ADATA®
INDUSTRIAL

A+ Duplicator

User Manual

2024/04/23

Version Control Table

Version	Date	Detail
1.0	2023/05/24	1st release
1.0.1	2024/04/23	Bug fix and add custom model mapping

Contents

Overview

ADATA A+ Duplicator is designed for cloning the disk including operating system to a new ADATA SSD. A+ Duplicator also have disaster recovery feature which is able to back up the current system drives to image files. User can recover this image to another new ADATA SSD or current SSD if the previous system is crashed or corrupted.

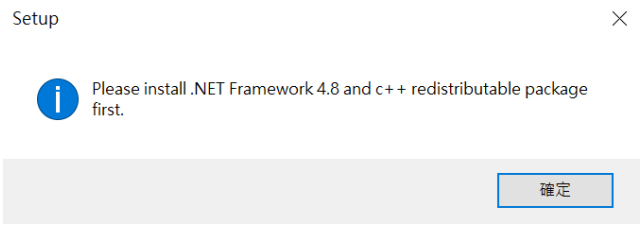
NOTE: Please follow this user manual to avoid data loss caused by improper usage. ADATA will not accept any responsibility for loss of data.
NOTE: Destination must be ADATA SSD, otherwise clone/recovery cannot start.

System Requirement

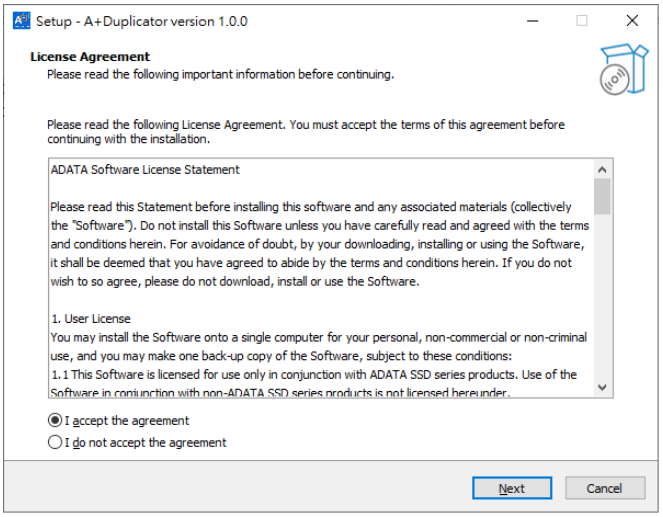
Item	Minimum Requirement
Processor	Intel Core i3 series or same level CPU
Memory	4 GB RAM
Free Disk Space	20 MB available hard disk space
Recommend Operating System	Windows 10 (1903 or above)
Windows Access permission	Administrator privileges is required
Package	Microsoft Visual C++ 2015-2022 Redistributable
Package	.NET Framework 4.8
File System	FAT32、NTFS、exFAT
Power State	Power: Turn Off Sleep Mode

Installation & Running

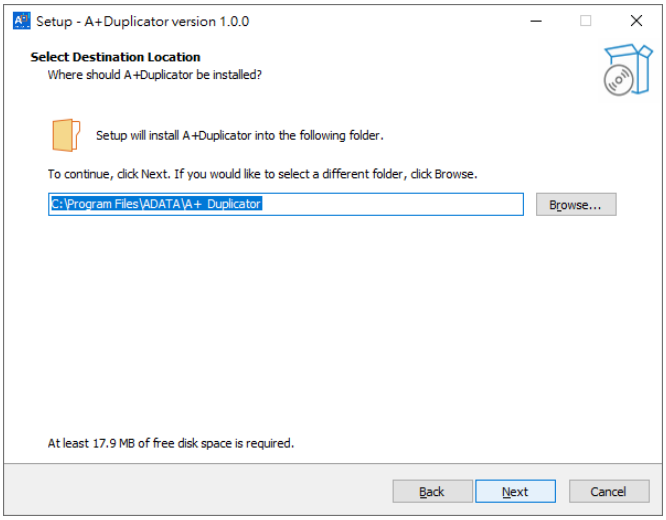
1. Double click on A+Duplicator_v1.0.1_x64.exe.
   NOTE: A+Duplicator only supports x64 OS.
2. There is a notification to notice user to install .NET Framework and Microsoft Visual C++ Redistributable tool.



