

Backups. Who needs em?

In the famous words of Alfred E. Neuman
What, me worry?

For those of you who don't know who Alfred E. Neuman is. Here he is. No, he's the guy on the right.



Why bother to backup your computer?

Because something is going to go wrong.

Hardware Failure

Software Failure

Virus/Malware

Ransomware Attack

Your kids (grandkids)/spouse play
with your computer

How can we make the process easier?

How about automation and simplification.

Most common types of backups

Full

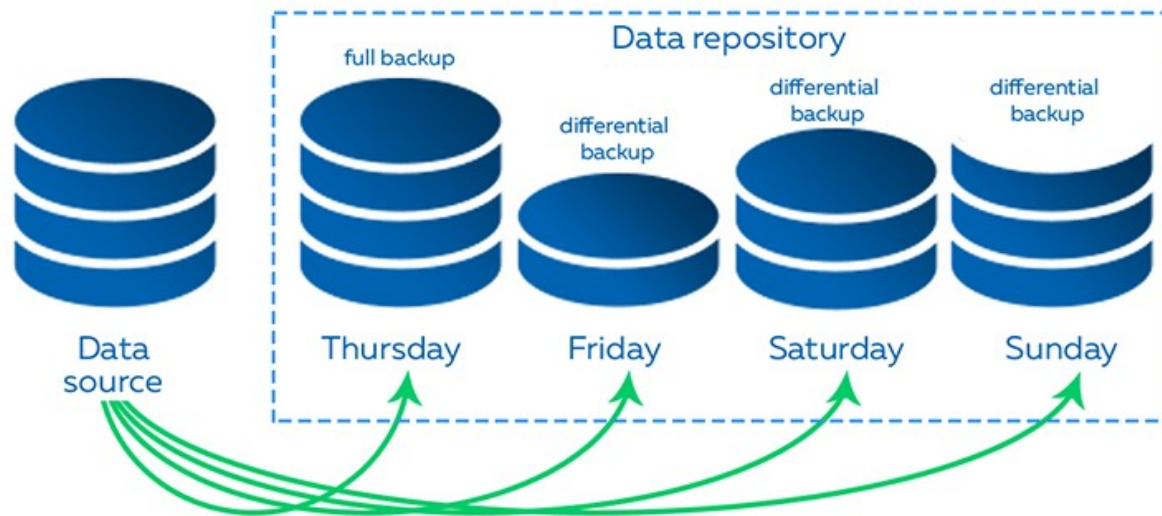
Differential

Incremental

Full backup – Everything gets backed up. Takes up the most space, takes the longest.

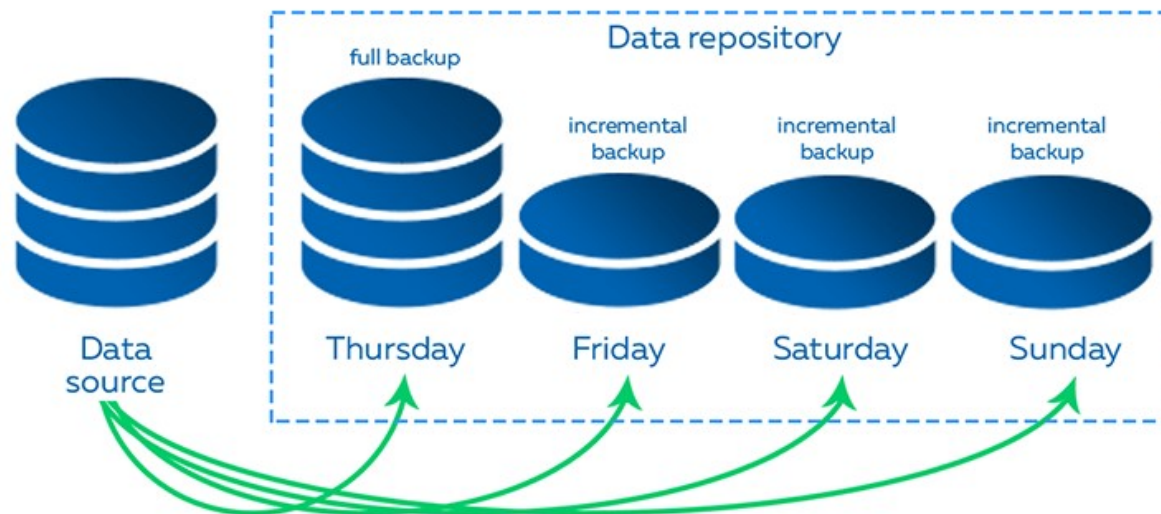
Differential Backup – Backup is everything that has changed since the last full backup. Fast and smaller backups.

