Unit 6 Assignment Computer systems

STATEMENT

https://www.xatakawindows.com/windows/este-metodo-permite-instalar-windows-11-equipos-que-no-poseen-chip-tpm-2-0

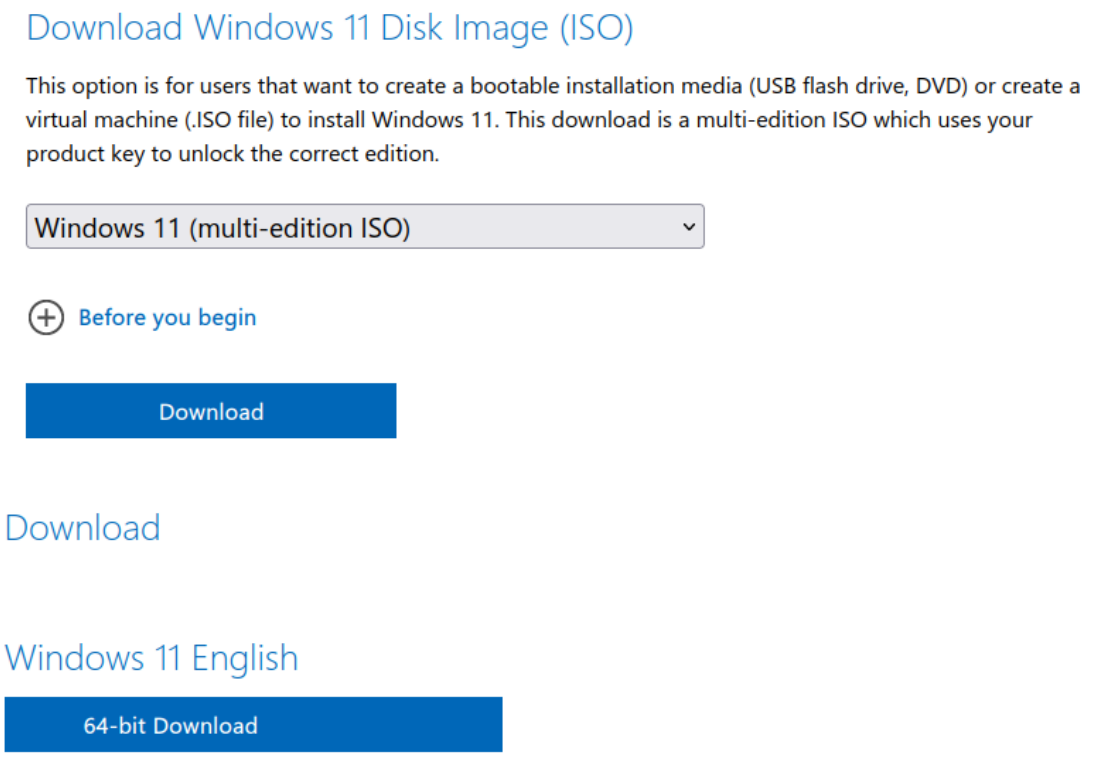
https://www.wikigain.com/configure-raid-in-windows-11/

https://movilandroide.com/como-crear-un-sistema-raid-1-desde-windows-11-10/#gsc.tab=0

https://www.prepressure.com/library/technology/raid#raid-0

https://www.youtube.com/watch?v=mFn0a9Cu16c

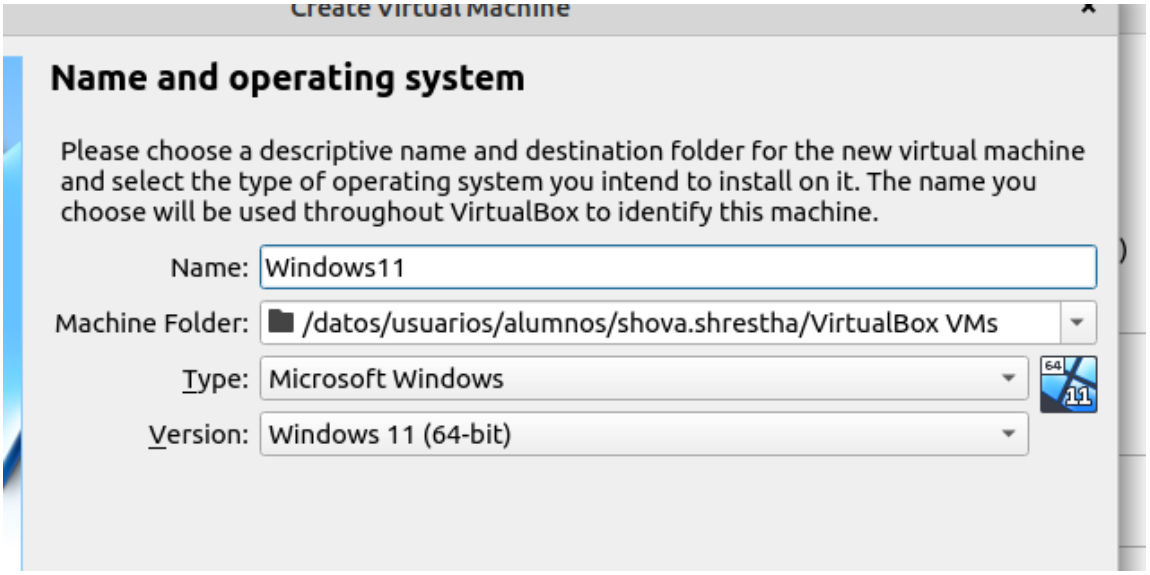
The aim of the assignment is to install Windows 11 in a VirtualBox machine and try different features.

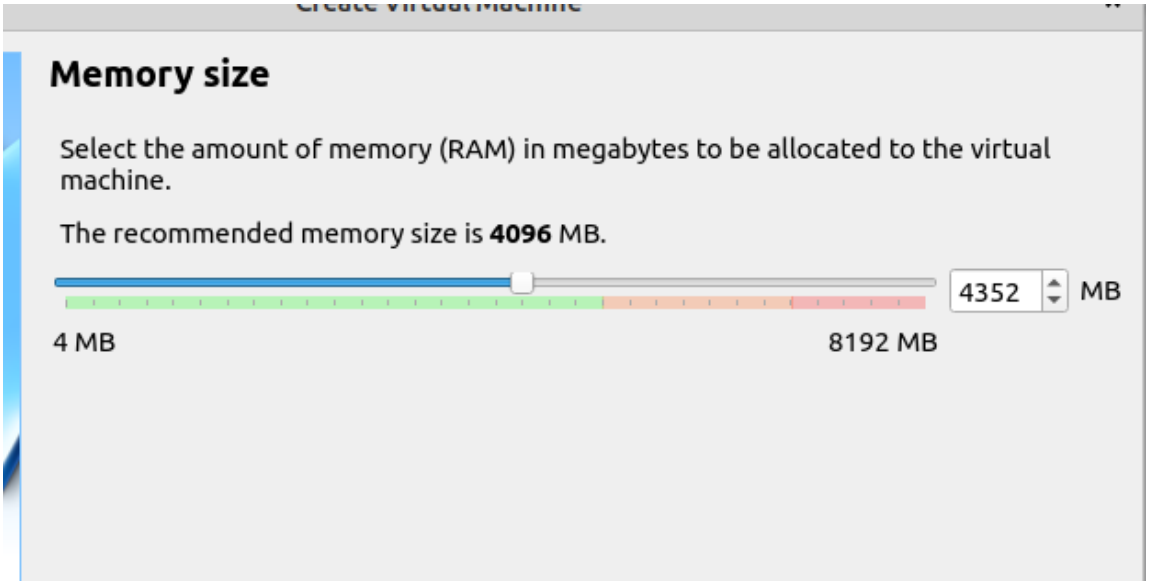


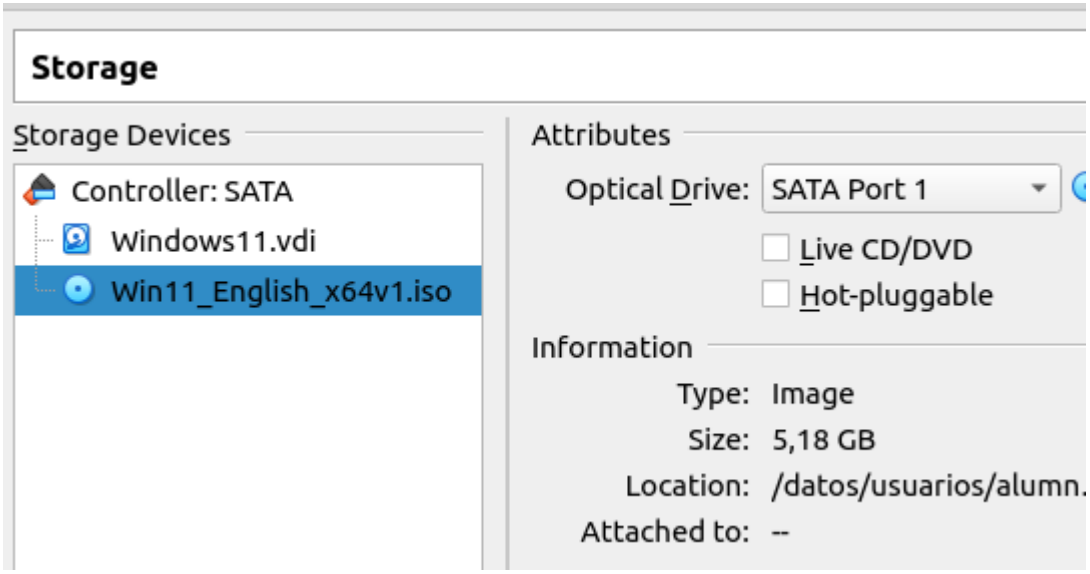
The installation on VirtualBox is not rocket science, but it's not a cakewalk either…

