

Lab Manual -- Attach Data Volume to existing Windows EC2 instance.

### Steps

1. Create the Windows EC2 instance
2. Attach the volume to the EC2 instance from the AWS console
3. Format and mount the volume inside the Windows Machine.
4. Detach the Volume from the Windows Machine.

## 1. Create the Windows EC2 instance

### Step 1: Choose an Amazon Machine Image (AMI)

[Cancel and Exit](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. You can select an AMI provided by AWS, our user community, or the AWS Marketplace; or you can select one of your own AMIs.

Search by Systems Manager parameter

AWS Launch Wizard for SQL Server offers an easy way to size, configure, and deploy Microsoft SQL Server Always On availability groups. Use AWS Launch Wizard for this launch

Quick Start (19) 1 to 19 of 19 AMIs

My AMIs (0)

AWS Marketplace (724)

Windows  
Free tier eligible

Microsoft Windows Server 2019 Base - ami-0c278895328cddfd

Microsoft Windows 2019 Datacenter edition. [English]

Root device type: ebs Virtualization type: hvm ENA Enabled: Yes

Select

64-bit (x86)

### Search for windows machine and select the one with “Free Tier”

### Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group

Create a new security group

Select an existing security group

Security group name: RDP-Port

Description: RDP-Port

Type	Protocol	Port Range	Source	Description
RDP	TCP	3389	Custom 0.0.0.0/0, ::/0	e.g. SSH for Admin Desktop

Add Rule

Cancel Previous Review and Launch

Make sure to create an new Security Group, in case its not available with port rdp (3389)

### Select an existing key pair or create a new key pair



A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about [removing existing key pairs from a public AMI](#).

Choose an existing key pair

Select a key pair

devb03-key1

☒ I acknowledge that I have access to the selected private key file (devb03-key1.pem), and that without this file, I won't be able to log into my instance.

Cancel

Launch Instances

We could use the same Key , that was used for the linux machines previously.

The screenshot shows the AWS Management Console interface for an EC2 instance. The instance is named 'i-03d2557e68042ca31' and is of type 't2.micro'. It is located in the 'us-east-1a' availability zone and is in a 'running' state. The status checks show '2/2 checks' passed. The instance is associated with the 'devb03-key1' key pair. The console also displays various details about the instance, including its private DNS, private IPs, secondary private IPs, VPC ID, subnet ID, and the AMI ID. The AMI ID is 'Windows\_Server-2019-English-Full-Base-2020.04.15 (ami-0c278895328cddfd)'.

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status
	i-03d2557e68042ca31	t2.micro	us-east-1a	running	2/2 checks	None

Category	Value
Finding	Opt-in to AWS Compute Optimizer for recommendations. <a href="#">Learn more</a>
Private DNS	ip-192-168-0-124.ec2.internal
Private IPs	192.168.0.124
Secondary private IPs	
VPC ID	vpc-0d14c552b05cd4384 (LAB-VPC)
Subnet ID	subnet-0a4144268c9b1a7
Elastic IPs	
Availability zone	us-east-1a
Security groups	RDP-Port. <a href="#">view inbound rules</a> . <a href="#">view outbound rules</a>
Scheduled events	No scheduled events
AMI ID	Windows_Server-2019-English-Full-Base-2020.04.15 (ami-0c278895328cddfd)
Platform details	Windows

The windows Ec2 instance is created in the “us-east-1a”, we would need to create the volume as well in the same Availability Zone.

Lets login to the windows machine, chk the disk mgmt..

### Connect to your instance ✕

**Connection method** ☒ A standalone RDP client i  
☐ Session Manager i

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You can connect to your Windows instance using a remote desktop client of your choice, and by downloading and running the RDP shortcut file below:

[Download Remote Desktop File](#)

When prompted, connect to your instance using the following details:

<b>Public DNS</b>	ec2-3-80-115-193.compute-1.amazonaws.com
<b>User name</b>	Administrator
<b>Password</b>	v3gaOYWMoyF==UTcBgyhi7zU@ZrC (GiA

If you've joined your instance to a directory, you can use your directory credentials to connect to your instance.

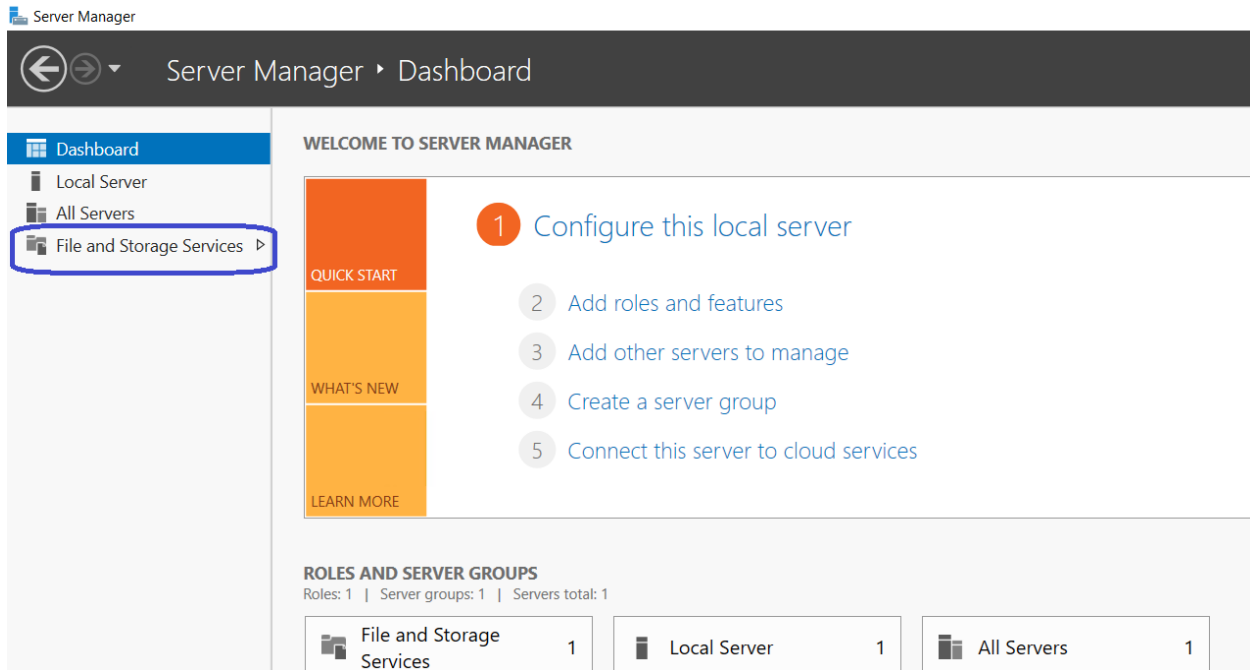
If you need any assistance connecting to your instance, please see our [connection documentation](#).