Differential

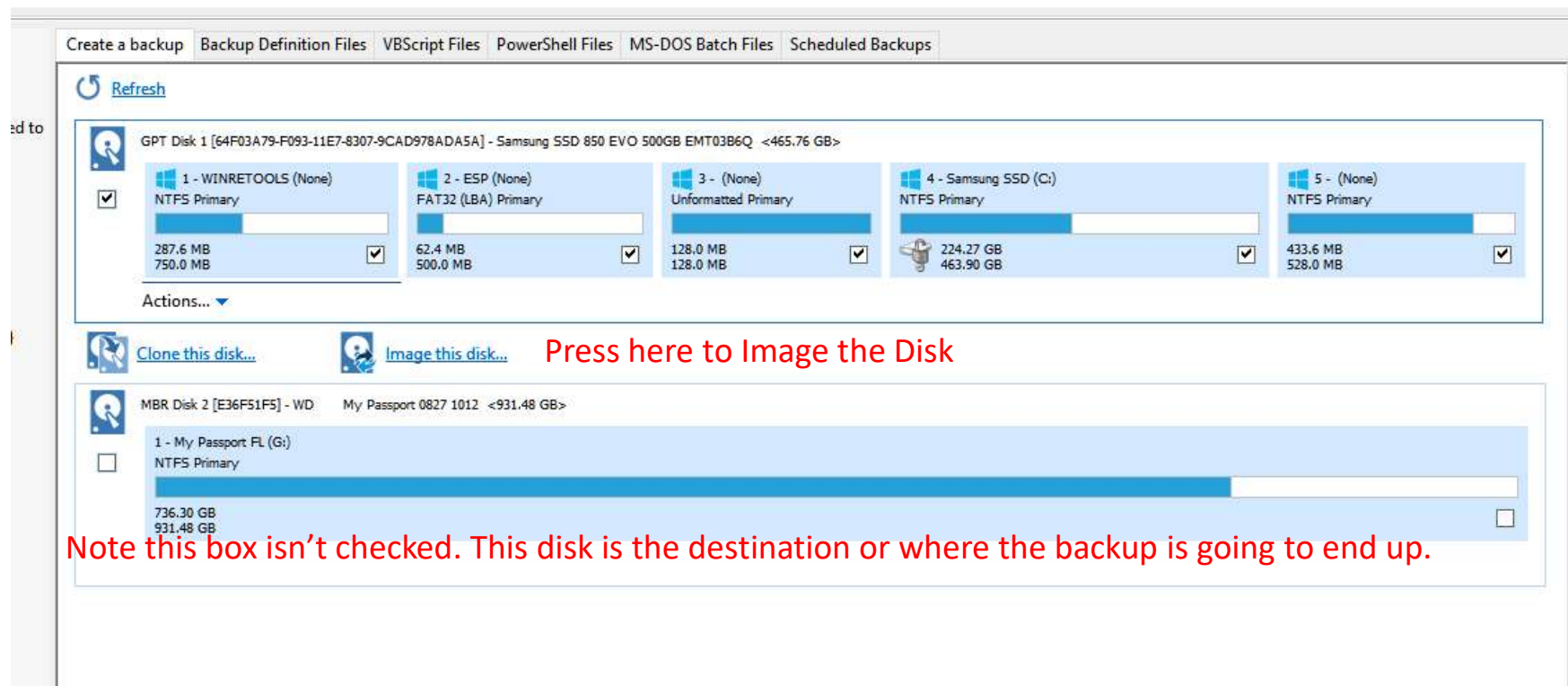


Incremental Backup – Backup is everything that has changed since the last Incremental Backup.
Fast and smallest.

Incremental



Next is Automation. Both Macrium and EaseUS allow scheduling so backups can be run automatically.



Disk Image



Select Source Drive(s) and Image Destination

Source

GPT Disk 1 [64F03A79-F093-11E7-8307-9CAD978ADA5A] - Samsung SSD 850 EVO 500GB EMT03B6Q <465.76 GB>

Volume	File System	Size	Free Space	Selected
1 - WINRETOOLS (None)	NTFS Primary	287.6 MB	750.0 MB	<input checked="" type="checkbox"/>
2 - ESP (None)	FAT32 (LBA) Primary	62.4 MB	500.0 MB	<input checked="" type="checkbox"/>
3 - (None)	Unformatted Primary	128.0 MB	128.0 MB	<input checked="" type="checkbox"/>
4 - Samsung SSD (C:)	NTFS Primary	224.27 GB	463.90 GB	<input checked="" type="checkbox"/>
5 - (None)	NTFS Primary	433.6 MB	528.0 MB	<input checked="" type="checkbox"/>

Total Selected: 225.16 GB

Destination

☒ Folder: G:\Macrium Backup\ [Alternative locations](#)

☐ CD/DVD Burner: (D:) - Dell , DVD+/-RW DW514 v0102 (0:0:0)

☒ Use the Image ID as the file name. (Recommended)

Backup filename: {IMAGEID}

G:\Macrium Backup\{IMAGEID}-00-00.mimg

Here's where you set the destination or where
The backup should be saved.