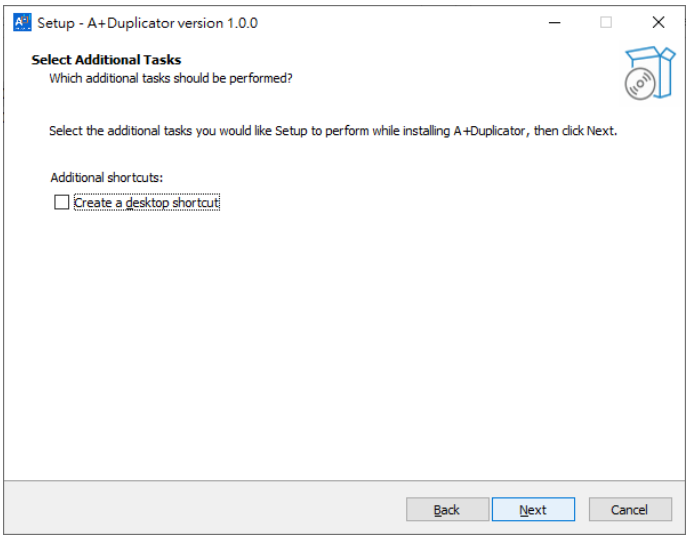
3. Click “I accept the agreement” of ADATA License Agreement to continue, or “I do not accept the agreement” to cancel the installation



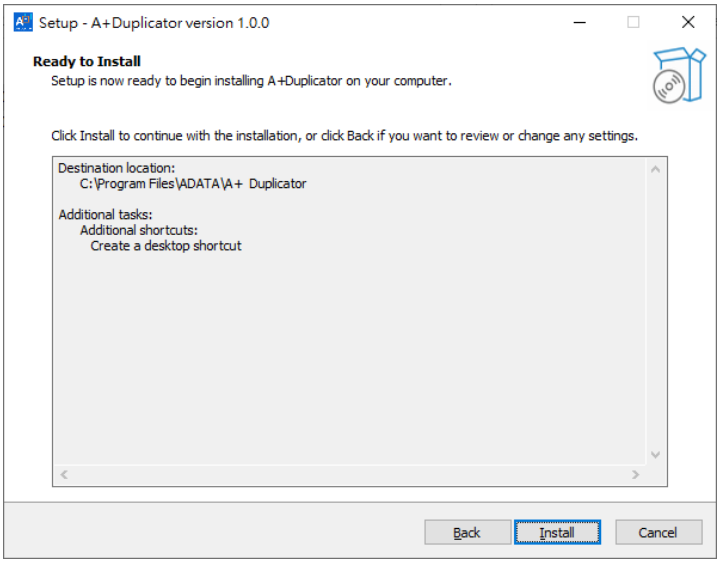
4. Select a destination folder to install. The default folder is “C:\Program Files\ADATA\A+ Duplicator”.



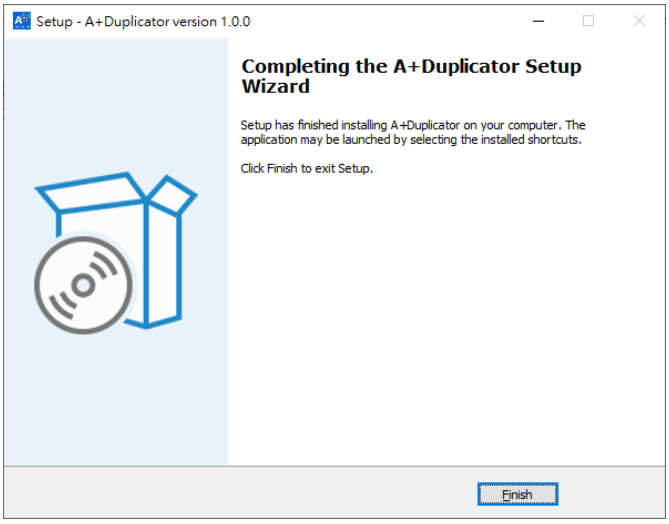
5. Click “Create a desktop icon” if you want to create a shortcut on desktop