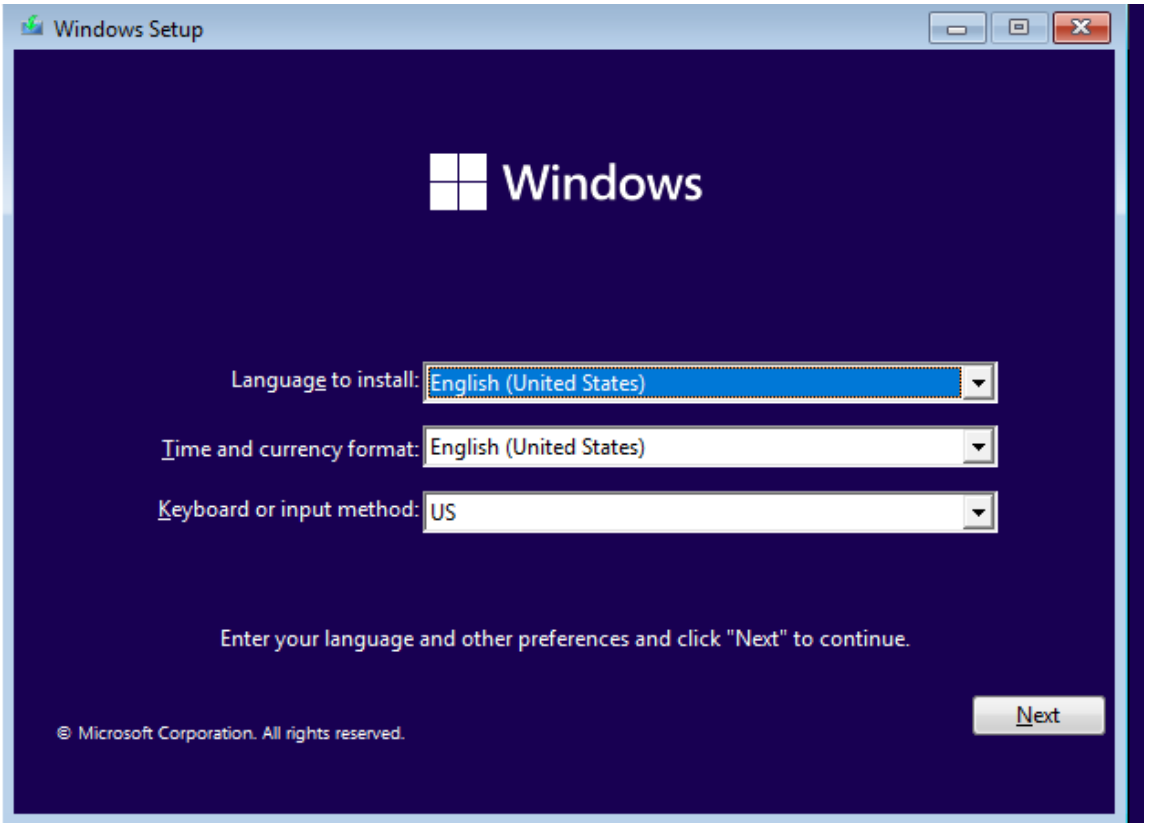
There are two important requirements before installing Windows 11:

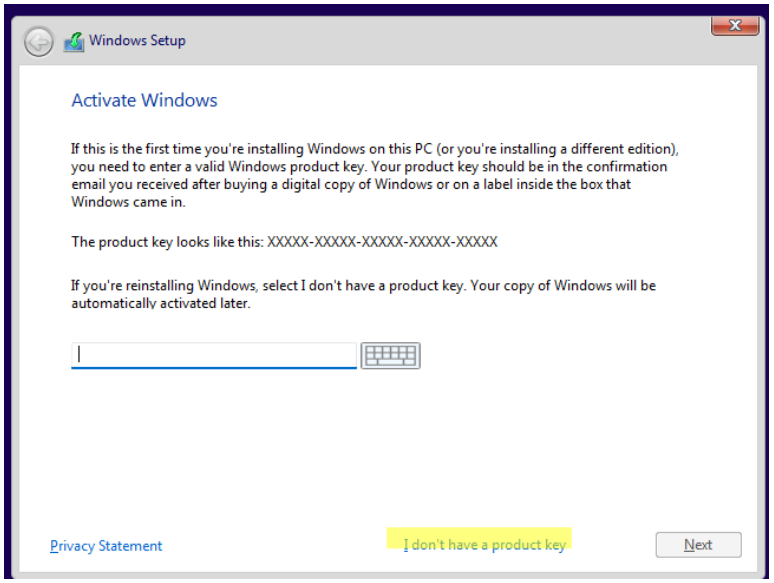
- Update VirtualBox to the last version.
- Windows 11 requires at least 4 GB of RAM and a feature TPM. It is crucial to research about how to skip "TPM" in VirtualBox to install Windows 11.

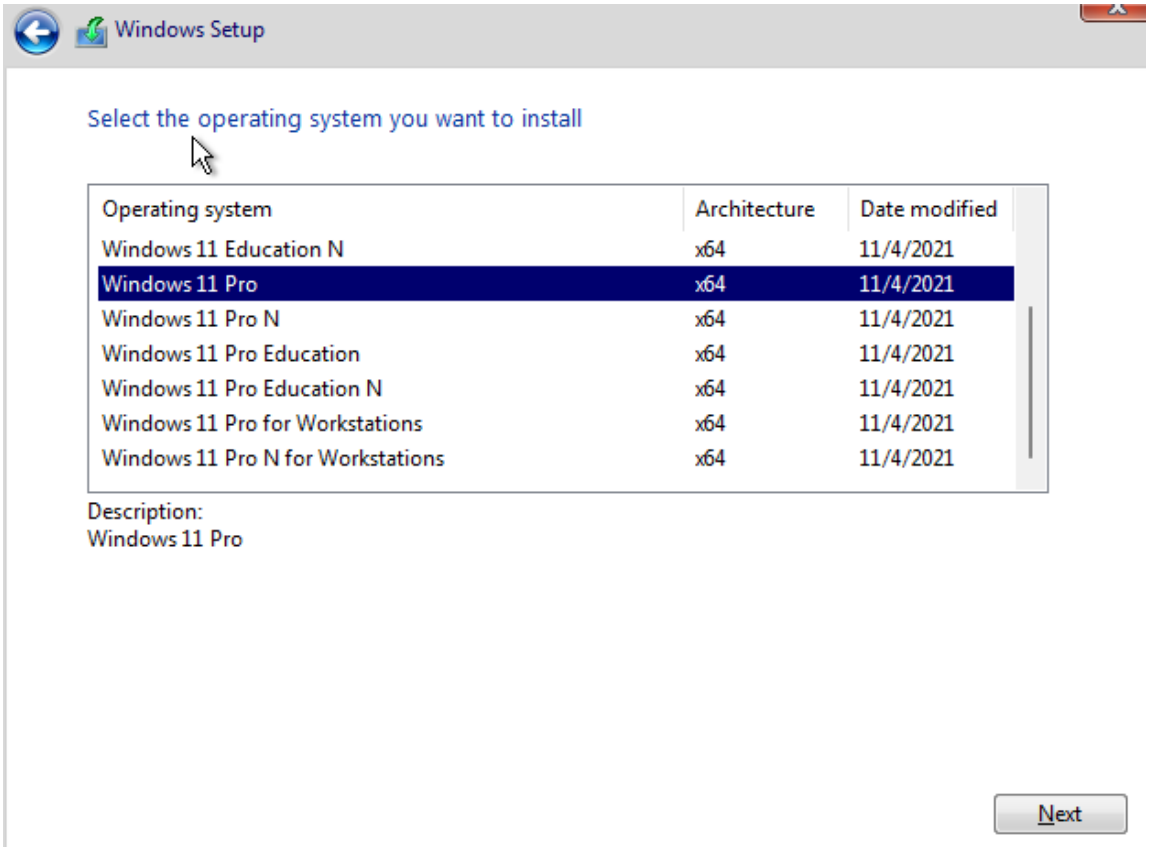

Create Virtual Machine
Name and operating system
Please choose a descriptive name and destination folder for the new virtual machine and select the type of operating system you intend to install on it. The name you choose will be used throughout VirtualBox to identify this machine.
Name: Windows11
Machine Folder: /datos/usuarios/alumnos/shova.shrestha/VirtualBox VMs
Type: Microsoft Windows
Version: Windows 11 (64-bit)


Memory size
Select the amount of memory (RAM) in megabytes to be allocated to the virtual machine.
The recommended memory size is 4096 MB.
4352
MB
4 MB
8192 MB


Storage
Storage Devices
Controller: SATA
Windows11.vdi
Win11_English_x64v1.iso
Attributes
Optical Drive: SATA Port 1
Live CD/DVD
Hot-pluggable
Information
Type: Image
Size: 5,18 GB
Location: /datos/usuarios/alumn.
Attached to: --

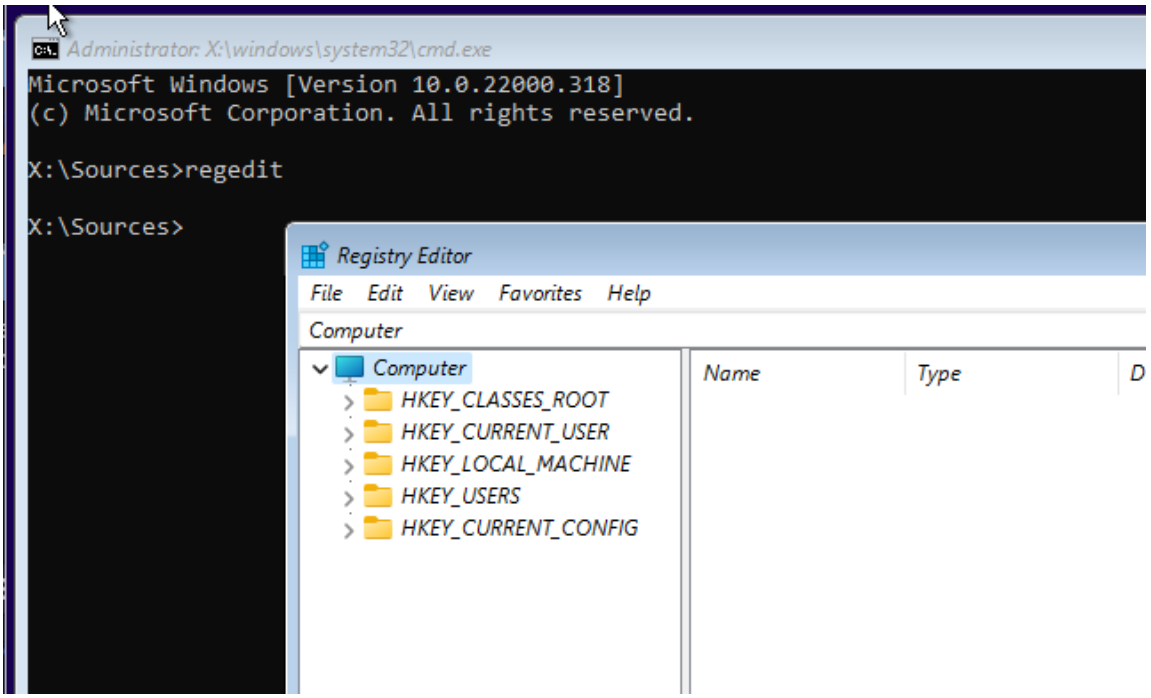

Windows Setup
Windows
Language to install: English (United States)
Time and currency format: English (United States)
Keyboard or input method: US
Enter your language and other preferences and click "Next" to continue.
© Microsoft Corporation. All rights reserved.
Next