Then Click Here

[Advanced Options](#)

Help

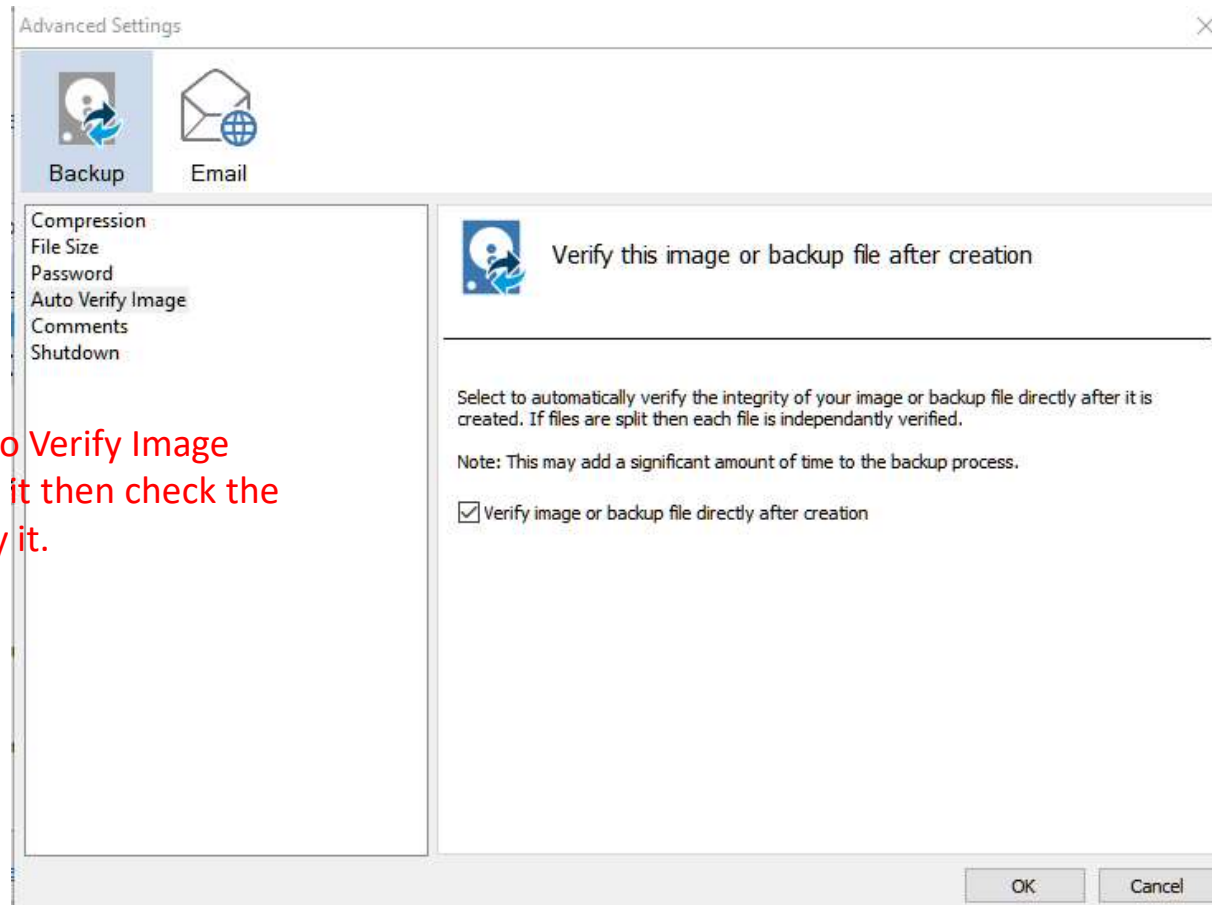
< Back

Next >

Cancel

Finish

Keep hitting next after each step in this case
after setting Auto Verify.



Click on Auto Verify Image
to highlight it then check the
box to verify it.