5. The setup information is listed. Click “Install” to begin the installation process.



6. Please wait for the A+ Duplicator installation to complete and Click “Finish” to complete the installation.



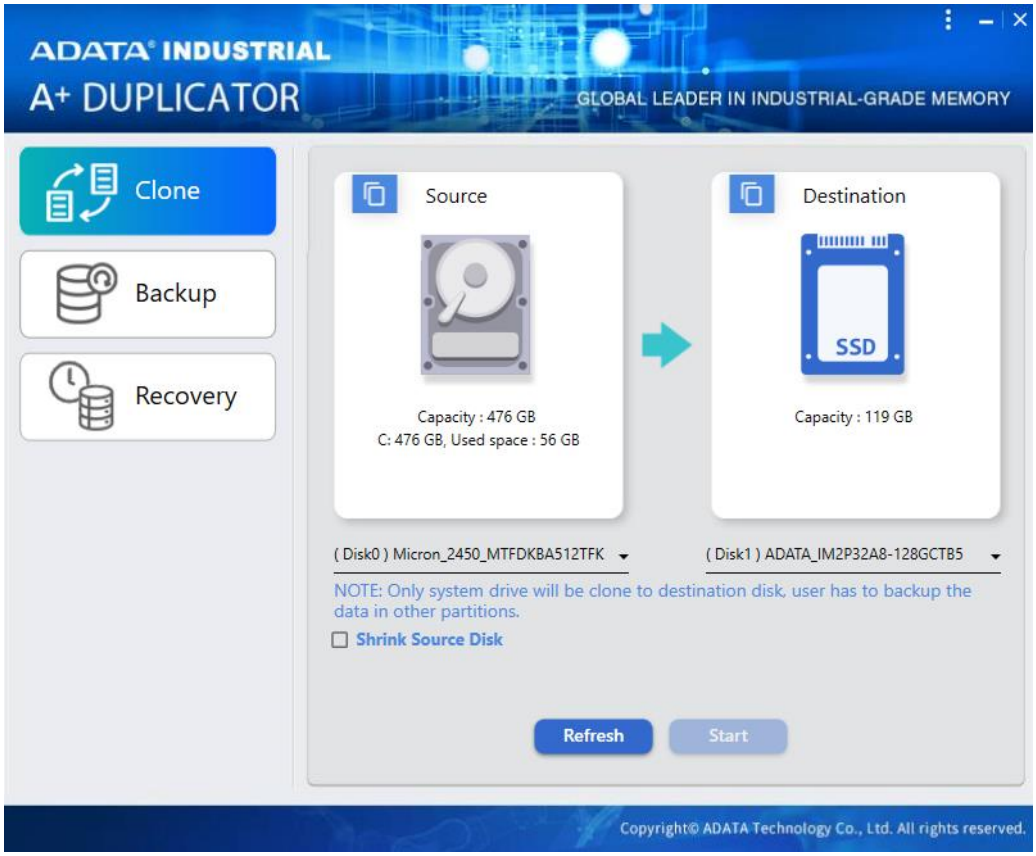
7. Please double click A+ Duplicator to launch application.

A+ Duplicator Introduction

A+ Duplicator provides several features for user to do SSD data clone or backup. It can clone the current system disk to a brand new ADATA SSD seamlessly. It also supports to back up the current system to image files and store this image to the specified location. Once there is any crashed or corrupted on current system, user is able to recover to the new SDD by the image files which backed up before.

A+ Duplicator User Interface

When A+ Duplicator is launched, this utility contains 3 sections. Clone, Backup, Recovery.



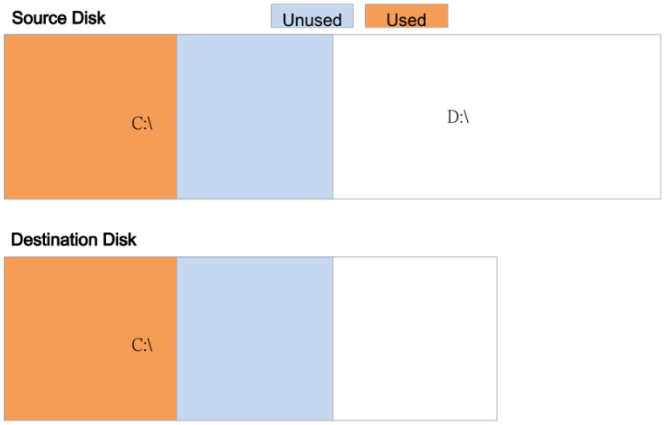
1. Clone:
   User can clone current system to new ADATA SSD.
2. Backup:
   User can back-up current system to image files and store them to safe location.
3. Recover:
   User can recover to another ADATA SSD by using the image files which was backup by A+ Duplicator.

