Elastic compute cloud--EC2

EC2 instance

compute service

first we select region (near by location)

AMI----amazon machine image

free tier
vcpu ram storage and network
number of instance
tenancy ---shared / dedicated
storage ---volume type
security group----firewall

On demand
Reserved
spot
dedicated

EC2 instance---

service ---ec2-----launch instance-----windows server (free tier)---no of instance ---storage --tag---
security group----key pair create and name- download it---launch instance

type of instance----T2 D2 R4 C4 G2 I2

after create ----action ---connect--download--remote desktop---get password
require key file--decrypt password---copy

Action ---connect get password create template instance state image networking cloud watch

Elastic IP

Instance -------get public ip

webside -----ip address not change ---permant means static ip address

one ip address free assoicate with one instance

if we associate but dont use it is chargable

Practical----

elastic ip ------allocate ip address---get ip address

Action---associate Ip----instance select---associte

check on instance ------find elastic ip

how to release----
acction----networking---deassocite elastic ip

again check on instance ------elastic ip ---no attach----chargable
action-----release ip address

EBS ---Elastic Block store

block storage

instace ------create volume
os install
create attach file system this volume

EBS----avilibilty zone

dynamically increase

volume type --

general purpose ssd --gps2---default volume---ec2 instance---boot volume --low latency
provision iops ssd----iops----large database----more than 10000 iops up to 64000 iops
throughput optimized ssd ---large database---big data--not boot volume---500 iops
cold hdd----------hdd ---lowest cost ---file server---not boot volume ---250 iops
magnetic standard-----boot volume

EC2 volume

increase a volume size
attach a volume in existing ec2 instance
detach a volume
also delete a volume

one you increase a volume can not decrease (wait for 6 hours)

note : your ec2 volume are available in that availability zone in which your ec2 instance available

instance and volume available only in that region whre you create
can not see in another region

volume ---check availability zone ---ec2 instance same availability zone

volume --action ---modify volume --volume type ---size

volume ---create ---size---availibilty zone--tag
create same avalibilty zone where instance

status----in use , available , create

action ---attach volume

volume and instance same availibilty and also check with different availability zone
check result

delete volume

here --different avalibilty zone --not attach any instance ---we can delete
but

in use volume first have detach and than delete volume
server---manage disk ---refresh volume and disk

Action ---modify ---size-----increase

go to machine --and than extend the volume --give size which apply on amazon modify tab in size optimize

server machine---delete volume

amazon ---select ---de attach----status---now available

if want to delete----action ---delete

Backup and Restore

EC2-----backup store in forms of AMI

backup AMI copy from one region to another region

backup---image

instance - create instance ---there is AMI

VOLUME --create a volume --same availibilty zone--tag

two volume ---1 from instance -----use
2 new ------available

connect machine ----public ip ---administrator and password

volume ---2 nd one is free------attach a volume----attach

machine -----ist volume----action -----modify size ----35 ----yes

machine refresh--no change

server manage----disk---5gb bring online new volume

first volume ---extend a volume ---refresh ----maxi 35

Backup-----instance ---action---image ---create image

machine pe new folder ---new test folder also c drive and d drive new folder

close machine ---disconnect

instance ---create instance

instance ---slect action ---image ---create image---name description

snapshot----also ---create of volume

snapshot ----(backup of volume---next lect)

AMI----create----take a time
instance ---terminate

volume ----boot volume ----delete
5 gb available ----manually delete

AMI se restore or

instance ---new instance --my AMI select--next -----same zone or different zone
tag---secuirty group---launch

check ---instance ---
volume

public ip ----status 2/2---old username and password

verify by folder

EBS Snapshot

EBS storage-------snapshot

snapshot---1 -----backup
attach with another instance
data recover

next time snapshot incremental
maximum 5 snapshot---last snapshot is latest --which one is latest you can restore from it
no problem if previous snapshot delete
snapshot immediately created

snapshot immediately create ---save on S3

Limit upto five pending snapshotfor single gp2 iops or megnetic
and one pending snapshot for a single st1 oe sc1 volume

snapshot copy in different regions

create instance image ---create snapshot with AMI
Snapshot are create of volume

AMI Delete instance delete volume delete----

using of snapshot ----volume recover or image create

select snapshot-----action----delete, create volume , create image , copy

os wala snapshot----
using of snapshot --create a image
name description ----create
check in AMI----Image

select action ----create volume ---
check in volume

instance ---new instance --my AMI---select AMI--which create from snapshot--
subnet--add tag---security group--launch

volume ---attach -----instance select and attach

ami delete , snapshot delete ----instance chalu
access with public ip

Security Group

virtual firewall that control traffic

associate security group to instance

modify the security group any time

security group---

inbound
outbound

ping from local pc to instance ip

inbound ----edit
all icmp protocol icmp port 0-65535 source anywhere

outbound

type all --- protocol all--- port num all---desti-0.0.0.0/0

ping from amazon pc

EC2 instance

putty and puttygen

os	username
Amazon linux	ec2-user
centos	centos
debian	admin or root
fedora	ec2-user
RHEL	ec2-user or root
suse	''
ubuntu	ubuntu or root

instance ---- Amazon linux---name---volume--secuirty group (ssh)
key pair ---.pem private or .ppk public

connect---putty gen open --save private key

putty---public ip ----ssh ---auth---browse---private key

ELASTIC IP ADDRESS
elastic ip----public ip
do not support elastic ipv6

first ----allocate and than associte
disassocite
release it means deassocitae---

allocate----to your account
associate to your machine

allocate and not use it is chargeble--associate to instance

public ip ---elastic ip------first de associate
and than release