Hit OK

Click on Add Schedule Then Add a Full Schedule

The screenshot shows a backup software interface with three main sections: 1. Select a Template for your Backup Plan, 2. Add/Edit Schedules, and 3. Define Retention Rules. The 'Full Schedule Settings' dialog box is open, showing options for Frequency (Monthly, Weekly, Daily, One Time Only, On Event) and Settings (Every, Day, Of month(s)). The 'Every' option is selected, and the frequency is set to 'First' on 'Monday' at '09:00' starting on '5/ 3/2021'. The 'Of month(s)' section has checkboxes for all months (January through December), all of which are checked. The 'Start Time' is '09:00' and the 'Start Date' is '5/ 3/2021'. The 'Conditions...' button is visible at the bottom left of the dialog. The main interface also shows an 'Add Schedule' button in the '2. Add/Edit Schedules' section and a 'Purge the oldest backup s' checkbox in the '3. Define Retention Rules' section.

1. Select a Template for your Backup Plan
None Full Schedule

2. Add/Edit Schedules
Backup Type Sc
Add Schedule

3. Define Retention Rules
Apply retention rules to match
☒ Full Keep
☒ Differential Keep
☐ Incremental Keep
☐ Run the purge before backup
☒ Purge the oldest backup s

Full Schedule Settings

Frequency
☒ Monthly
☐ Weekly
☐ Daily
☐ One Time Only
☐ On Event

Settings
☒ Every
☐ Day
☐ Of month(s)
First Monday
1
☒ January ☒ February ☒ March
☒ April ☒ May ☒ June
☒ July ☒ August ☒ September
☒ October ☒ November ☒ December
Start Time 09:00
Start Date 5/ 3/2021

Conditions... OK Cancel

Advanced Options Help < Back Next > Ca

Say OK when done with the first schedule. Don't hit Next until the second schedule is done.

Add Another Schedule This Time a Differential Schedule

Edit the Plan for this Backup

1. Select a Template for your Backup
None

2. Add/Edit Schedules
Backup Type: Full
Schedule: At 9:00 AM
Add Schedule

3. Define Retention Rules
Apply retention rules to match:
☒ Full Keep
☒ Differential Keep
☐ Incremental Keep
☐ Run the purge before backup
☒ Purge the oldest backup sets (by less than 5 days) on the target volume (minimum 1GB)

Differential Schedule
Differential Schedule Settings

Frequency
☐ Monthly
☒ Weekly
☐ Daily
☐ One Time Only
☐ On Event


Settings
Select Days: ☒ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday ☐ Saturday ☐ Sunday
Every: 1 Weeks
Start Time: 09:00
Start Date: 4/12/2021

Conditions... OK Cancel

Advanced Options Help < Back Next >

Say OK Then Hit Next

Define the Retention Rules (how many backups to keep)




 Edit the Plan for this Backup

1. Select a Template for your Backup Plan

None

2. Add/Edit Schedules

Backup Type	Schedule
Full	At 9:00 AM on the first Mon of every month, starting 5/3/2021
Differential	At 9:00 AM every Mon of every week, starting 4/12/2021

 Add Schedule  Edit Schedule  Delete Schedule

3. Define Retention Rules




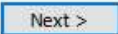
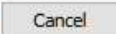
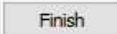
Apply retention rules to matching backup sets in the target folder

<input checked="" type="checkbox"/> Full	Keep	2	Backups
<input checked="" type="checkbox"/> Differential	Keep	4	Backups
<input type="checkbox"/> Incremental	Keep	10	Backups

Create a Synthetic Full if possible ☐

☒ Run the purge before backup.

☒ Purge the oldest backup set(s) if less than 5 GB on the target volume (minimum 1GB)

 [Advanced Options](#)  Help  < Back  Next >  Cancel  Finish

Hit Next

Backup Summary

Imaging Summary



Auto Verify: Y
Maximum File Size: Automatic
Compression: Medium
Password: N
Intelligent Copy: Y
Power Saving: N
Email On Success: N
Email On Warning: N
Email On Failure: N
Total Selected: 225.16 GB
Current Time: 4/6/2021 12:32:58 PM

Schedules

Full - At 9:00 AM on the first Mon of every month, starting 5/3/2021
Diff - At 9:00 AM every Mon of every week, starting 4/12/2021

Retention Rules

Rules will be applied to all matching backup sets in the destination folder

Full: Retain 2 full images
Linked incremental and differential images will also be deleted

Differential: Retain 4 differential images
Linked incremental images will also be deleted

Purge will be run before the image.