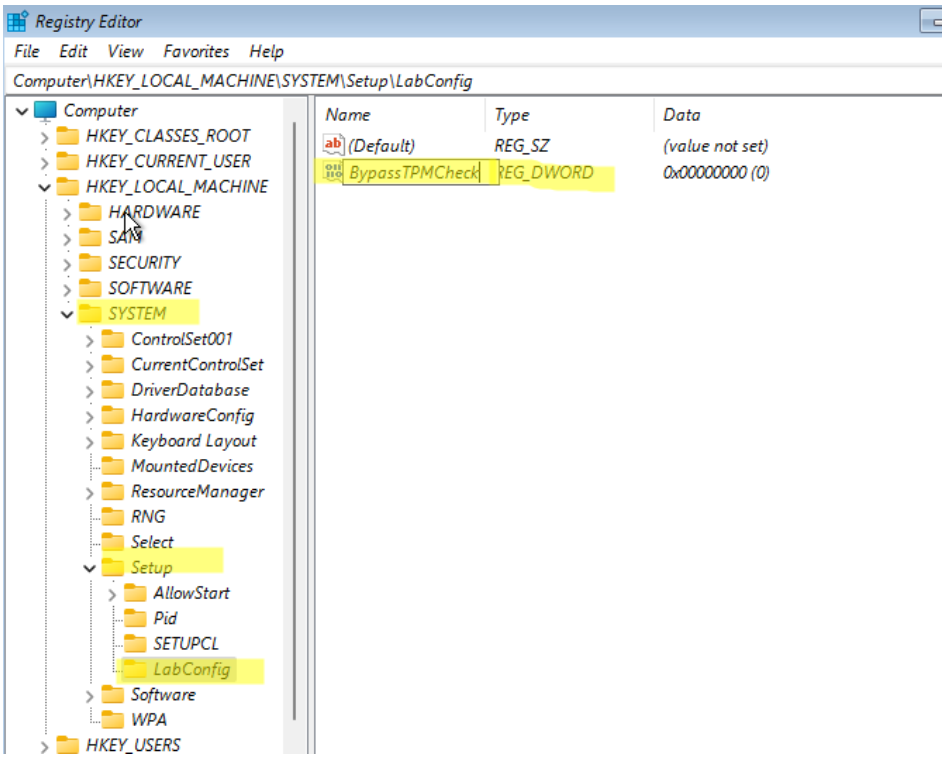


It will have a message that said that the computer it’s not compatible

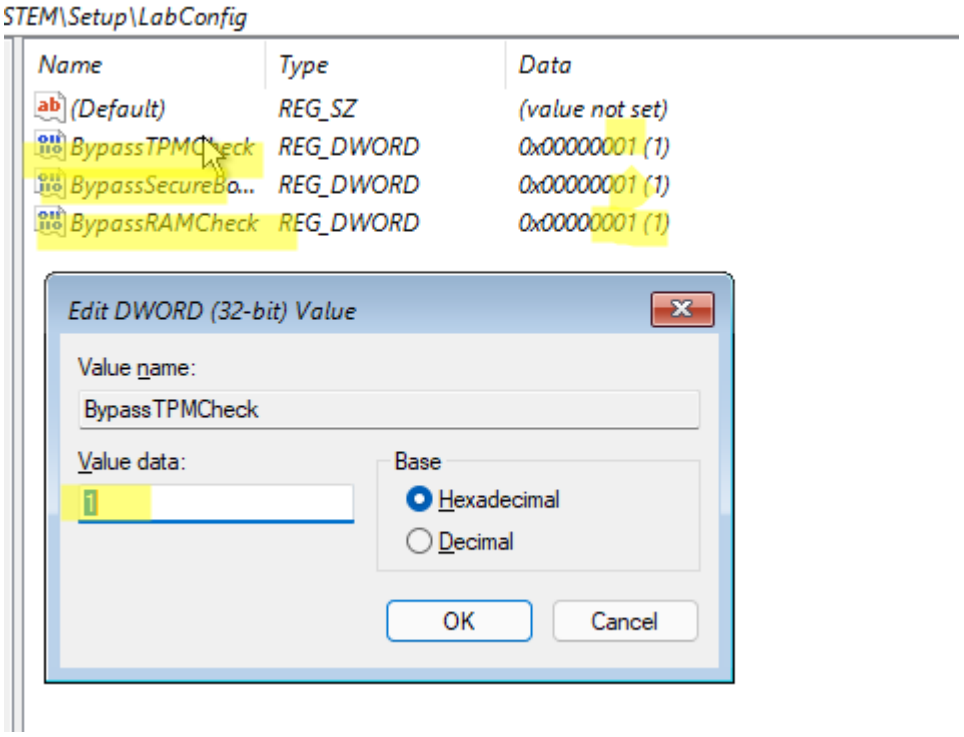
So we need to go to the key in **Shift+F10** and we are in the command line system we write **regedit,** now that we are in the registry editor.

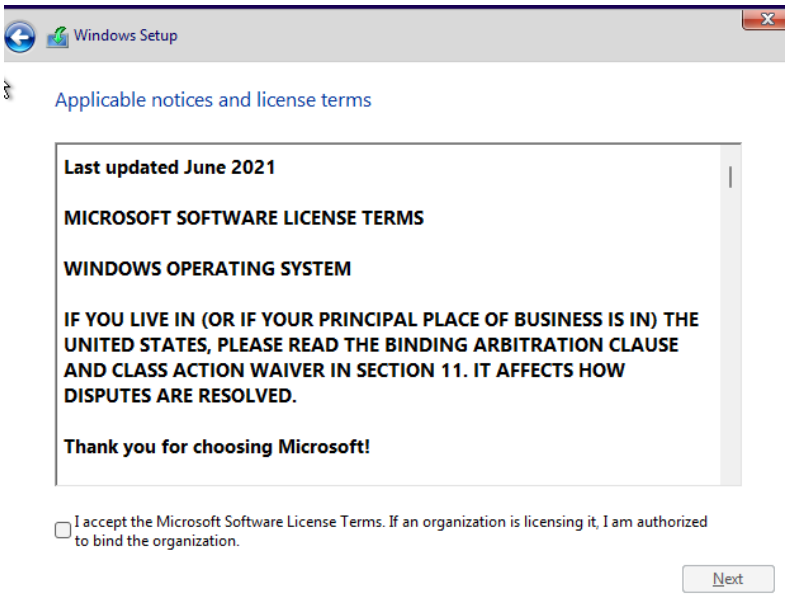


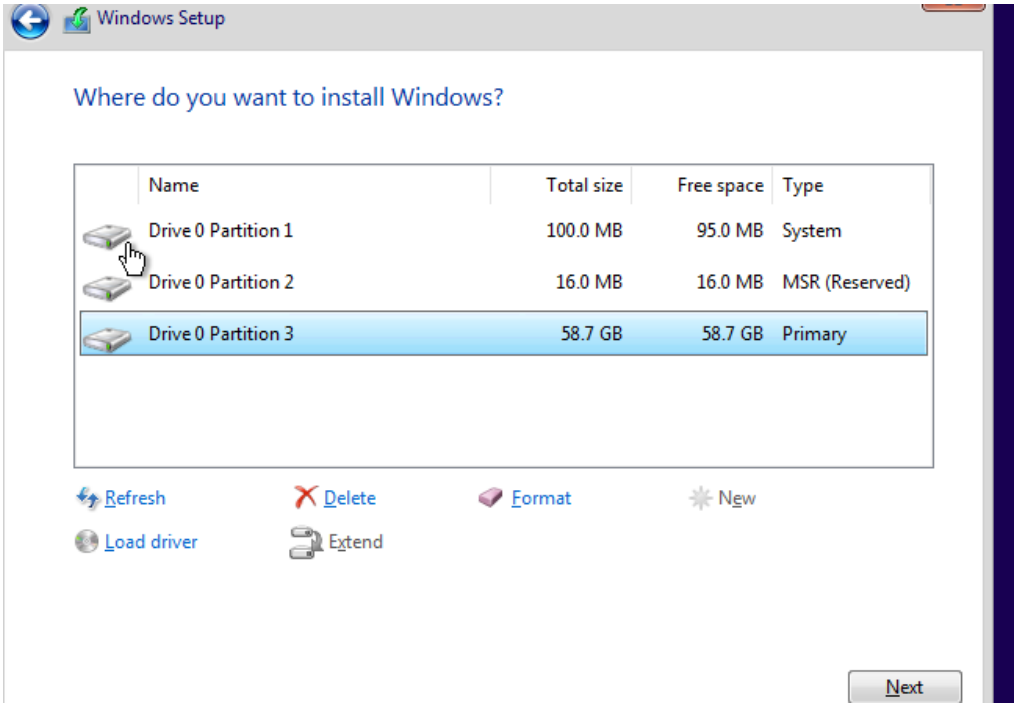
we need to go to **HKEY_LOCAL_MACHINE→ SYSTEM→ Setup** and there we need to create the folder **LabConfig**.

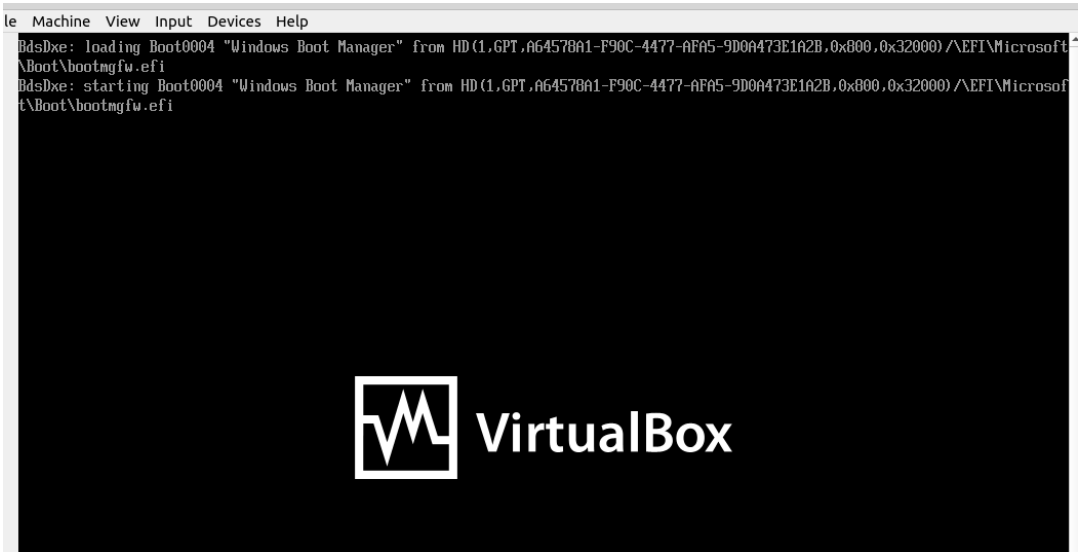


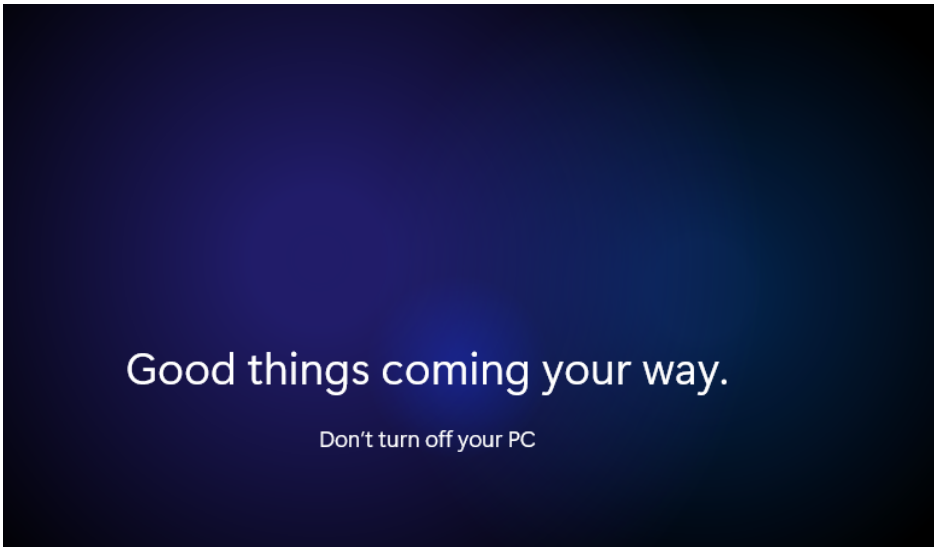
There we create "BypassTPMCheck" "BypassRAMCheck" and "BypassSecureBootCheck" with value 1.