[Close](#)

You need to “get the password” to login to the windows machine.

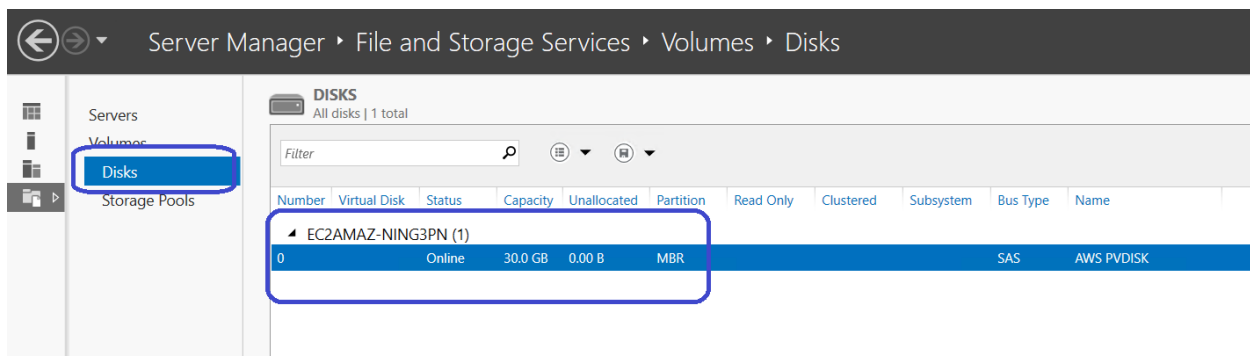
## AWS – EBS – Volumes on Windows

Login to the windows machine.



Open the “server Manager” and wait for it come up.

Click on “File and storage Service”

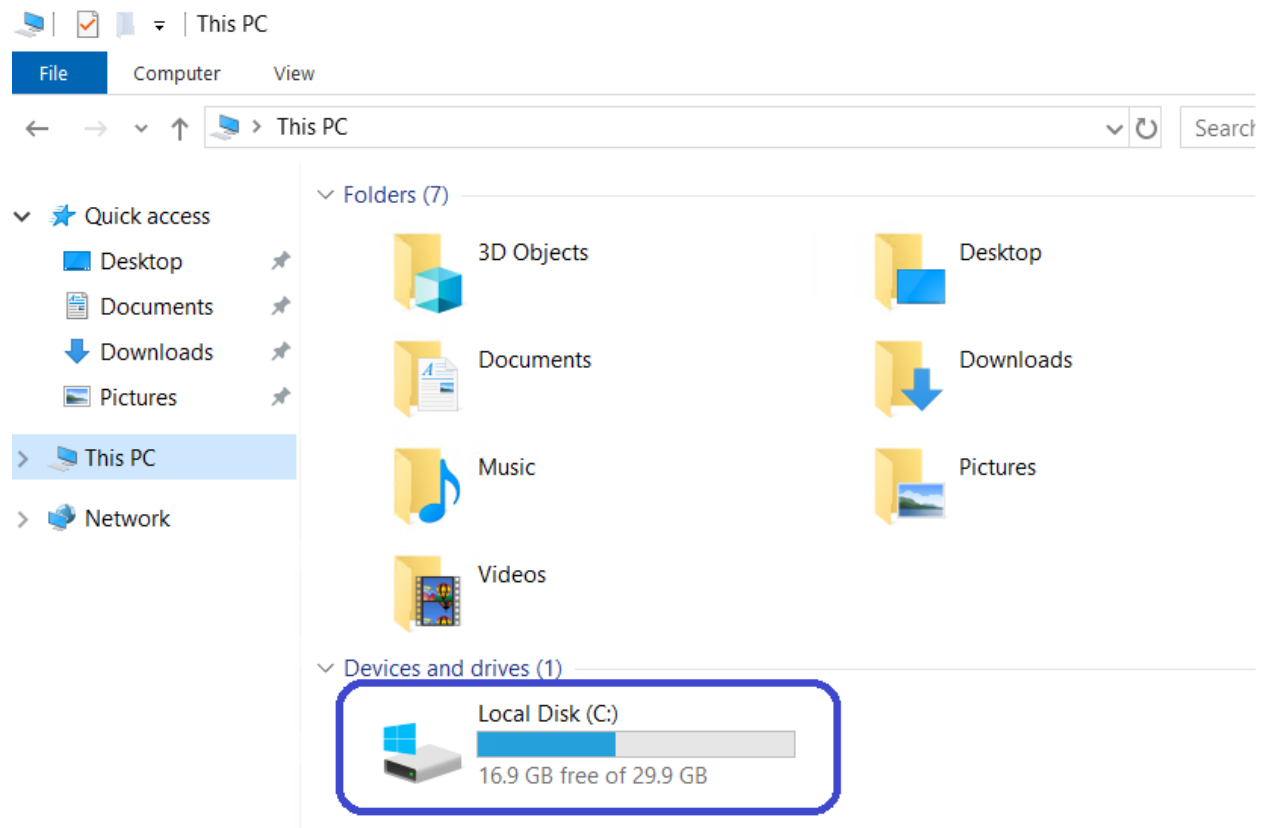


And then Click on “Disks”.

Currently we would see only the c drive of 30 GB.

