EC2 Instance Storage Section

EBS Volume :-

- network drive you can attach to your instances while they own.
- It allows your instances to pexist data, even after their termination.
- They can be mounted to one Instance at a time (at the ccr level)
- -> They are bound to a specific availability zone.

Analogy: Think of them as a "network USB Stick".

Free tier: 30 MB of free EBs storage of type vieneral purpose (SSD), or Magnetic per month.

EBS Volume: - It's a network drive (i.e. not physical drive) * It uses todency network to communicate the mstance, which means there might be a bit of latency. → It can be 'detached from an Ecz Instance & attached to another one quickly. . It's locked to an availability some (Az) -> An EBS Volume on Us-east-1 a commot be attached to us-east - 16 -> To move a vol. across, you first need to spapshot it. · Have a provisioned capacity (size in InBs, undalegara Japs) - You get billed for all the provisioned capacity. - You can increase the capacity of the drive once time.

Imp for exam

EBS - Delete on Termination attribute

- → controls the EBS behaviour when an Ecz
 - · Bydefault, the root EBS volume is deleted.

 (attribute enabled)
 - · Bd Bydefault, any other attached EBS volume is not deleted (attribute disabled)
- This can be controlled by AWS console!

 AWS CLI
- nstance is terminated

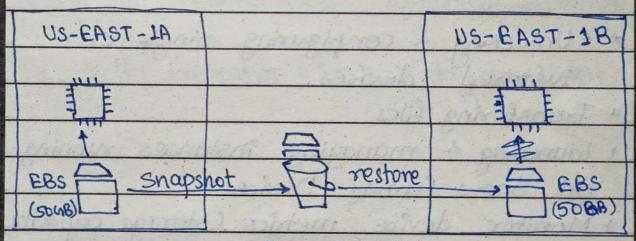
(New Update)

we have EBS Multi-Attach using which we can attach EBS volume to multiple mostances for iol and iol volume.

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EBS Snapshots

- → Make a backup (snapshot) of your EBS volume at any point in time.
- -> Not necessary to detach volume to do snapshot , but recommended.
- Can copy snapshots across Az or Region.



EBS Snapshot

and once, restoration is done we can again attack EBS vol to mestance.

EBS Snapshots Features 12 Million Comme

- @ EBS Snapshot Archive Archive
 - Move a Snapshot to an "archieve tier" that is 75% cheaper.
 - Takes within 24 to 72 hours for restoring the archieve.
- @ Recycle Bin for EBS Snapshots
 - setup rules to retain deleted strapshots to you can recover them apter an accidental deletion.
 - Specify retention (from 1 day to 1 year)

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AMI Overview Waivravo IMA

- · AMI = Amazon Machine Image
- · AMI are a customization of an Ecz instance
 - -You add your own software, configuration, operating system, manitoring....
 - Faster boot/configuration time because all your software is pre-packaged.
- · AMI build for a speti specific region (and can be copied across regions)
- · You can launch EC2 mstance from:
 - A public AMI: AWS provided.
 - Your own AMI: You make & maintain them yourself.
 - An Aws Marketplace AMI: an AMI someone else made (& potentially sells)

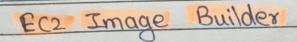
AMI Process (from an Ecz instance)

- 1) Start an Ecz instance and customize it.
- @ stop the mstance (for data mtegrity)
- 3 Build an AMI this will also create

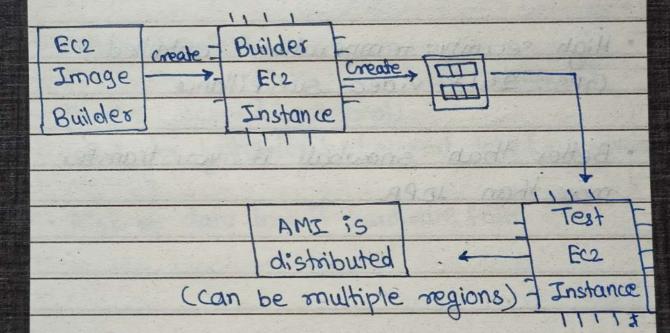
 EBS snapshot.
- EBS Snapshot.

 (a) Launch instances from other AMIs.

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- · Use to automate the creation of Virtual Machines or container images.
- Automate the creation, maintain, validate & test Ecz AMIs.
- free service (only pay for the underlying resound



*Builder Ecz Instance: Build components applied (ustomize software on instance)

* Test Ecz Instance: The Test suite is run (is the AMI working, secure?)

EFS - Elastic File System
Cotenies atolicated sold there are a
- Managed NFS (Network File system)
that can be mounted on Lows of Ecz
mstance. I so the state is ag
- EFS works with Linux Ecz instances in
multi-AZ. Inscitate prince #2 House
- Highly available, scalable, expensive (3xgp2)
, pay per use, no capacity planning.
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EFS Infrequent Access (EFS-IA)

- storage class that is cost-optimized for files not access everyday.
- + upto 924. Lower cost compared to Efs standard.
 - FFS will be automatically moved to your files to EFS-IA based on the last time they were used. accessed.
 - Enable EFS IA with lifecycle policy.
- Ex: more files that are not accessed for so days to EFS-IA.
- Transparent to the applications accessing EFS

Amazon Fsx - Overview
- miles was out strapped of isagethers
- Launched 3rd party high-performance file
Charles of Marie 1997
systems on AWS
- Fully managed services.
and series industry start
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@ FSx for windows File Servere I these 2
3 FSx for NetApp ONTAP
and the state of t
OFSX For Windows File Server
Desir develope della Co
-> A fully managed, highly reliable, and scalab
Windows notive shared file system.
- Built on Windows file server
-> Supports SMB protocol & Windows NTFs.
-> Integrated with Microsoft Active Directory.
-> can be accessed from AWS or your
on-premise infrastructure.
refined the place out some what is all
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2) Amazon FSX for Lustre				
- A fully managed, high-performance, scalable				
File storage for High Performance				
(HPC)				
	4			
> The name Lustre is derived from	"Linux			
and "Custer".				
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- Machine Learning, Analytics, Video	Processina			
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Financial Modeling,				
+ Scales up to 100s GB/s, millions	op IOPS,			
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Shared Responsibility for Ecz Storage
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DAWS: Infrastructure
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3 Replacing faulty hardware.
@ Ensuring there are employees cannot access
your data.
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User:
- setting up backup snapshot procedures
@ setting up data encryption
3 sekesponsibility of any data on the diver.
Winderstanding the risk of using Ecz
Instance store.
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- DEBS Volumes: Network drives attached to one Ecz instance at a time.
- Mapped to an Availability Zones.
- Can use EBS Snapshots for backups! transferring EBS Volumes across AZ.
- ② AMI :- Create ready-to-use Ecz instances with our customizations.
- DEC2 Image Builder: automatically build, test & distribute AMIs.
- @ EC2 Instance Store: High Performance hardware disk attached to our EC2 instance.
- Lost if our instance is stopped/terminated.
- To 200s of instances in a region.
- © EFS-IA: Cost-optimized storage class for infrequent accessed files

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for windows servers.
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18 FSx for Lustre: High Performance Computing
Linux File System.
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