Free space threshold: Delete oldest backup sets when free space is less than 5.00 GB

Destination:

File Name: G:\Macrium Backup\{IMAGEID}-00-00.mimg

Operation 1 of 5

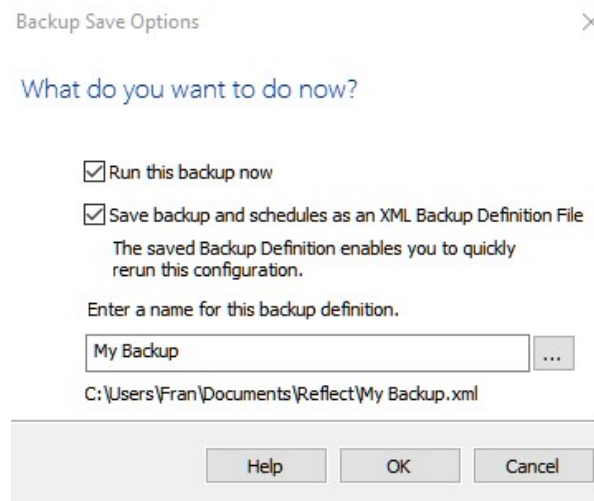
Hard Disk: 1
Drive Letter: N/A
File System: NTFS
Label: WINRETOOLS
Size: 750.0 MB
Free: 462.4 MB
Used: 287.6 MB

Operation 2 of 5

Hard Disk: 1
Drive Letter: N/A
File System: FAT32 (LBA)
Label: ESP
Size: 496.0 MB
Free: 433.6 MB

If The Summary Looks Good Then Hit Finish

Hit Finish And You Get This



At a minimum, leave the box checked to save the backup definition or hit OK to run it as well.

[Create a backup](#)
[Backup Definition Files](#)
[VBScript Files](#)
[PowerShell Files](#)
[MS-DOS Batch Files](#)
[Scheduled Backups](#)

Filter list:

File Name	Path	Type
My Backup(7).xml	C:\Users\Fran\Documents\Reflect\	Image

Here's my backup definition file which was just saved.
Click Once On It And You'll See The Details.

Image Options [XML View](#)

Current Time: 4/6/2021 12:25:43 PM

Schedules

Full - At 9:00 AM on the first Sun of every month, starting 1/13/2019
 Diff - At 9:00 AM every Mon of every week, starting 1/6/2019

Retention Rules

Rules will be applied to all matching backup sets in the destination folder

Full: Retain full images for 8 Weeks
 Linked incremental and differential images will also be deleted

Differential: Retain differential images for 30 Days
 Linked incremental images will also be deleted

Purge will be run before the image.

Free space threshold: Delete oldest backup sets when free space is less than 5.00 GB

Destination:

File Name: G:\Macrium Backup\{IMAGEID}-00-00.mimg

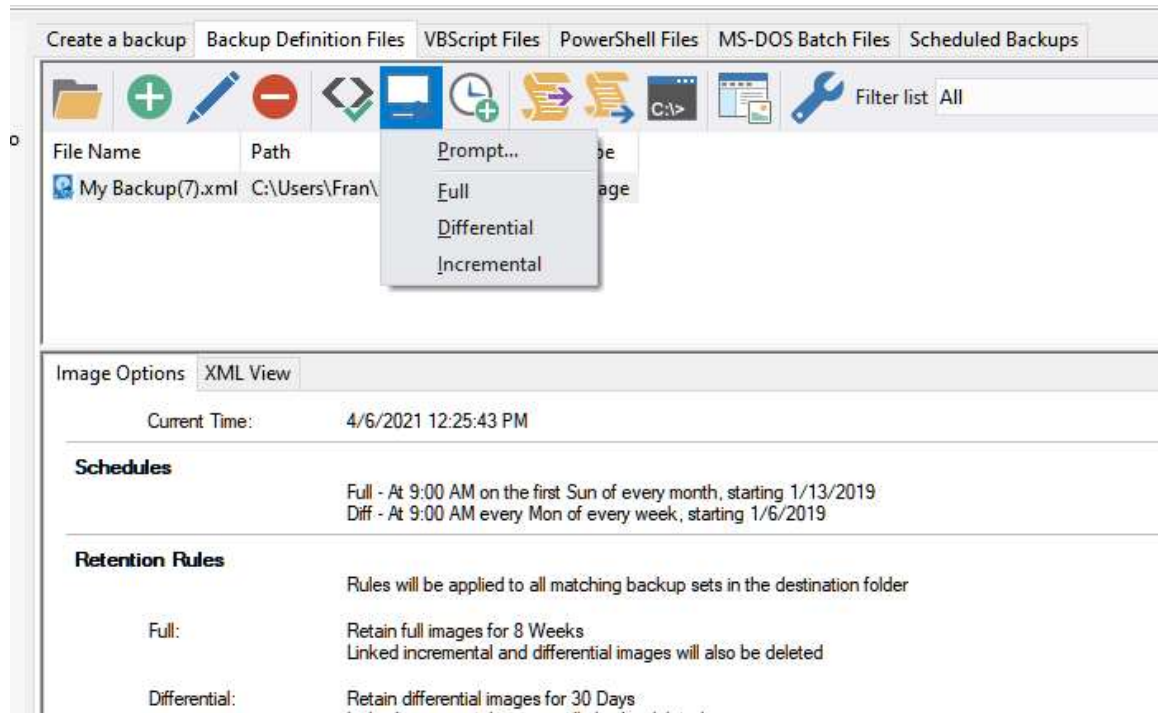
Operation 1 of 5

Hard Disk:	1
Drive Letter:	N/A
File System:	NTFS
Label:	WINRETOOLS
Size:	750.0 MB
Free:	462.4 MB
Used:	287.6 MB

Operation 2 of 5

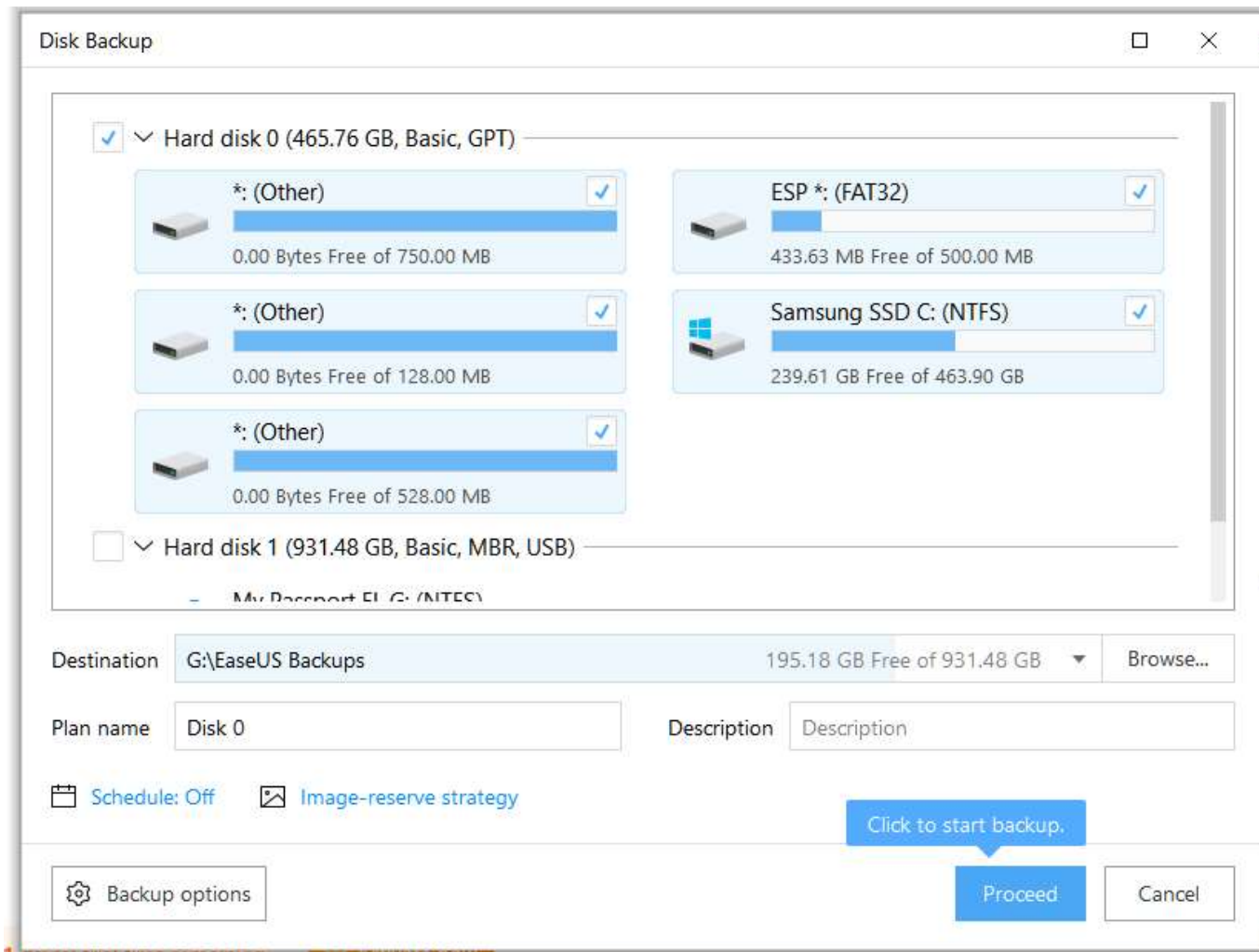
Hard Disk:	1
Drive Letter:	N/A
File System:	FAT32 (8 GB)

Click on the computer icon and you get these choices.
If you want to run a backup, click on Full or Differential and it will start backing up.