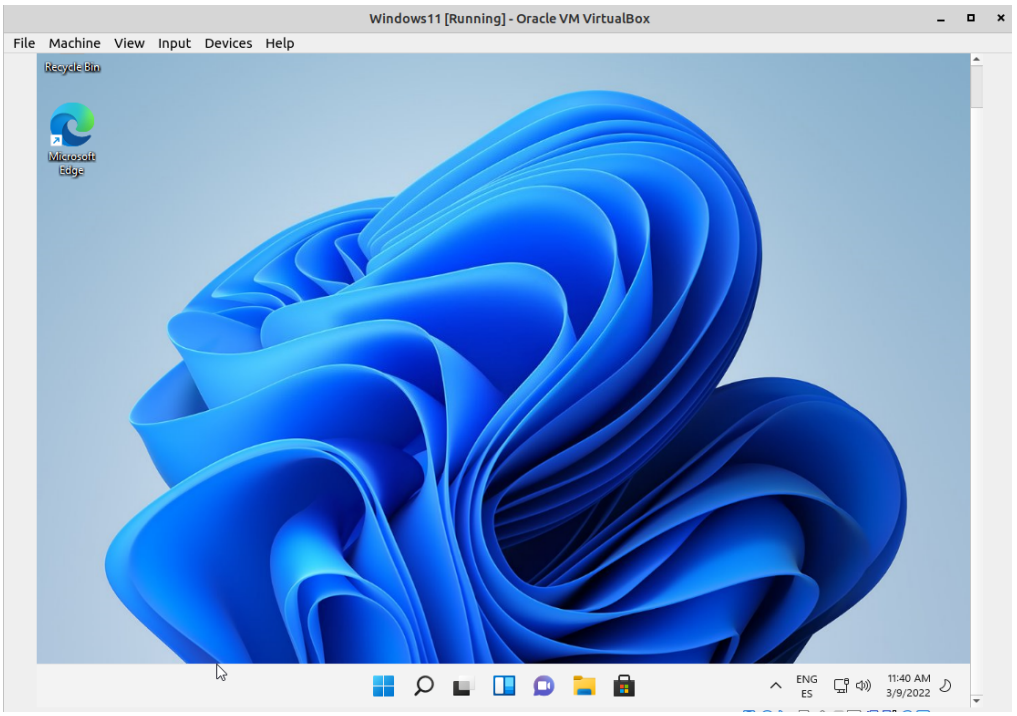





Windows Setup
Where do you want to install Windows?
Name
Total size
Free space
Type
Drive 0 Partition 1
100.0 MB
95.0 MB
System
Drive 0 Partition 2
16.0 MB
16.0 MB
MSR (Reserved)
Drive 0 Partition 3
58.7 GB
58.7 GB
Primary
Refresh
Delete
Format
New
Load driver
Extend
Next


le Machine View Input Devices Help
BdsDxe: loading Boot0004 "Windows Boot Manager" from HD(1,GPT,A64578A1-F90C-4477-AFA5-9D0A473E1A2B,0x800,0x32000)/\EFI\Microsoft\Boot\bootmgfw.efi
BdsDxe: starting Boot0004 "Windows Boot Manager" from HD(1,GPT,A64578A1-F90C-4477-AFA5-9D0A473E1A2B,0x800,0x32000)/\EFI\Microsoft\Boot\bootmgfw.efi
VirtualBox



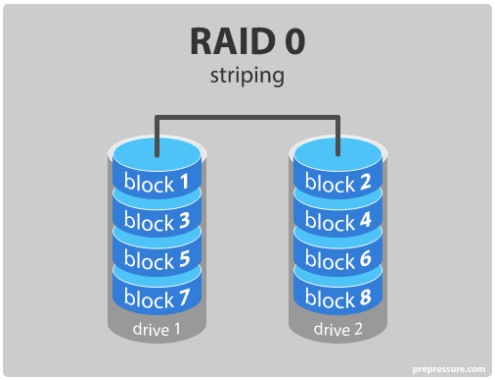


Once Windows 11 is installed, we are going to try the following tools:

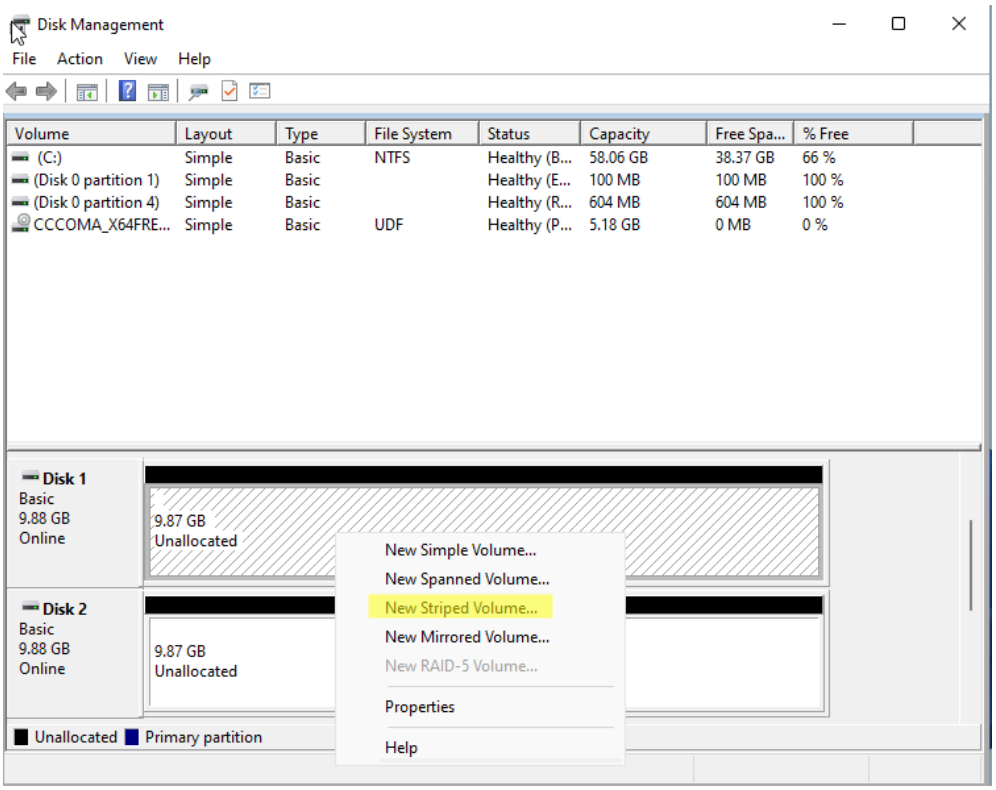
THERE IS TWO WAYS OF DOING THE RAIDS SO THE RAID0 WILL DO IT WITH THE SOFTWARE STORAGE SPACE AND I'LL PUT A EXAMPLE FOR THE OTHER WAY

• Create a RAID 0 (striped volume) using two virtual disks.

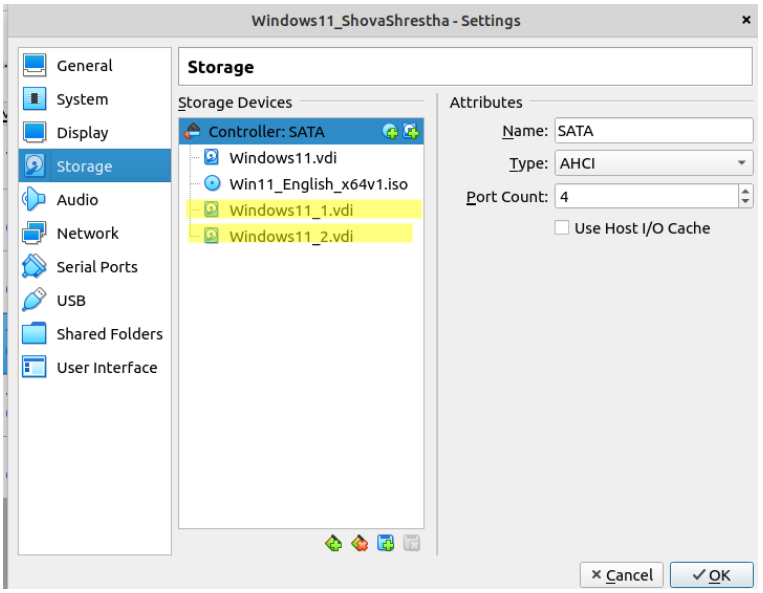
In a RAID 0 system data is split up into blocks that get written across all the drives in the array. By using multiple disks (at least 2) at the same time, this offers superior I/O performance. This performance can be enhanced further by using multiple controllers, ideally one controller per disk.