A+ Duplicator Clone

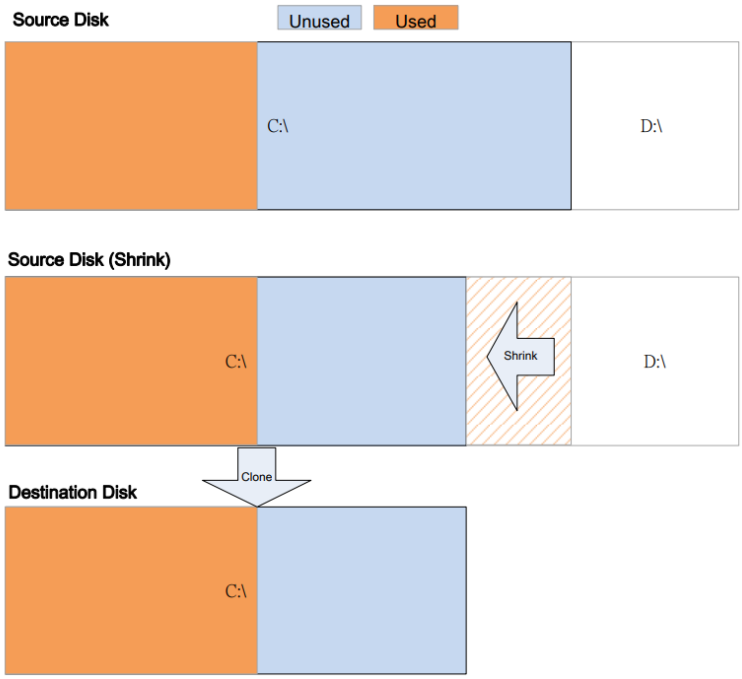
This section shows how to use Clone feature to clone current system to a new ADATA SSD(Destination Disk). It clones operating system (OS), programs and data. After cloning is completed, shutdown the system and replace current disk with new SSD and boot to new SSD.

A+ Duplicator clone policy:
If Destination Disk size is smaller than your current disk size:

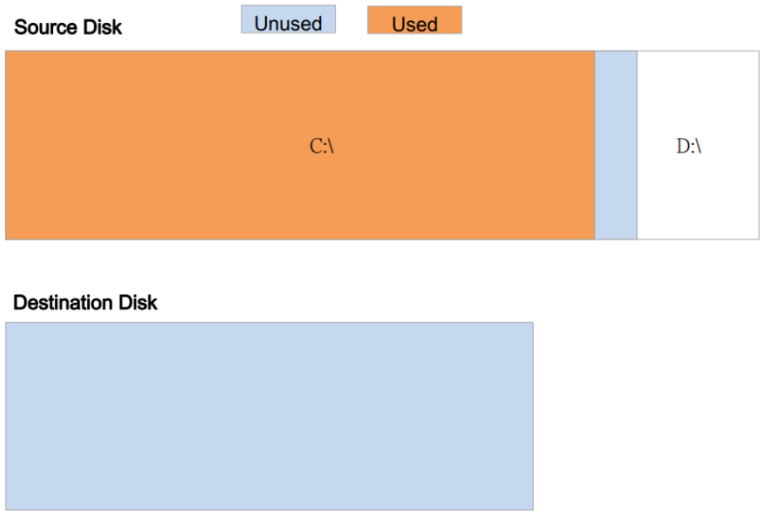
1. If system drive (C:\) size is smaller than destination SSD:
   A+ Duplicator will only clone system drive(C:\) to destination SSD.



2. If system drive (C:\) size is larger than destination SSD and used size is small than destination SSD:
   A+ Duplicator provides **shrink source disk** to clone system drive(C:\) to destination SSD.

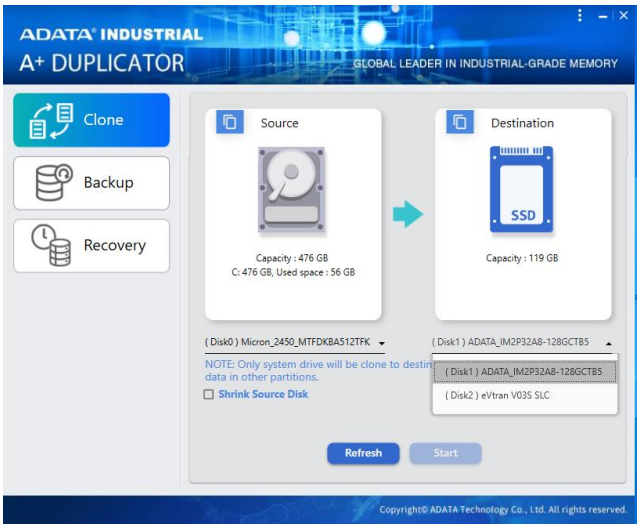


3. If system drive (C:\) size is larger than destination SSD and used size is larger than destination SSD:
   A+ Duplicator does not support this configuration.