## AWS – EBS – Volumes on Windows

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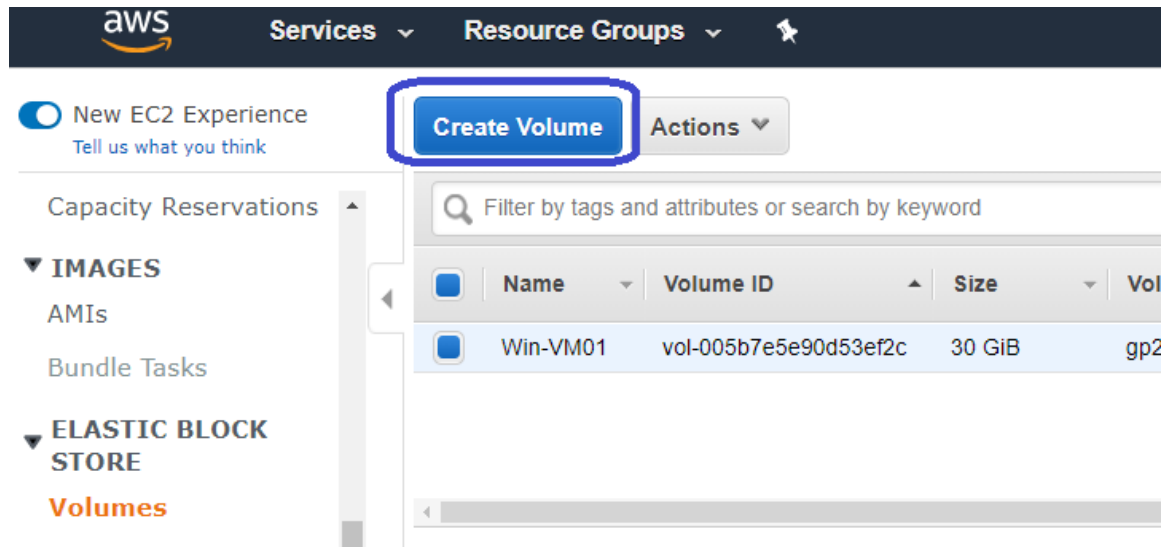
Which means currently we have only one virtual disk of 30GB, which is the OS disk.

Now, let's attach the new empty volume to this Windows EC2 instance.

### 2. Create & Attach the volume to the Windows EC2 instance from the AWS console.

Note: -- Assuming the Volume and the EC2 instance are in the same “Availability Zone”

Click on “Volumes” on the left panel under EC2 page.



[Volumes](#) > Create Volume

### Create Volume

Volume Type: General Purpose SSD (gp2) ⓘ

Size (GiB): 2 (Min: 1 GiB, Max: 16384 GiB) ⓘ

IOPS: 100 / 3000 (Baseline of 3 IOPS per GiB with a minimum of 100 IOPS, burstable to 3000 IOPS) ⓘ

Availability Zone\*: us-east-1a ⓘ

We will create a 2GB volume, in the same Availability Zone.

## AWS – EBS – Volumes on Windows

Throughput (MB/s) Not applicable ⓘ

Snapshot ID  ⓘ

Encryption ☐ Encrypt this volume

Key (128 characters maximum) Value (256 characters maximum)

*This resource currently has no tags*  
Choose the Add tag button or [click to add a Name tag](#)

Add Tag 50 remaining (Up to 50 tags maximum)

Cancel Create Volume

DO NOT SELECT ANY “SNAPSHOT”, LEAVE IT EMPTY.

Click on “Create Volume”

Create Volume Actions ▾

Filter by tags and attributes or search by keyword

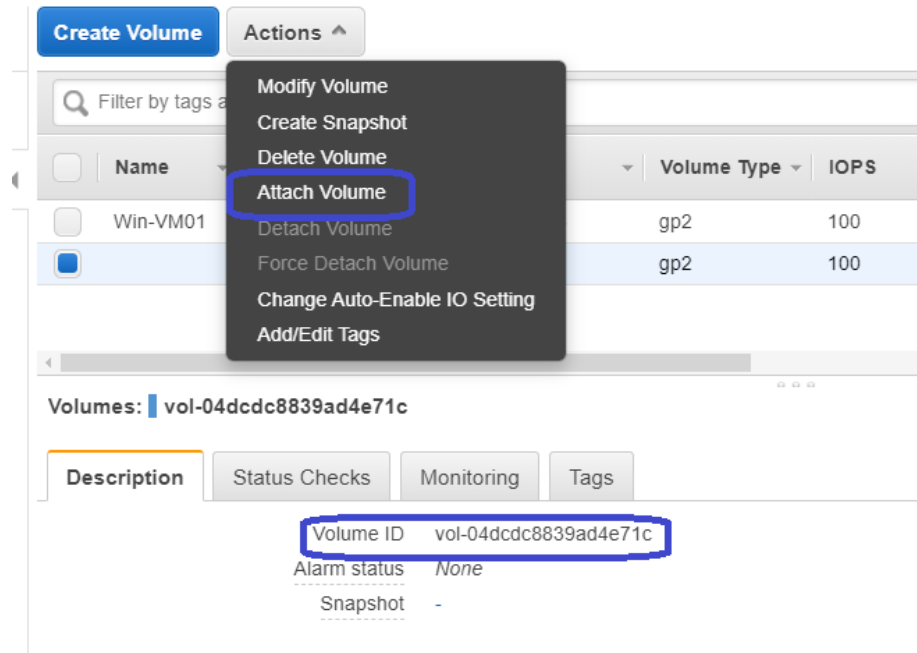
	Name ▾	Volume ID ▾	Size ▾	Volume Type ▾	IOPS ▾	Snapshot
<input checked="" type="checkbox"/>		vol-04dcdc8839ad4e71c	2 GiB	gp2	100	
<input type="checkbox"/>	Win-VM01	vol-005b7e5e90d53ef2c	30 GiB	gp2	100	snap-055f6fb6.

The new volume is created for 2GB.

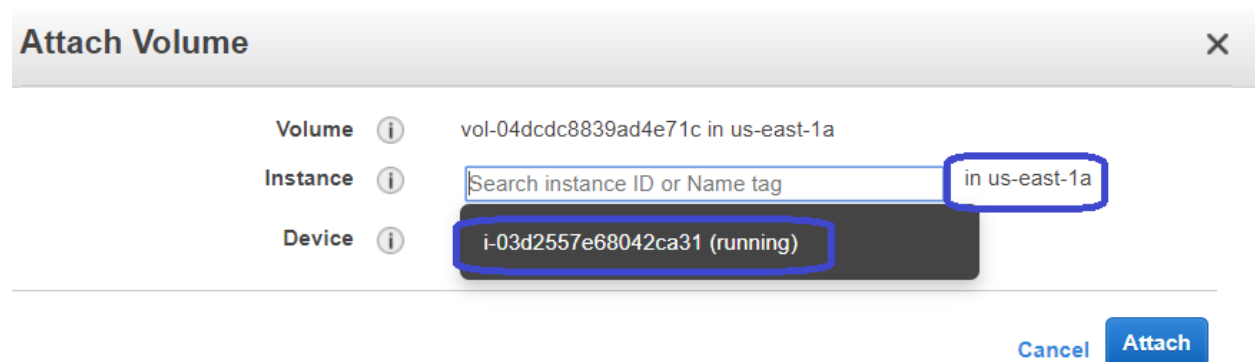
, now lets attach this to the EC2 instance.