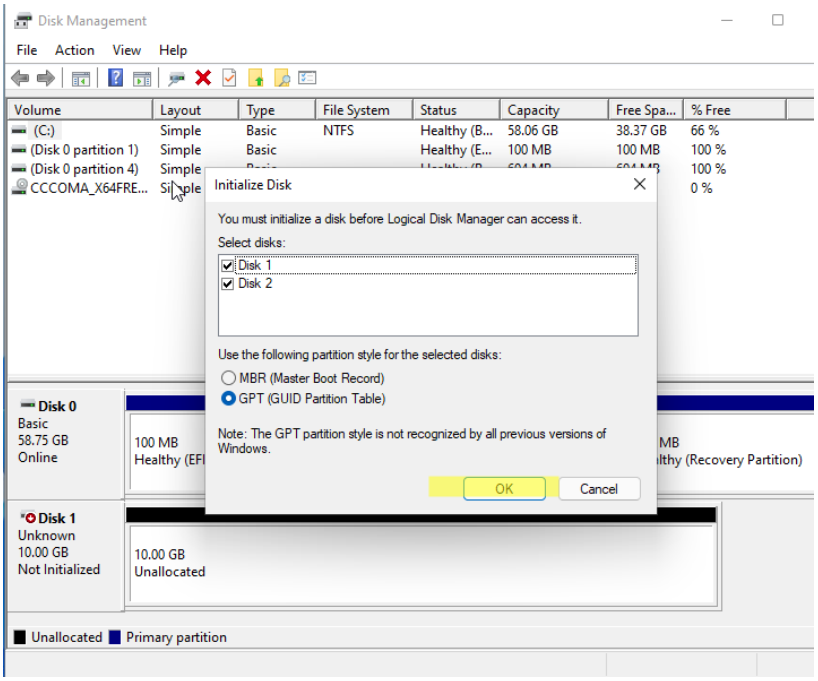
CREATE RAID 0

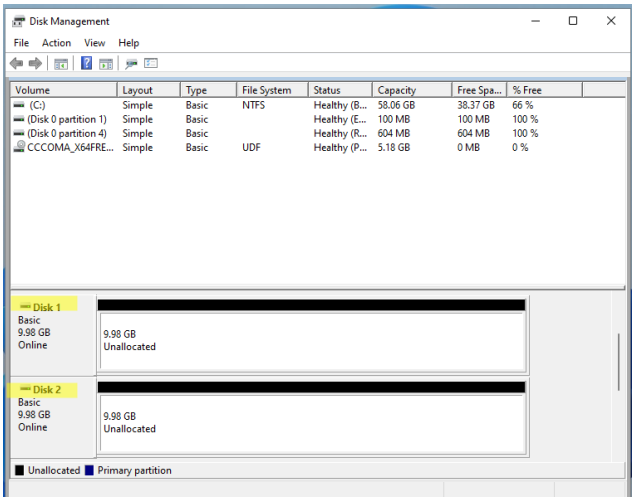


We create two virtual disk each one with 10GB

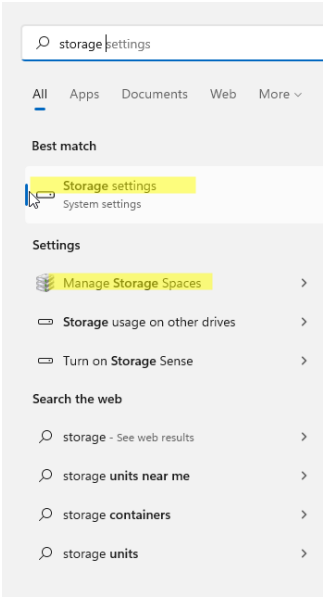


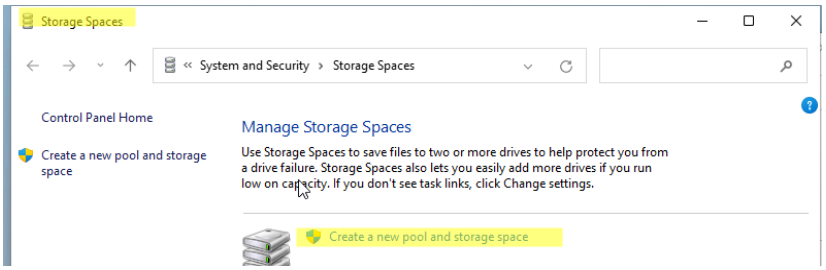
Then we start the virtual machine, go to the disk management where we can see the two disks that we have created.



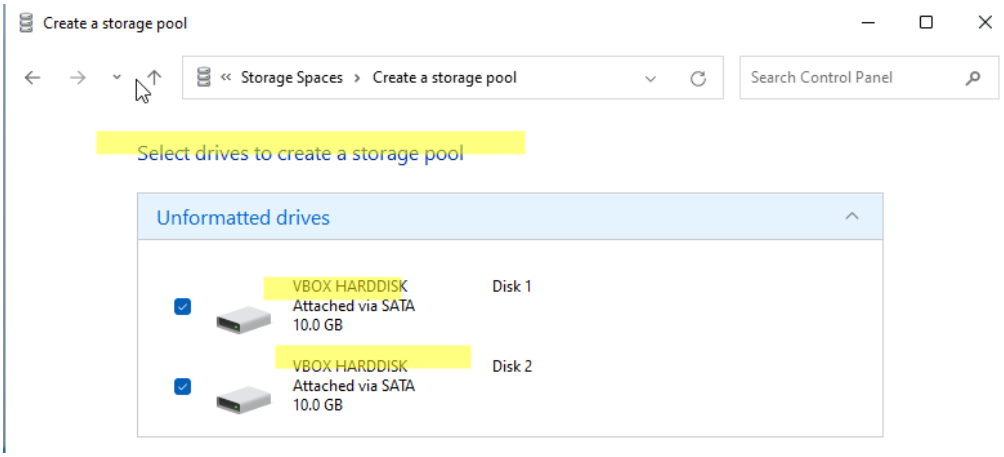


We search manage storage space, we click and we click in create a new pool and storage space

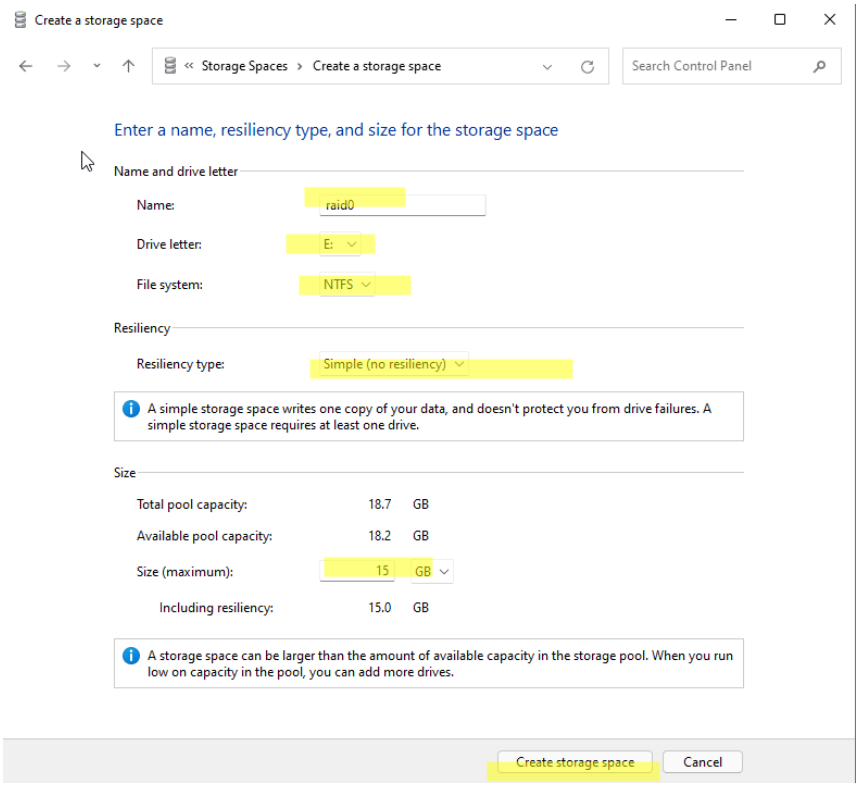




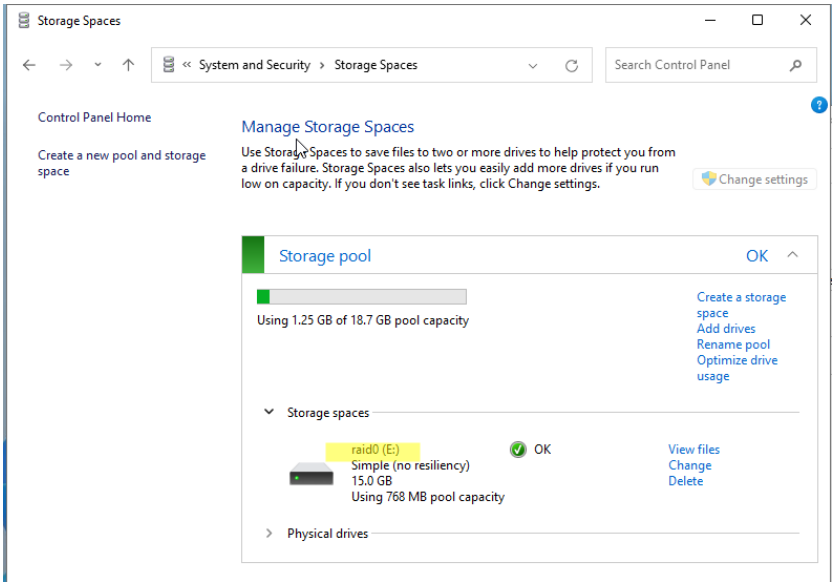
we choose the two virtual disks that we have before created.

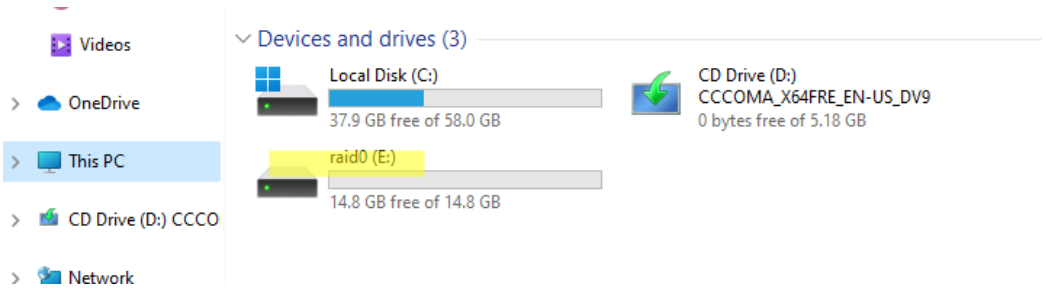


Now some configurations, choose the name, the drive letter, the file system and the resilient type which will be simple, that means it's raid0, also we need to choose the maximum size, in the end we click create storage space.



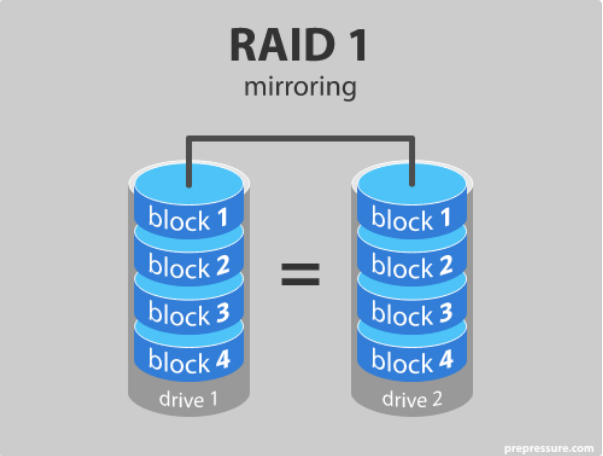
It's properly created.