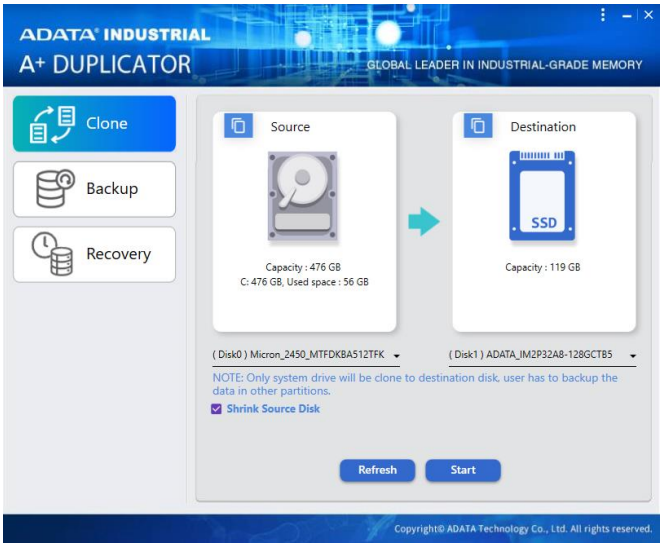


If Destination Disk size is larger or the same than your current disk size:
A+ Duplicator will clone the completed disk to new ADATA SSD
Please follow below steps to start Clone.

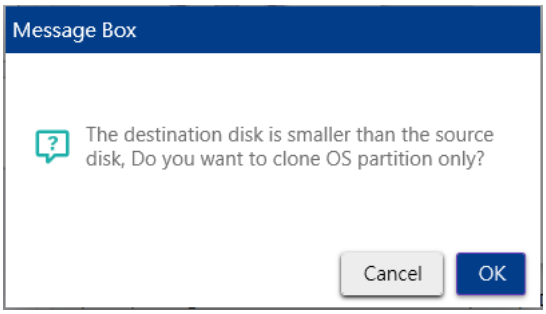
1. Connect new ADATA SSD (Destination) to your computer.
   A+ Duplicator supports to clone with below configurations:
   1. Onboard SATA to Onboard SATA
   2. Onboard SATA to USB/SATA adapter
   3. Onboard PCIe(M.2) to Onboard PCIe(M.2)
   4. Onboard PCIe(M.2) to USB/PCIe adapter
2. Please close all programs before start A+ Duplicator.
3. Launch A+ Duplicator.
4. If there is over one internal SSD or external SSD, it will be listed Destination drop-down list. Click Refresh to refresh Destination drop-down list if user installed external USB SSD.

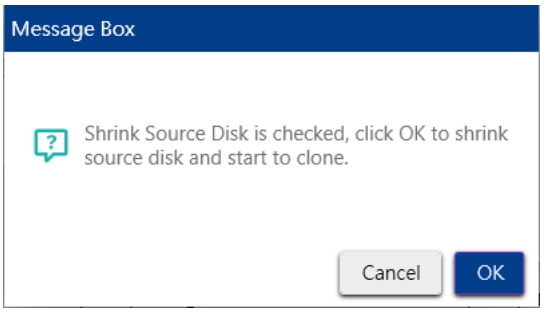


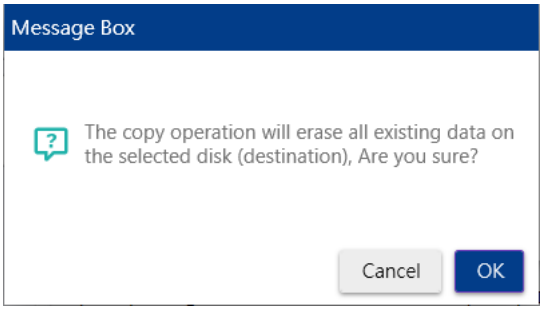
5. Select a Destination Disk from the Destination drop-down list.
6. Shrink Source Disk:
   Shrink Source Disk is appearing if the size of system drive (C:\) is larger than the size of destination disk. User has to check this to allow to shrink source disk during cloning.