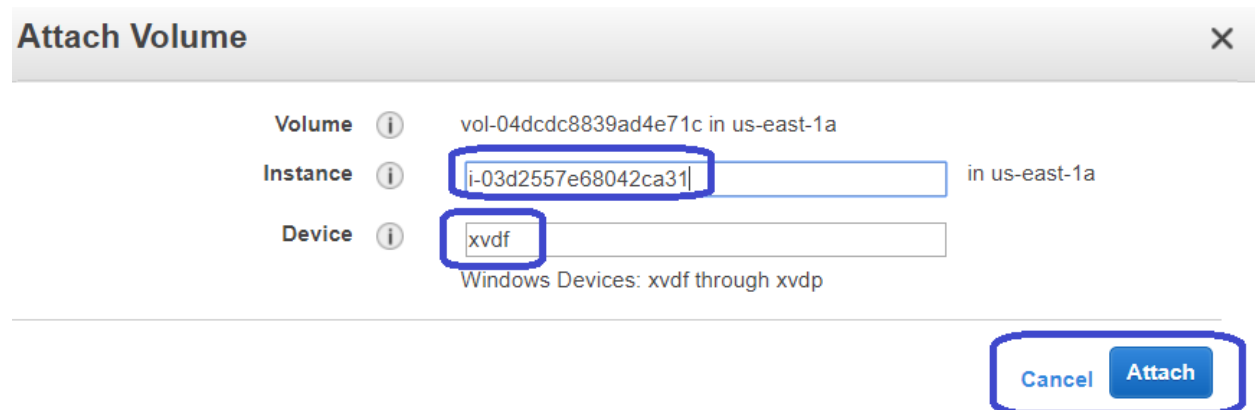
## AWS – EBS – Volumes on Windows



Select the Volume and Click on “attach volume”



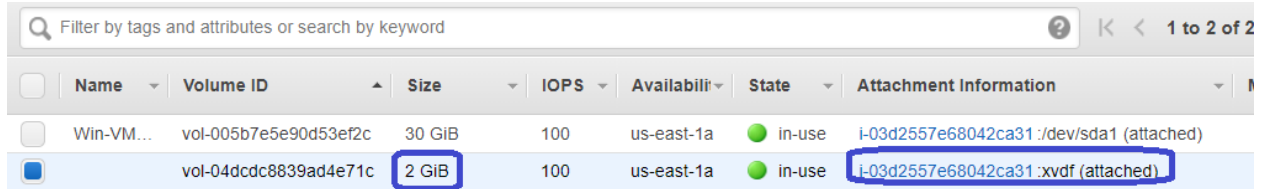
The windows instance would be listed to attach the volumes.



## AWS – EBS – Volumes on Windows

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The volume get attached as “xvdf”.

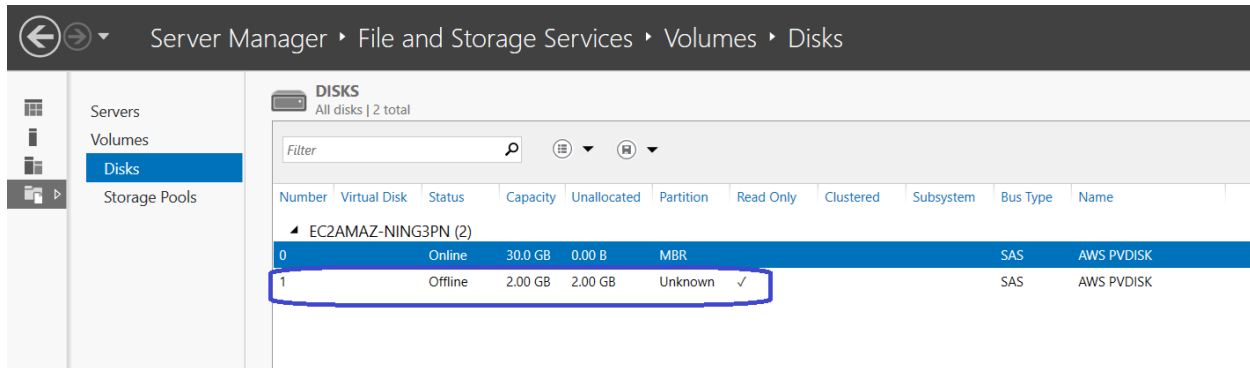


	Name	Volume ID	Size	IOPS	Availability	State	Attachment Information
<input type="checkbox"/>	Win-VM...	vol-005b7e5e90d53ef2c	30 GiB	100	us-east-1a	in-use	i-03d2557e68042ca31:/dev/sda1 (attached)
<input checked="" type="checkbox"/>		vol-04dcdc8839ad4e71c	2 GiB	100	us-east-1a	in-use	i-03d2557e68042ca31:xvdf (attached)

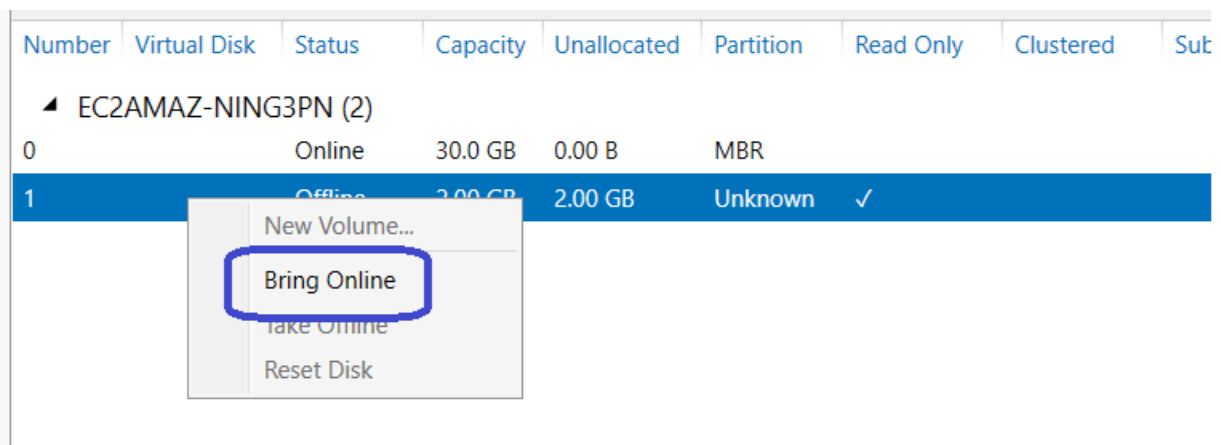
The “attachment Info” would show the instance details that it is attached to it.