If you want to change the Backup Definition File, click on the pencil. You'll then be able to edit it.

There's a similar process for EaseUS



Backup Scheme ✕

Schedule Type:

☐ One-time backup

☐ Daily

☐ Weekly

☒ Monthly

☐ Upon event

☒ Every First ▼ Week

☐ Start

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	Last Day			

Backup method Incremental ▼

☒ Appoint monthly first backup as Full ▼

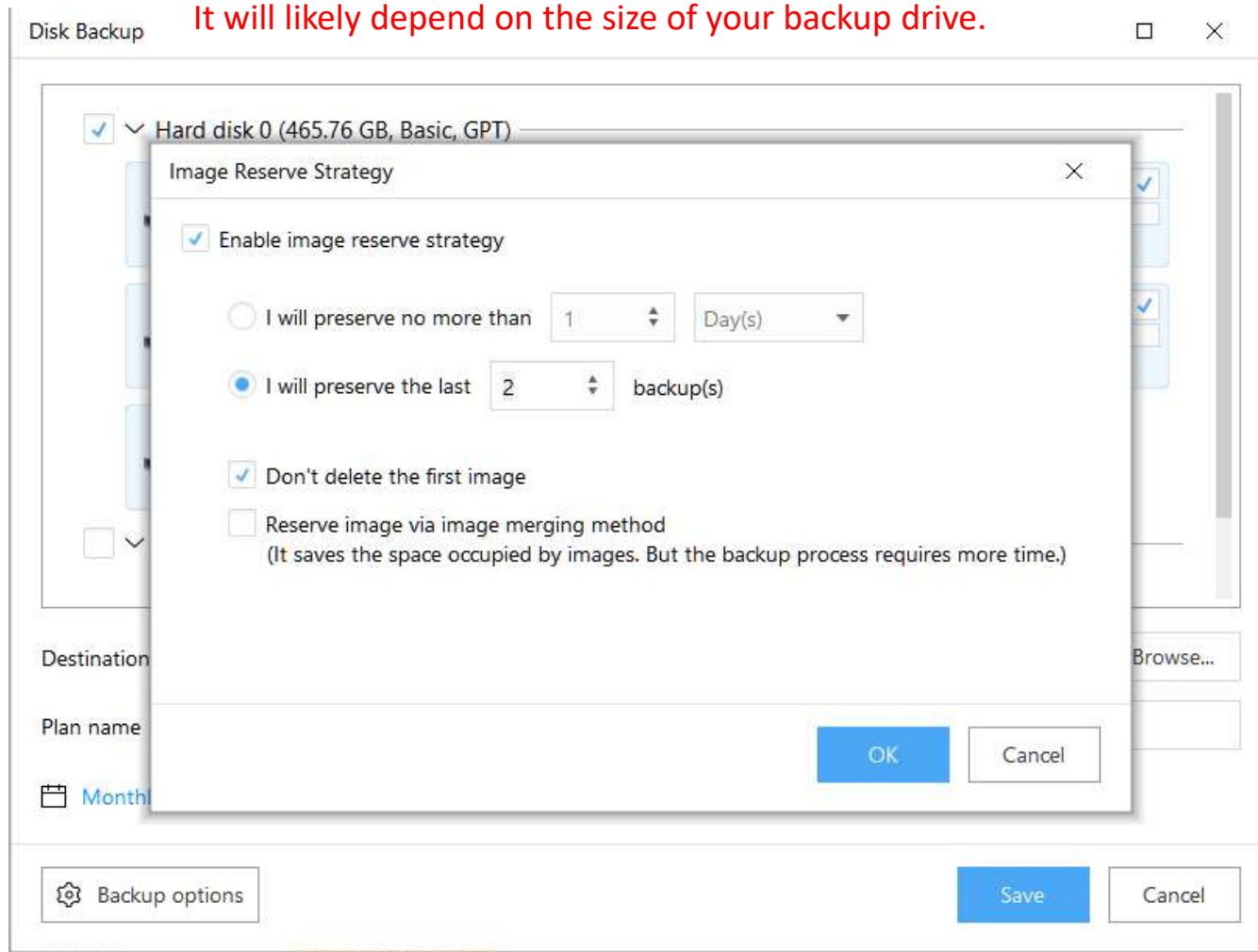
☒ Wake the computer to run this backup

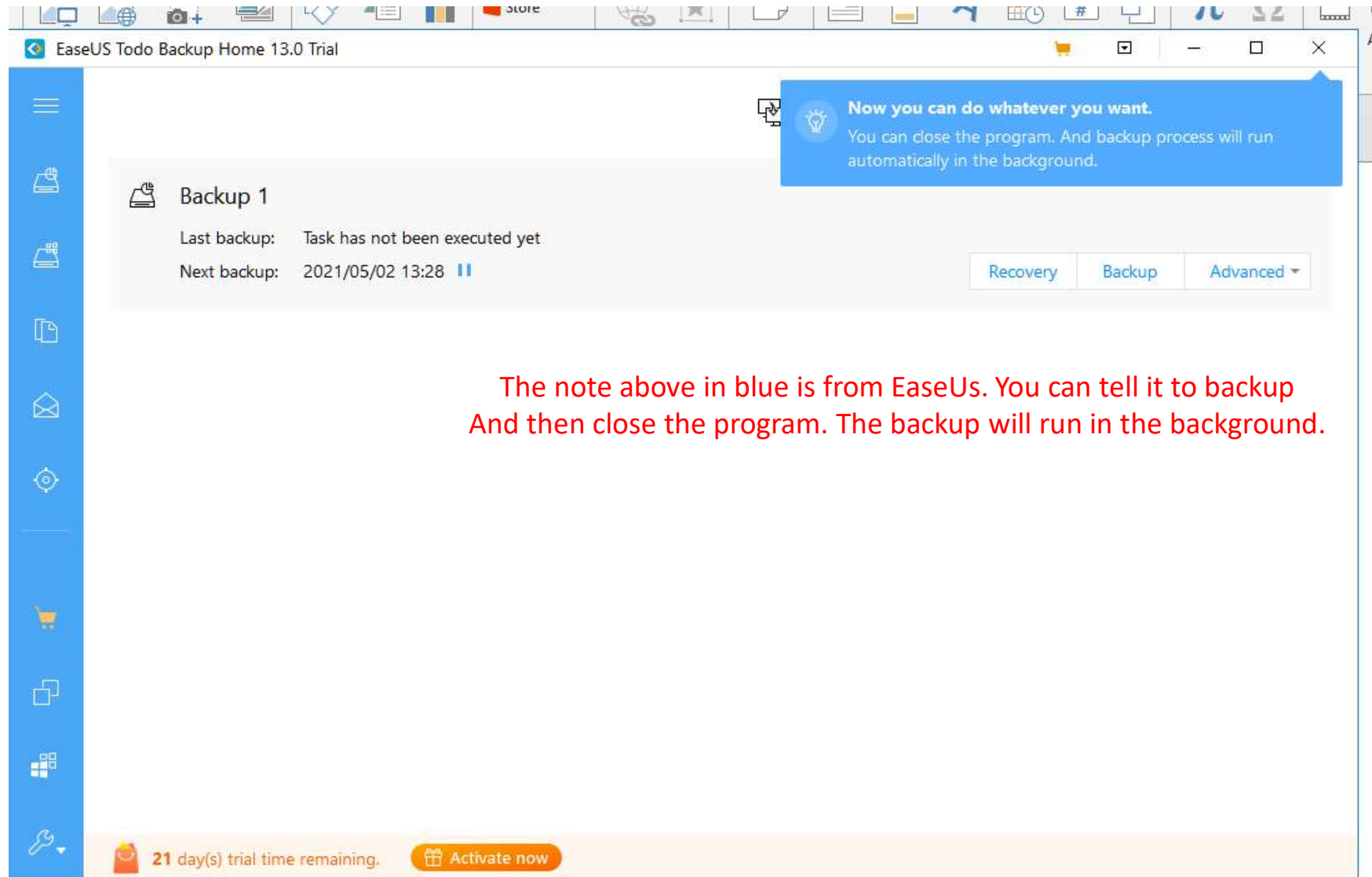
This screen is a bit misleading. You should schedule a monthly full backup then create another schedule for weekly incremental backups. Then save it.

Save

Cancel

Here's where you tell the software how many backups to keep.
It will likely depend on the size of your backup drive.





The note above in blue is from EaseUs. You can tell it to backup
And then close the program. The backup will run in the background.

A wise man I know once said that there are two types of people:

Those that back up and those that wish they did.

Which are you?