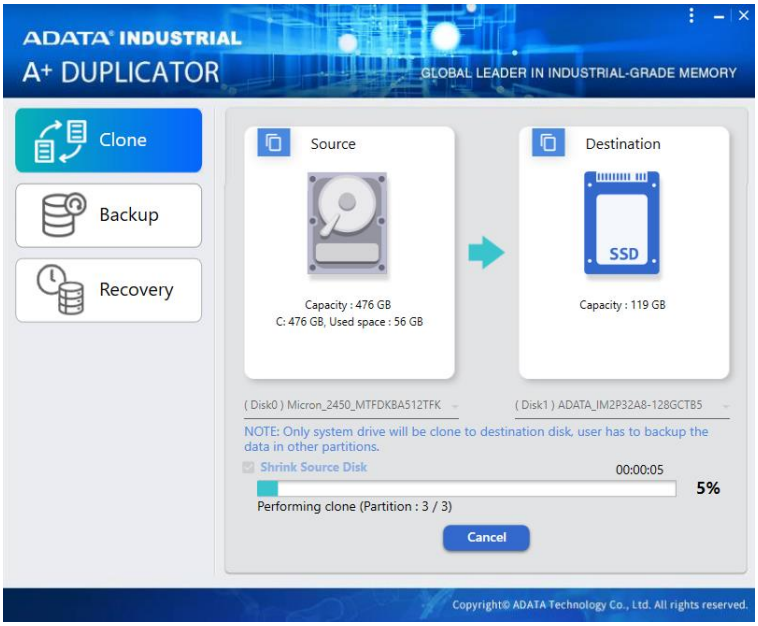
7. Click Start to start clone process. User has to confirm below message notices and clone will be started.



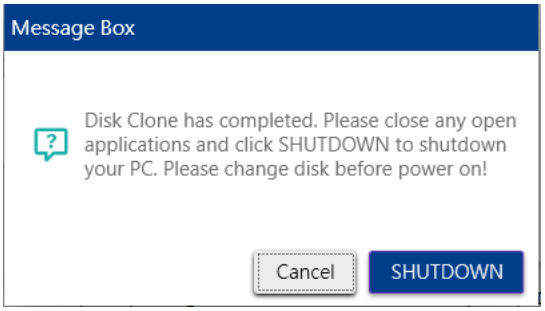




8. During cloning, process bar shows the percentage of the completion of cloning. Times shows the time of cloning.



9. Clone Completed. User has to click Shut Down to power off the computer. Replace the original disk with the destination SSD and power ON the computer.

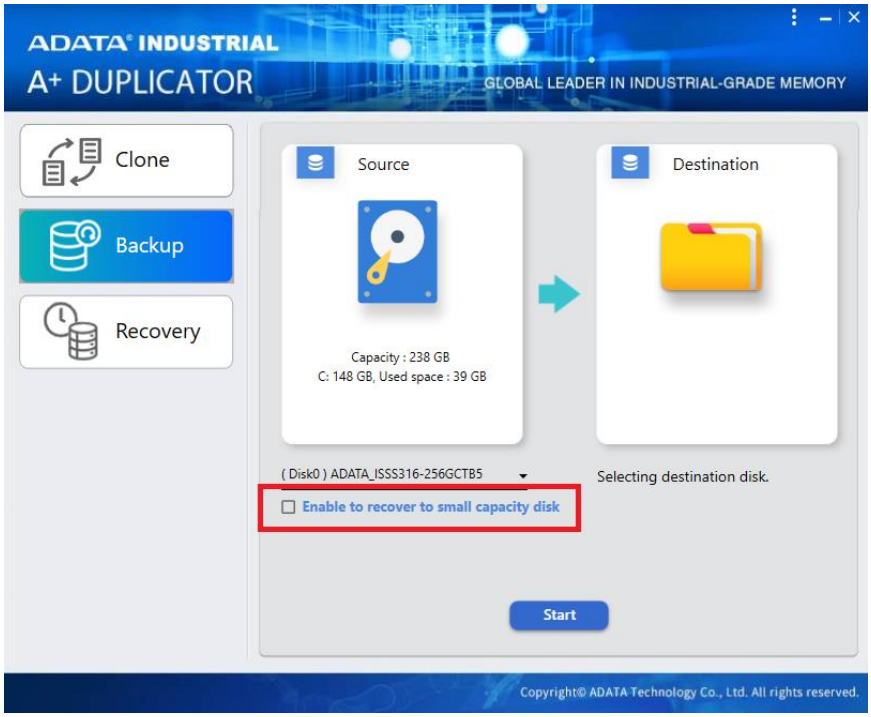


NOTE: Only one disk (Original or cloned destination) can be boot. DO NOT boot original disk with installed cloned destination or boot cloned destination with original disk. One disk will be set offline due to signature collision. If user set it to online, it will destroy its boot section.