### 3. Format the volume inside the windows EC2 Machine.

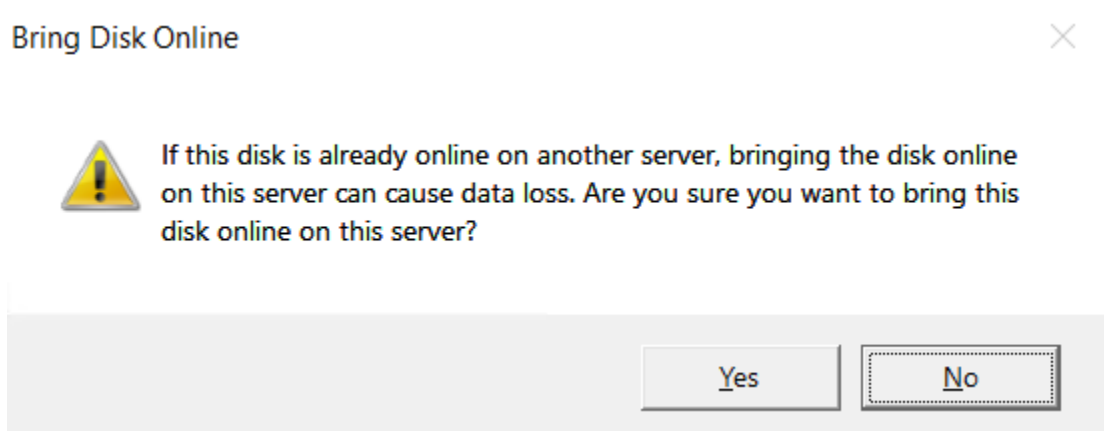
#### Step 1:



The disk mgmt. is now showing the “2gb Volume” that was created and attached.



Right click on the new volume, and click on “Bring Online”.






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Number	Virtual Disk	Status	Capacity	Unallocated	Partition	Read Only	Clu
EC2AMAZ-NING3PN (2)							
0		Online	30.0 GB	0.00 B	MBR		
1		Online	2.00 GB	2.00 GB	Unknown		

It would say “Online”

Let’s now format and create the drive.

**DISKS**  
All disks | 2 total

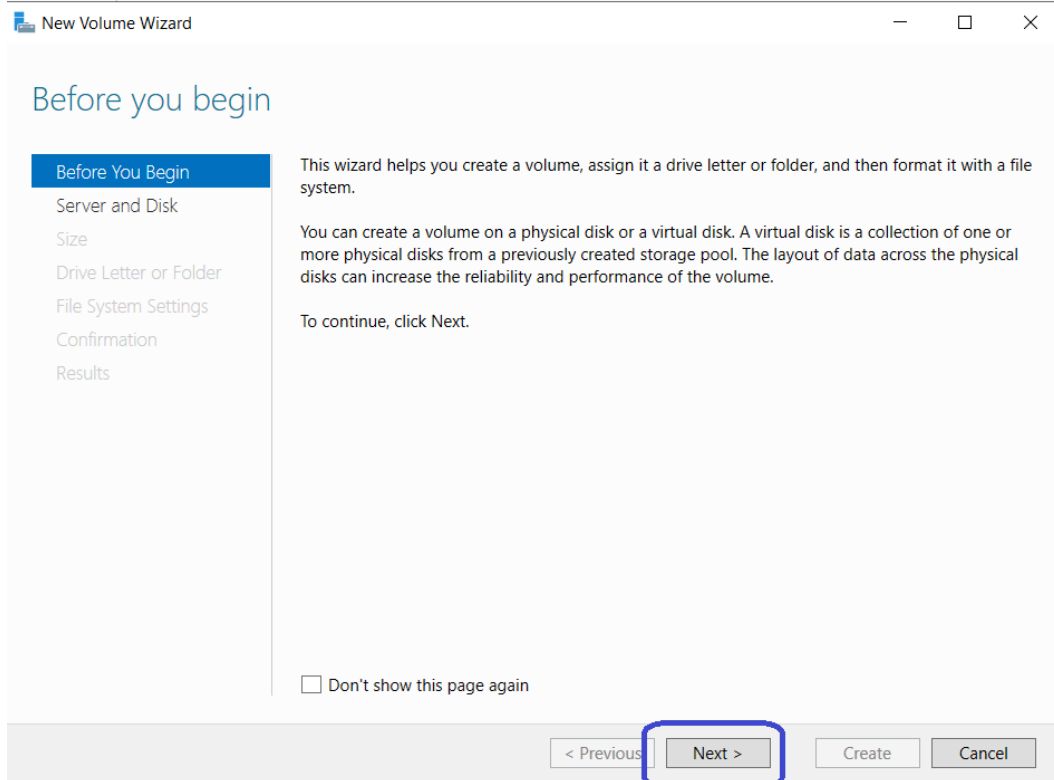
Filter    

Number	Virtual Disk	Status	Capacity	Unallocated	Partition	Read Only	Cluster
EC2AMAZ-NING3PN (2)							
0		Online	30.0 GB	0.00 B	MBR		
1		Online	2.00 GB	2.00 GB	Unknown		

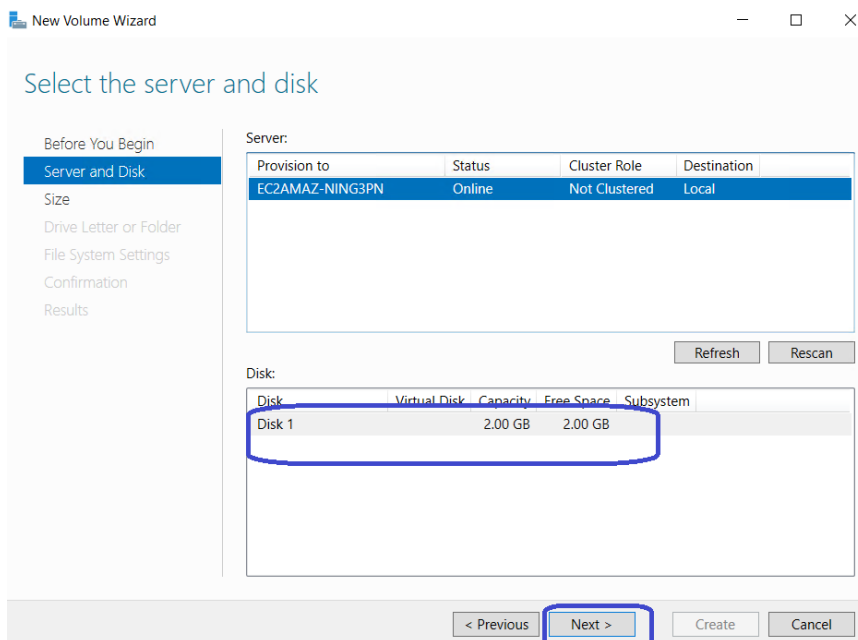
**New Volume...**  
Rescan Storage  
Refresh

Right click on the new volume and click on “New Volume”.

