devops\_ed\_aws.pem ../../AWS/devops\_ed\_aws.pem \

ec2-user@54.86.238.215:

ssh -i ../../AWS/devops\_ed\_aws.pem ec2-user@54.86.238.215

ssh -i devops\_ed\_aws.pem ec2-user@10.10.2.113

ping 8.8.8.8

* Launch NAT instance

aws ec2 describe-images \

--filter Name="owner-alias",Values="amazon" \

--filter Name="name",Values="amzn-ami-vpc-nat\*"

aws ec2 run-instances \

--image-id ami-ad227cc4 \

--instance-type t1.micro \

--subnet-id subnet-df2ae986 \

--security-group-ids sg-5d343638

* Disable source/dest check

aws ec2 modify-instance-attribute \

--instance-id i-f8775015 \

--no-source-dest-check

* Add route to NAT

aws ec2 create-route \

--route-table-id rtb-48b73b2d \

--instance-id i-f8775015 \

--destination-cidr-block 0.0.0.0/0

* Test

scp -i ../../AWS/devops\_ed\_aws.pem ../../AWS/devops\_ed\_aws.pem \

ec2-user@54.86.238.215:

ssh -i ../../AWS/devops\_ed\_aws.pem ec2-user@54.86.238.215

ssh -i devops\_ed\_aws.pem ec2-user@10.10.2.113

ping 8.8.8.8