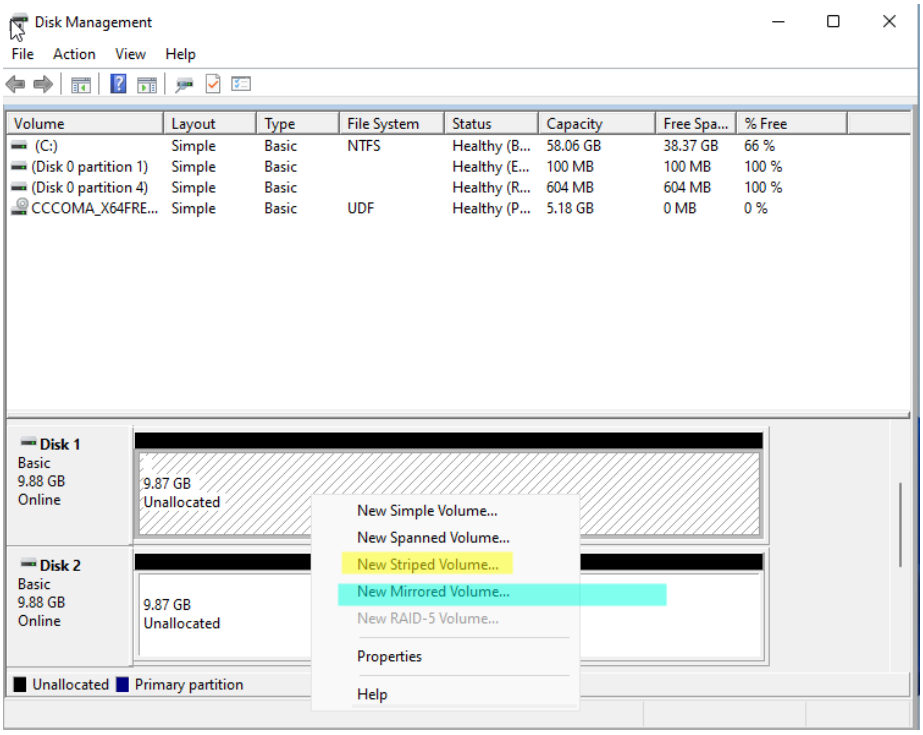


• Create a RAID 1 (mirrored volume) using two virtual disks.

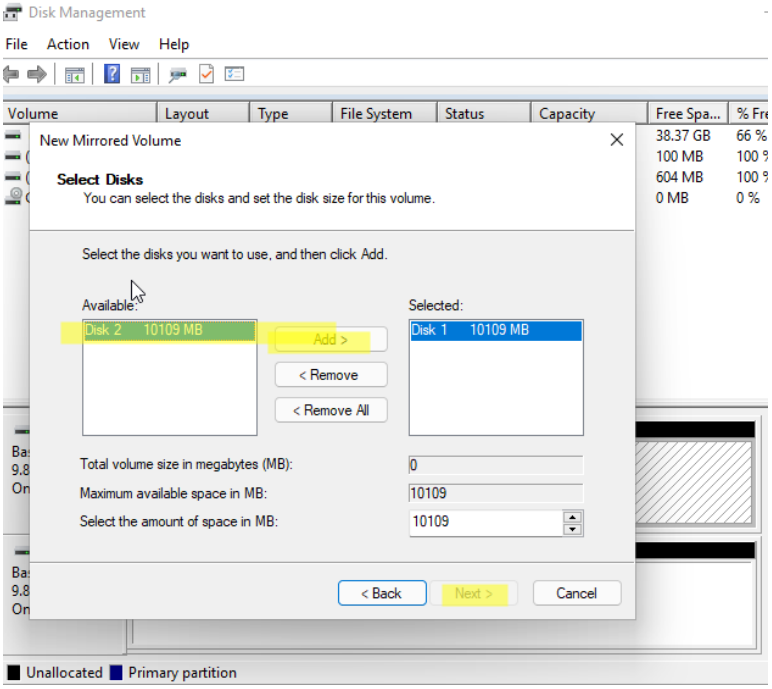
Data is stored twice by writing them to both the data drive (or set of data drives) and a mirror drive (or set of drives). If a drive fails, the controller uses either the data drive or the mirror drive for data recovery and continuous operation. You need at least 2 drives for a RAID 1 array.

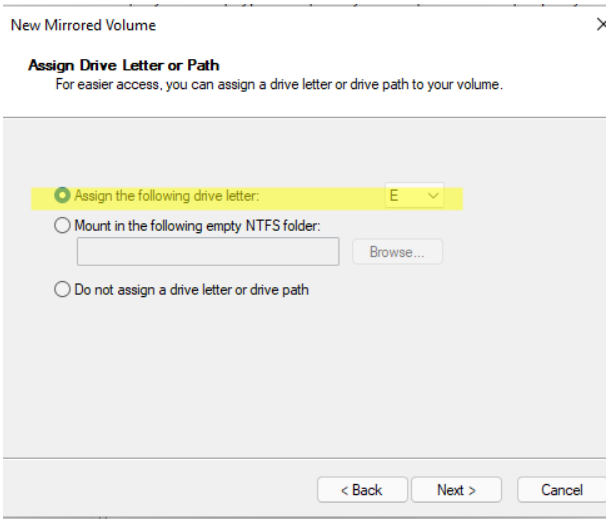


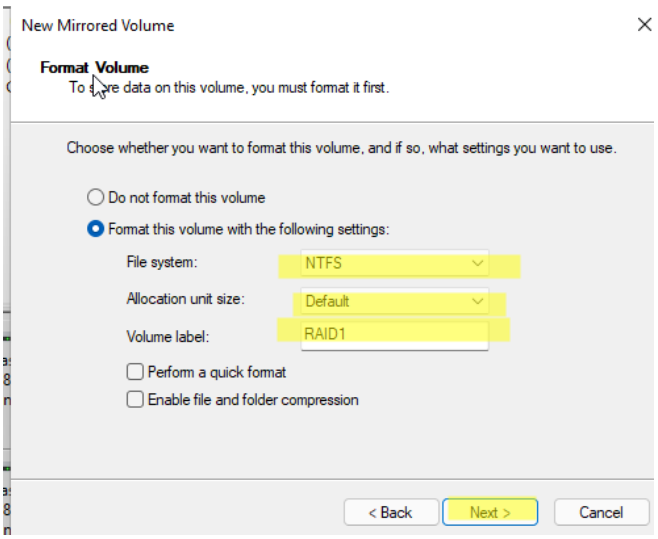
We select new **Mirror Volumen** to create raid1

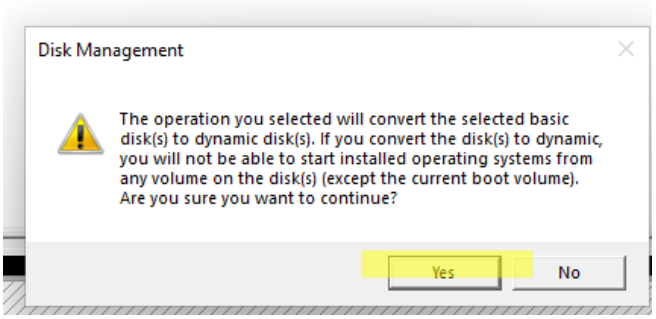


We choose the disk and add it

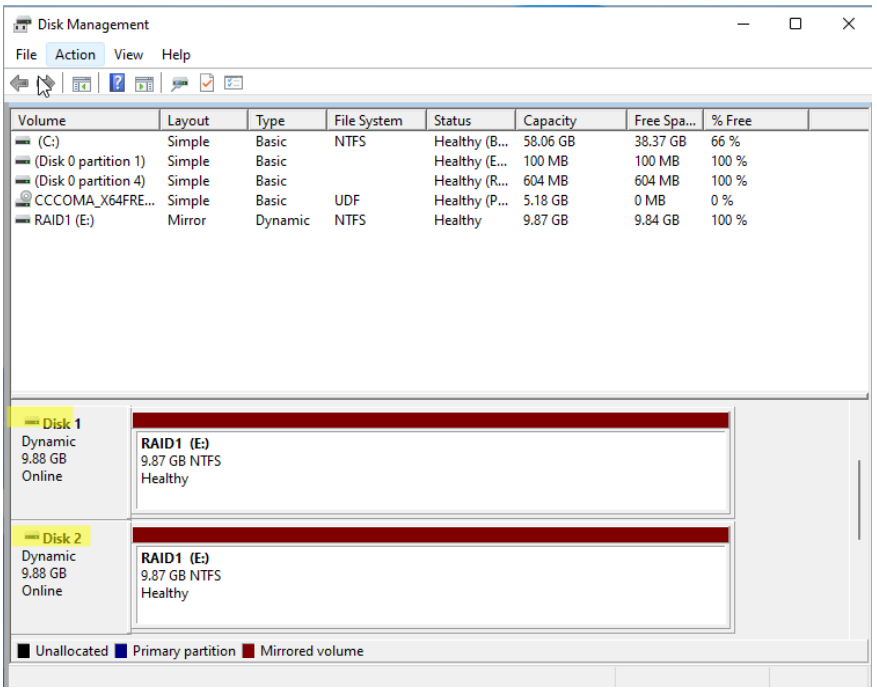


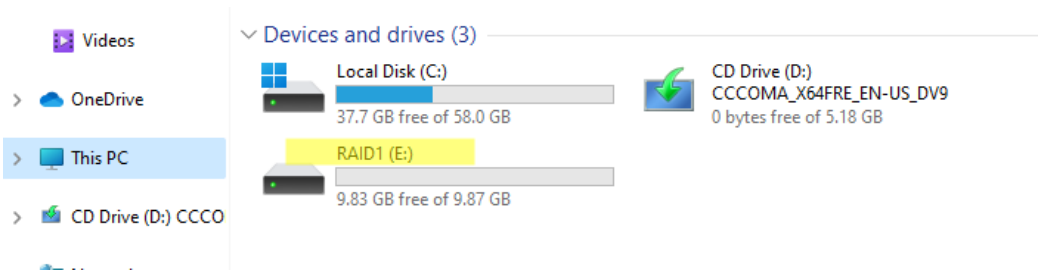





Disk Management
The operation you selected will convert the selected basic disk(s) to dynamic disk(s). If you convert the disk(s) to dynamic, you will not be able to start installed operating systems from any volume on the disk(s) (except the current boot volume). Are you sure you want to continue?
Yes
No