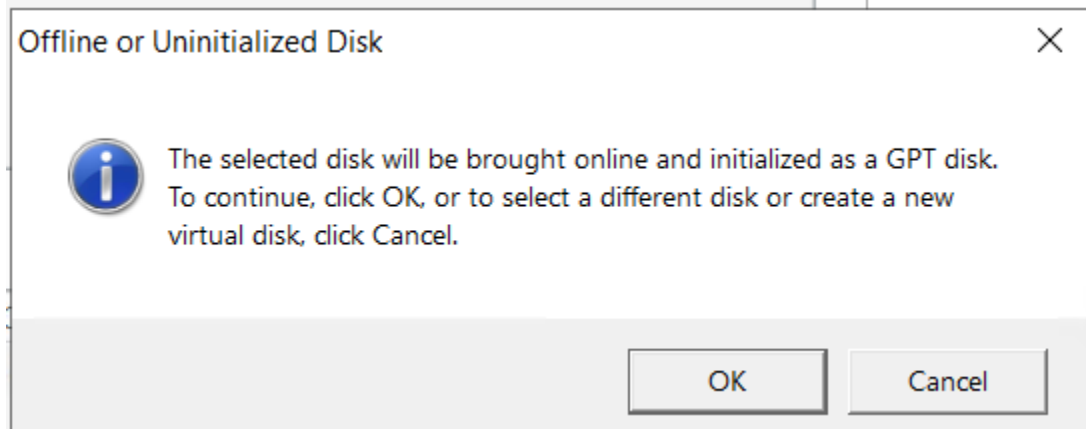
## AWS – EBS – Volumes on Windows



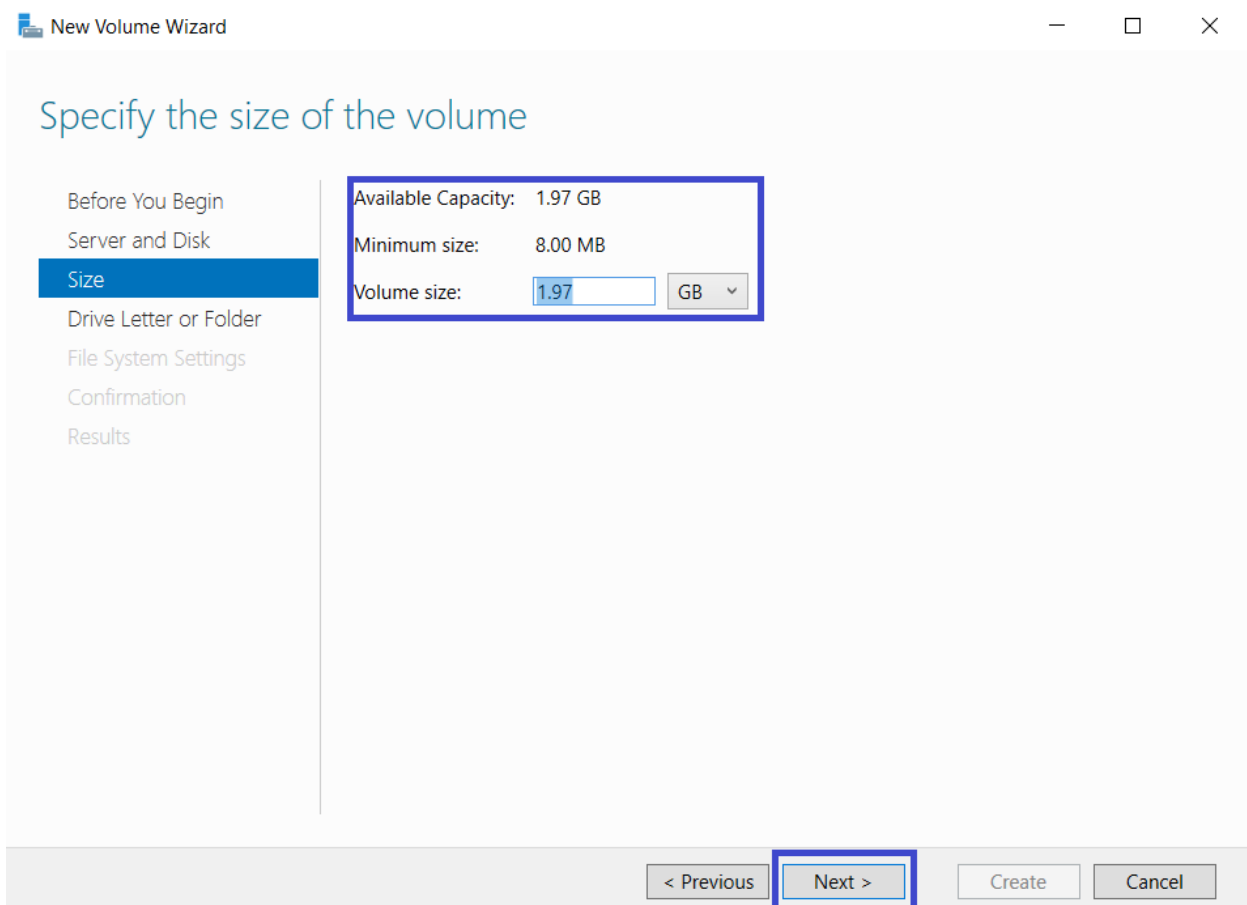
Click on “NEXT”



The 2gb volume is selected, now click “next”.



Click on "OK". On the popup window.



Click on "Next"

The screenshot shows the 'New Volume Wizard' window. On the left, a sidebar lists the steps: 'Before You Begin', 'Server and Disk', 'Size', 'Drive Letter or Folder' (which is highlighted in blue), 'File System Settings', 'Confirmation', and 'Results'. The main area is titled 'Assign to a drive letter or folder' and contains the following text: 'Select whether to assign the volume to a drive letter or a folder. When you assign a volume to a folder, the volume appears as a folder within a drive, such as D:\UserData.' Below this, there are three radio button options under the heading 'Assign to:'. The first option, 'Drive letter: D', is selected and has a blue box around it. The second option is 'The following folder:' followed by a text input field and a 'Browse...' button. The third option is 'Don't assign to a drive letter or folder.' At the bottom of the window, there are four buttons: '< Previous', 'Next >' (which is highlighted with a blue box), 'Create', and 'Cancel'.