NOTE: Destination must be ADATA SSD, otherwise Start Button cannot be clicked.

A+ Duplicator Backup

This section allows user to run A+ Duplicator Backup. User can backup the current system drive to image files and store image files to the safe location. Once there is any system crash or corrupted, user can use image files to recover to original status.



Back up to image condition:

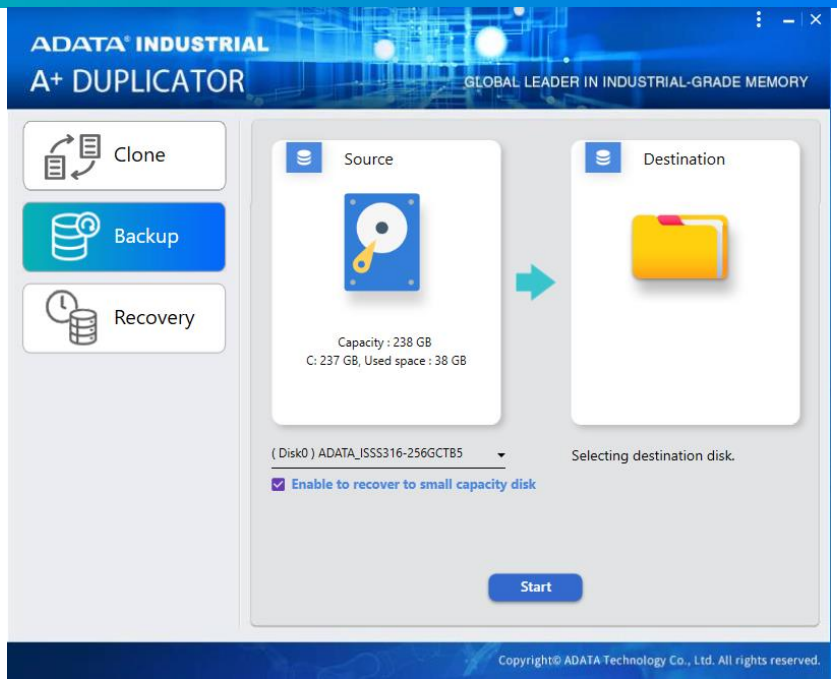
1. Enable to recover to small capacity disk is checked:
   This feature will shrink current system drive and back up current disk to image files. If the size of recovered destination disk is smaller than backed up disk, A+ OPAL will recover the OS system (C:\) to the destination disk only.
2. Enable to recover to small capacity disk is NOT checked:
   This feature will back up the current system disk without shrink the system drive. User has to use the same or larger disk to do recovery.

Please follow below steps to start Backup.

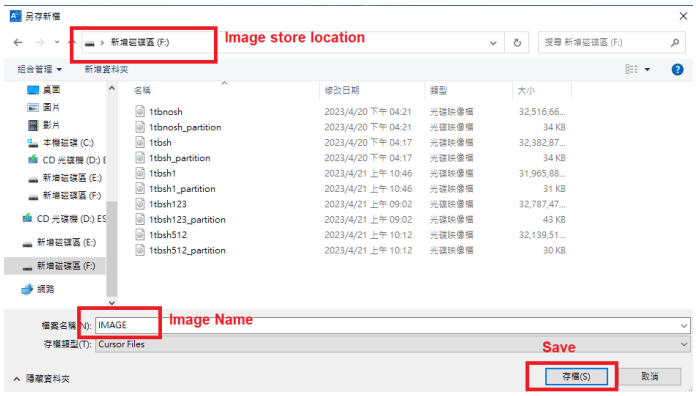
1. Connect one external storage for stored backed up image files

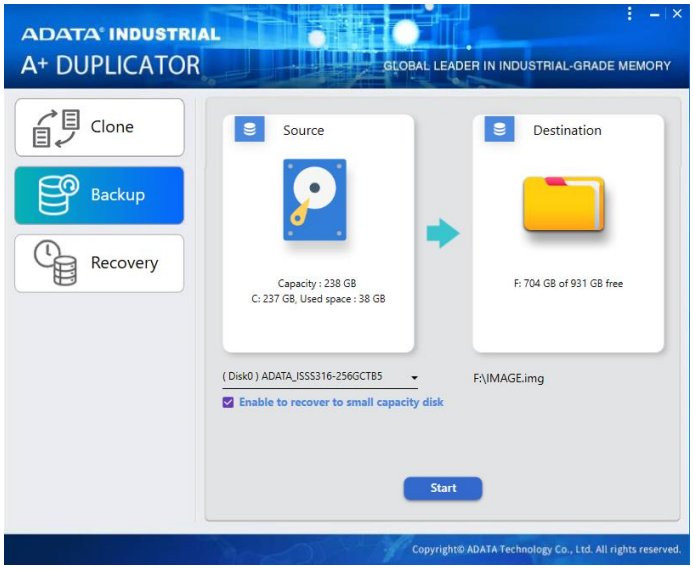
NOTE: A+ Duplicator does not support to back up and store to its disk.