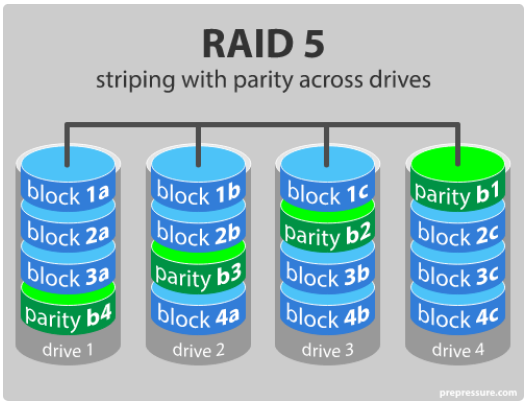
It's ready


Disk Management
File Action View Help
Volume Layout Type File System Status Capacity Free Spa... % Free
(C:) Simple Basic NTFS Healthy (B... 58.06 GB 38.37 GB 66 %
(Disk 0 partition 1) Simple Basic Healthy (E... 100 MB 100 MB 100 %
(Disk 0 partition 4) Simple Basic Healthy (R... 604 MB 604 MB 100 %
CCCOMA_X64FRE... Simple Basic UDF Healthy (P... 5.18 GB 0 MB 0 %
RAID1 (E:) Mirror Dynamic NTFS Healthy 9.87 GB 9.84 GB 100 %
Disk 1
Dynamic
9.88 GB
Online
RAID1 (E:)
9.87 GB NTFS
Healthy
Disk 2
Dynamic
9.88 GB
Online
RAID1 (E:)
9.87 GB NTFS
Healthy
Unallocated Primary partition Mirrored volume


Videos
OneDrive
This PC
CD Drive (D:) CCCO
Devices and drives (3)
Local Disk (C:)
37.7 GB free of 58.0 GB
CD Drive (D:)
CCCOMA_X64FRE_EN-US_DV9
0 bytes free of 5.18 GB
RAID1 (E:)
9.83 GB free of 9.87 GB

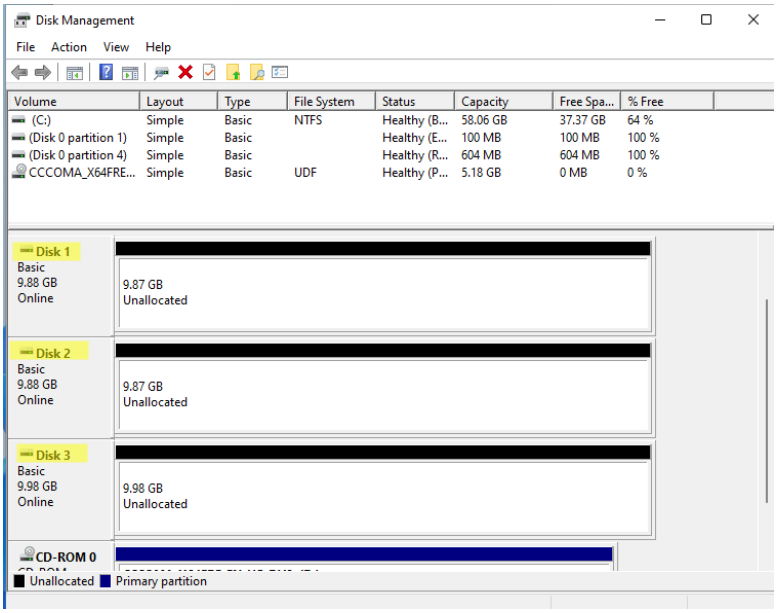
• Create a RAID 5 using three virtual disks and the tool “Storage spaces”.

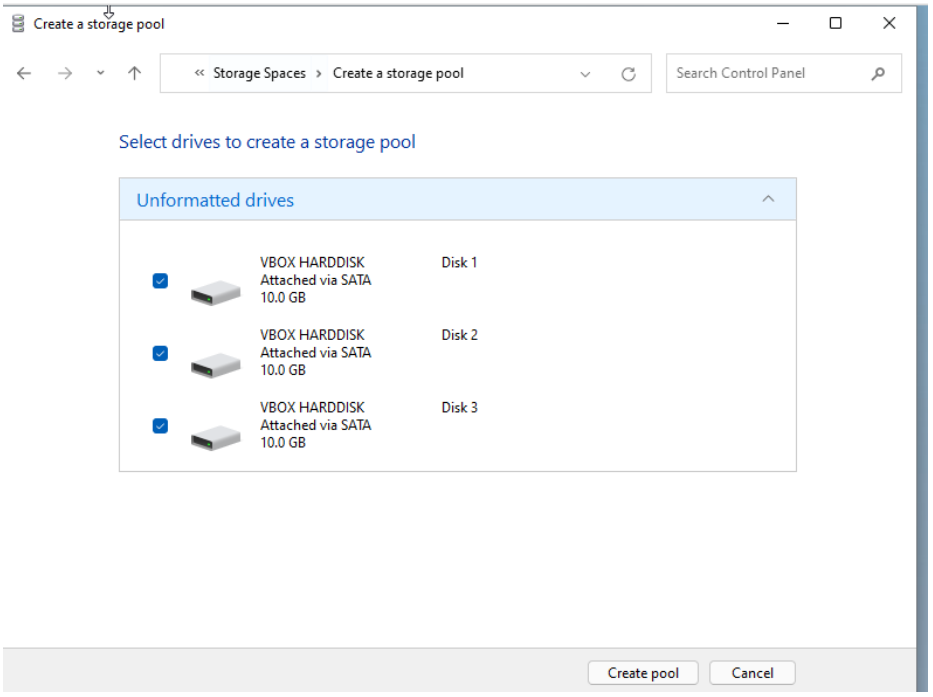
It requires at least 3 drives.Data blocks are stripped across the drives and on one drive a parity checksum of all the block data is written. The parity data are not written to a fixed drive, they are spread across all drives, as the drawing below shows. Using the parity data, the computer can recalculate the data of one of the other data blocks, should those data no longer be available.