This would list the drive letter, just let it be in default.

And click “NEXT”.

## AWS – EBS – Volumes on Windows

The screenshot shows the 'New Volume Wizard' window with the 'Select file system settings' step selected in the left sidebar. The main area contains the following settings:

- File system: NTFS (dropdown menu)
- Allocation unit size: Default (dropdown menu)
- Volume label: New Volume (text input)
- ☐ Generate short file names (not recommended)

Below the settings, a note states: 'Short file names (8 characters with 3-character extensions) are required for some 16-bit applications running on client computers, but make file operations slower.'

At the bottom, there are four buttons: '< Previous', 'Next >', 'Create', and 'Cancel'. The 'Next >' button is highlighted with a blue box.

Click on “NEXT”.

The screenshot shows the 'New Volume Wizard' window with the 'Confirm selections' step selected in the left sidebar. The main area displays a summary of the selected settings:

Confirm that the following are the correct settings, and then click Create.

VOLUME LOCATION	
Server:	EC2AMAZ-NING3PN
Disk:	Disk 1
Free space:	2.00 GB

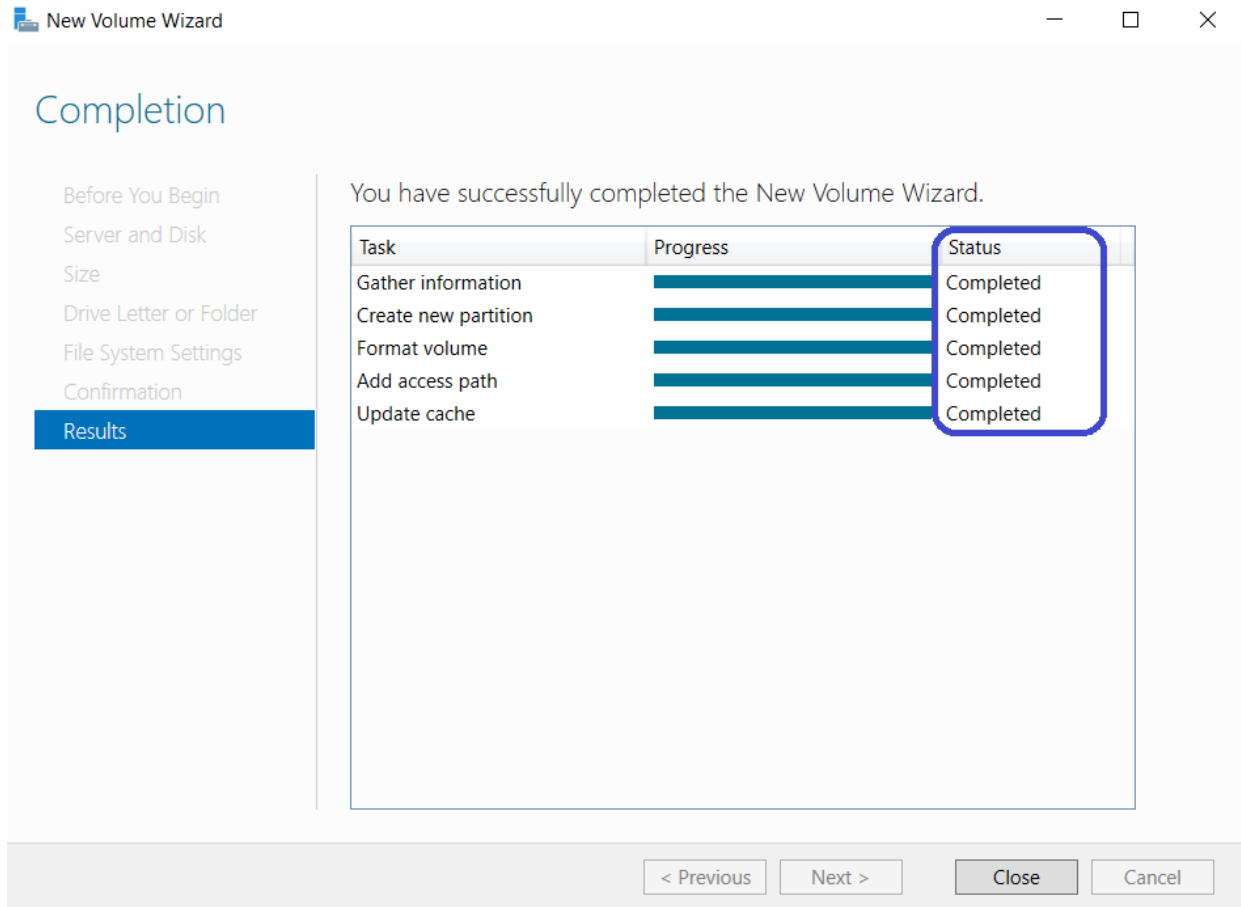
VOLUME PROPERTIES	
Volume size:	1.97 GB
Drive letter or folder:	D:\
Volume label:	New Volume

FILE SYSTEM SETTINGS	
File system:	NTFS
Short file name creation:	Disabled
Allocation unit size:	Default

At the bottom, there are four buttons: '< Previous', 'Next >', 'Create', and 'Cancel'. The 'Create' button is highlighted with a blue box.

Click on “Create”.