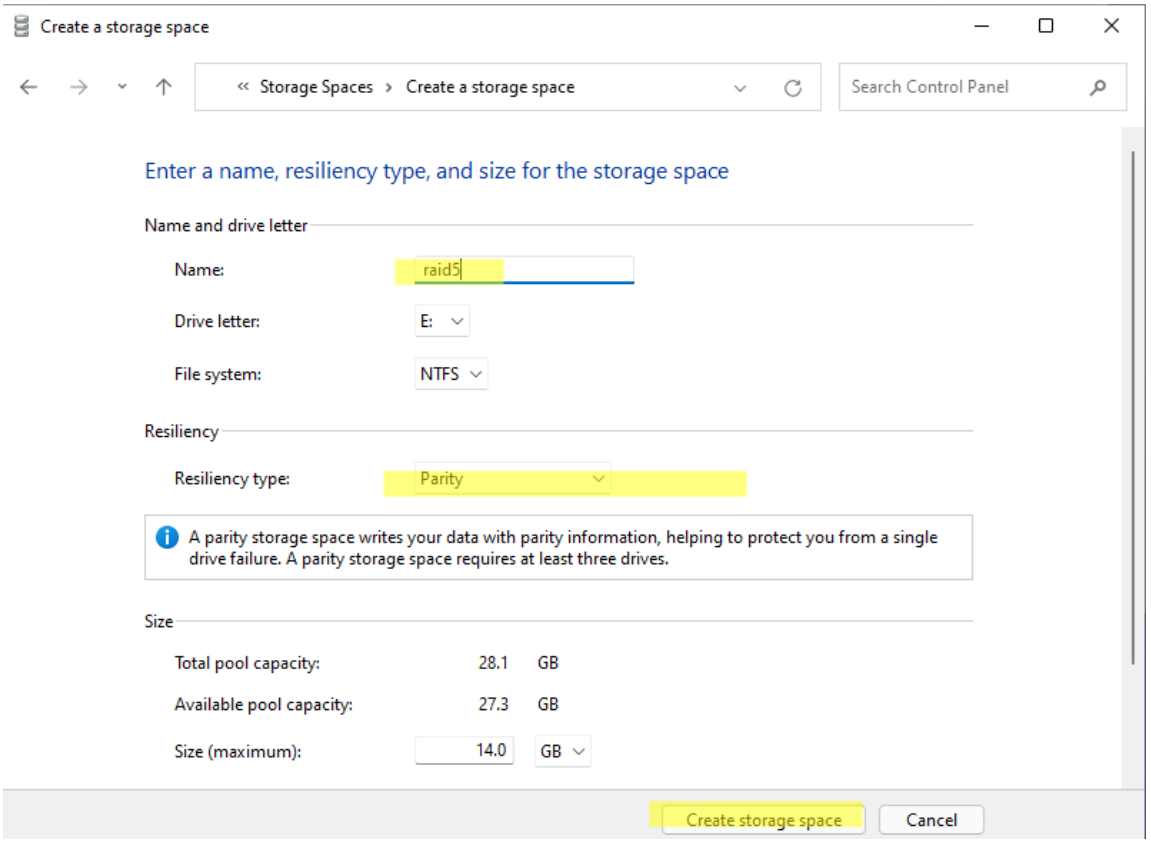


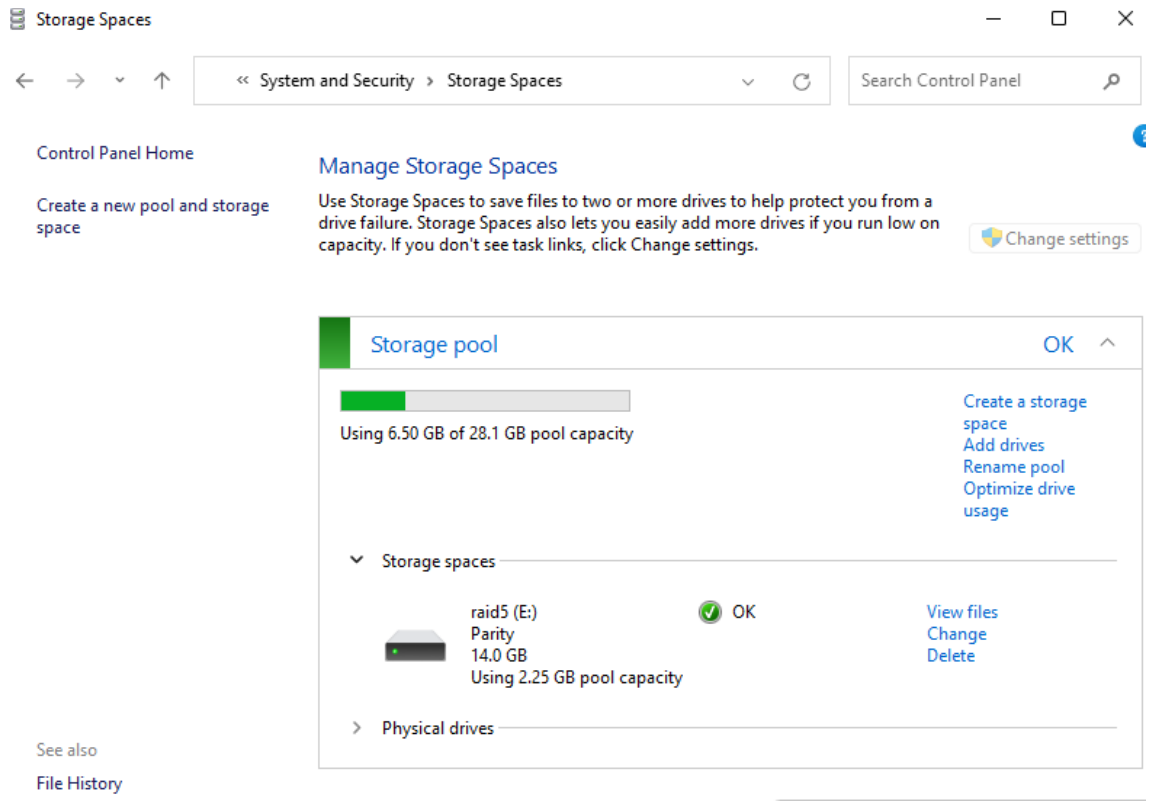
CREATE RAID 5

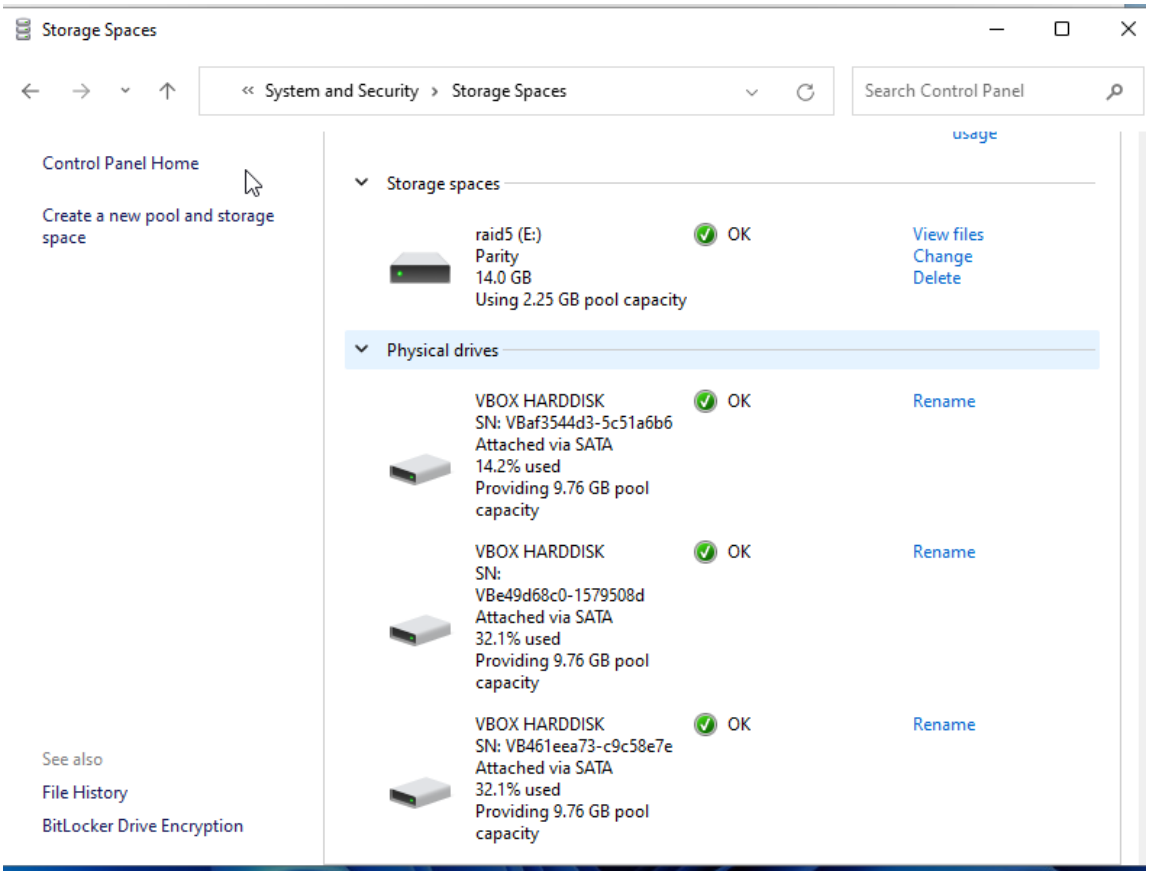
In this case we need three hard disc, we need to go to the create storage space, were we will select the three hard disc, and there we will put the name raid5 and the resiliency type as PARITY




Create a storage pool
Storage Spaces › Create a storage pool
Search Control Panel
Select drives to create a storage pool
Unformatted drives
VBOX HARDDISK
Attached via SATA
10.0 GB
Disk 1
VBOX HARDDISK
Attached via SATA
10.0 GB
Disk 2
VBOX HARDDISK
Attached via SATA
10.0 GB
Disk 3
Create pool
Cancel


Create a storage space
Storage Spaces › Create a storage space
Search Control Panel
Enter a name, resiliency type, and size for the storage space
Name and drive letter
Name:
raid5
Drive letter:
E:
File system:
NTFS
Resiliency
Resiliency type:
Parity
A parity storage space writes your data with parity information, helping to protect you from a single drive failure. A parity storage space requires at least three drives.
Size
Total pool capacity:
28.1
GB
Available pool capacity:
27.3
GB
Size (maximum):
14.0
GB
Create storage space
Cancel


Storage Spaces
System and Security › Storage Spaces
Search Control Panel
Control Panel Home
Create a new pool and storage space
Manage Storage Spaces
Use Storage Spaces to save files to two or more drives to help protect you from a drive failure. Storage Spaces also lets you easily add more drives if you run low on capacity. If you don't see task links, click Change settings.
Change settings
Storage pool
OK
Using 6.50 GB of 28.1 GB pool capacity
Create a storage space
Add drives
Rename pool
Optimize drive usage
Storage spaces
raid5 (E:)
Parity
14.0 GB
Using 2.25 GB pool capacity
OK
View files
Change
Delete
Physical drives
See also
File History


Storage Spaces
System and Security › Storage Spaces
Search Control Panel
Control Panel Home
Create a new pool and storage space
Storage spaces
raid5 (E:)
Parity
14.0 GB
Using 2.25 GB pool capacity
OK
View files
Change
Delete
Physical drives
VBOX HARDDISK
SN: VBaf3544d3-5c51a6b6
Attached via SATA
14.2% used
Providing 9.76 GB pool capacity
OK
Rename
VBOX HARDDISK
SN: VBe49d68c0-1579508d
Attached via SATA
32.1% used
Providing 9.76 GB pool capacity
OK
Rename
VBOX HARDDISK
SN: VB461eea73-c9c58e7e
Attached via SATA
32.1% used
Providing 9.76 GB pool capacity
OK
Rename
See also
File History
BitLocker Drive Encryption

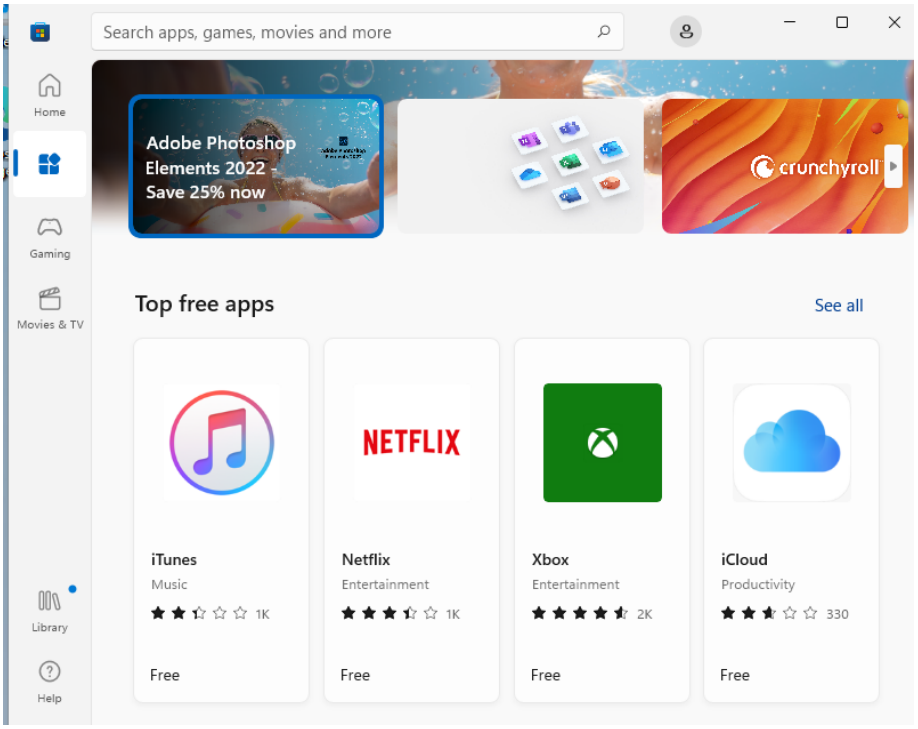
• Search about a new feature of Windows 11. Explain how the tool chosen works in as much detail as possible.

The addition of Android apps, via a subset of the apps available via the Amazon Appstore.

The store of the android applications you can find in the apps of the computer system, the store is divided into four parts: Home,Apps, Gaming, Movies and TV.

To download an app you need to go to the app section where you will find many apps. If you want to find any app you can go to the searcher which is up in the tab. Search the app, click it and then you will click download.

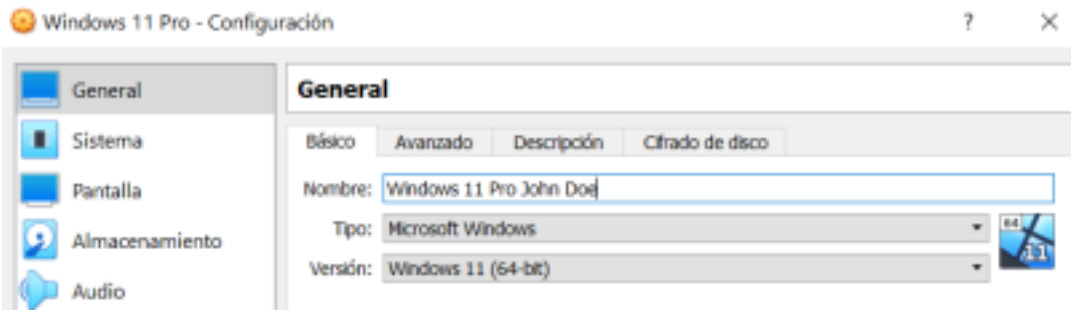
This new feature is really helpful because you don't need to go to a web to download any app which could have any virus, this store android apps are more safe.



IMPORTANT: You must submit a document with screenshots to demonstrate how you completed the different parts.

ALL THE EXPLANATIONS AND SCREENSHOTS MUST BE IN ENGLISH. If found at least one in Spanish, you will get a mark of 0

In addition, you should include in the screenshots something that helps to identify that the assignment is individual. For example, the virtual machine name.



Other elements to identify the assignment could be the name of the RAID volumes, virtual disk names, etc.windows 11 pro