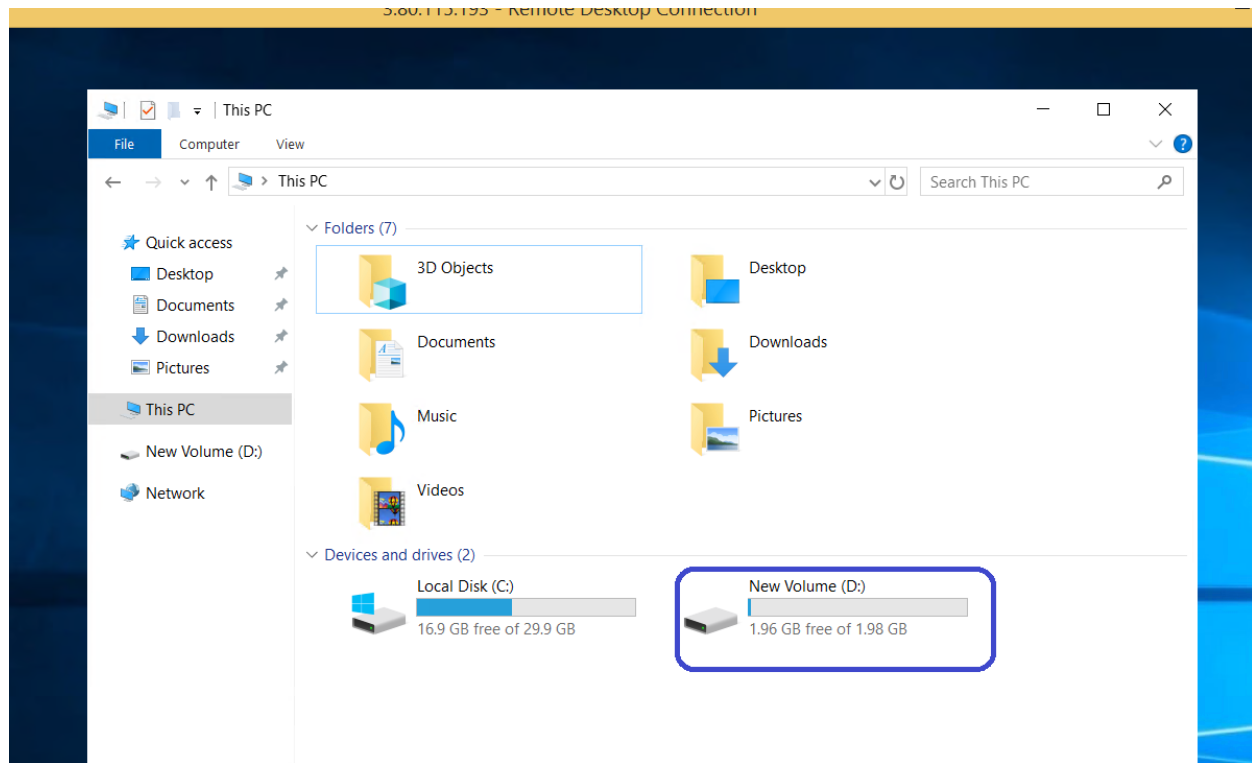




The Drive is successfully created.

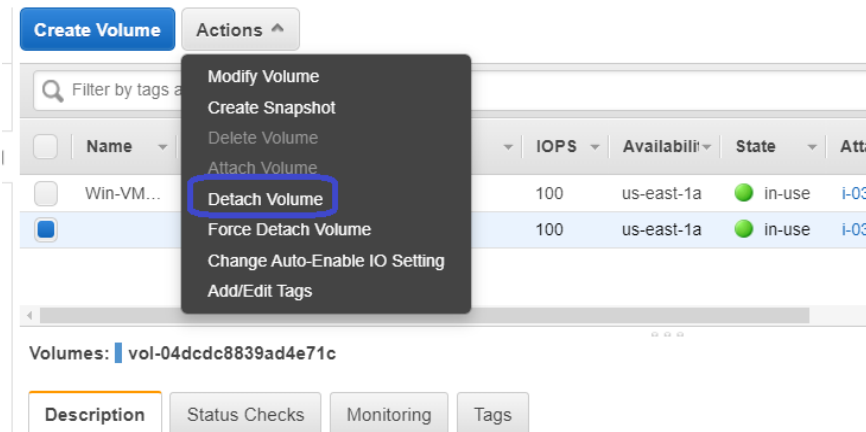
Let's check in the **"Windows Explorer"**

## AWS – EBS – Volumes on Windows

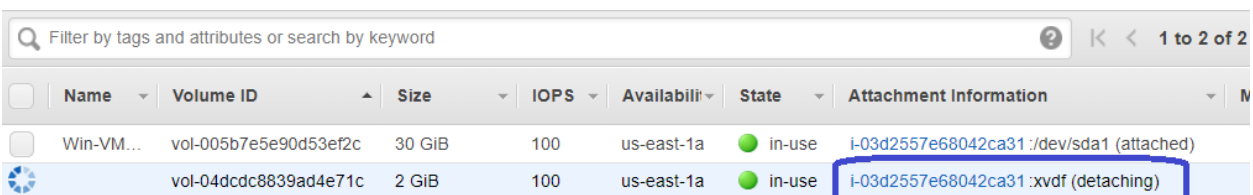
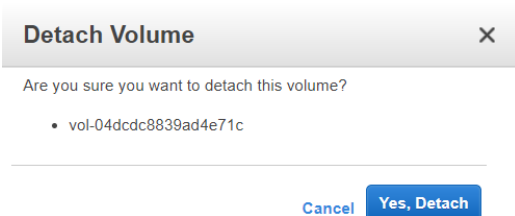


**The new “2Gb Volume” is detected as D: drive.**

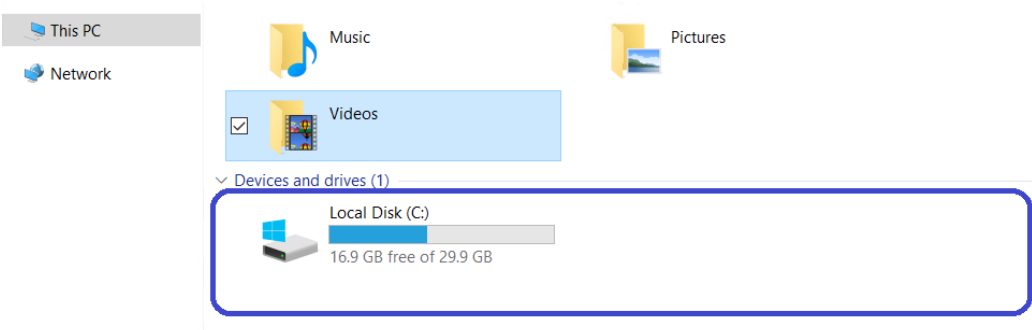
### 4. Detach the Volume from the Windows Machine.



Select the volume and click on “Detach Volume”.



Its “detaching”.



The “2Gb Volume” is disappeared. This means, we could detach the volume from windows at any given point of time.

### 5. Delete the new volume

Filter by tags and attributes or search by keyword							
<input type="checkbox"/>	Name	Volume ID	Size	IOPS	Availability	State	Attachment Information
<input type="checkbox"/>	Win-VM...	vol-005b7e5e90d53ef2c	30 GiB	100	us-east-1a	<span>in-use</span>	<a href="#">i-03d2557e68042ca31</a>
<input checked="" type="checkbox"/>		vol-04dddc8839ad4e71c	2 GiB	100	us-east-1a	<span>available</span>	

Once the volume says “**Available**”, its ready to get deleted.