2. Please close all programs before start A+ Duplicator.
3. Launch A+ Duplicator Application
4. On the sidebar, click Backup.
5. Check Enable to recover to small capacity disk (Please refer to **Back up to image condition**)



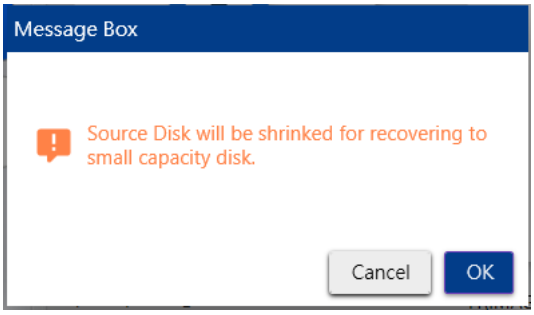
6. Click Destination folder to define stored image location and image name.



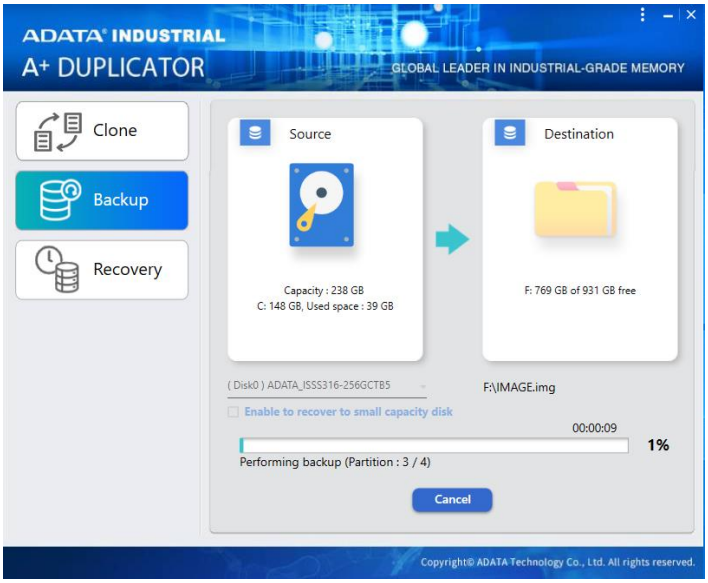


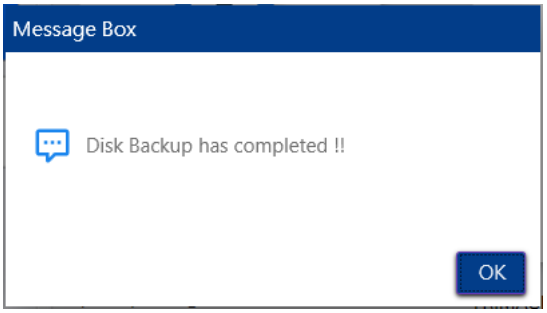
NOTE: A+ Duplicator will generate 2 files after completed back up process IMAGE.img and IMAGE_partition.img. User has to use these 2 files to run Recovery; name must follow the policy XXX.img and XXX_partition.img.

7. Click Start and click OK to start shrink source disk



8. Back up process and back up completed message.





9. Store backed-up files to safe location.

A+ Duplicator Recovery

This section allows user to run A+ Duplicator Recovery. If user's system is crashed or corrupted, user can find another computer to install A+ Duplicator and recover the backed-up images to the new disk or corrupted disk as 2nd disk. After that use installed recovered disk to issued computer and reboot to recovered disk.

A+ Duplicator Recovery policy:

1. If the backed-up image had not check "**Enable recover to small capacity disk**": the size of Recovered SSD must be the same or larger than backed-up original disk.
2. If the backed-up image checked "**Enable recover to small capacity disk**": the size of Recovered SSD is smaller than backed-up original disk, it will only recover system drive to disk.
3. If the backed-up image checked "**Enable recover to small capacity disk**": the size of Recovered SSD is the same or larger than backed-up original disk, it will recover completed drive to disk.

Please follow below steps to start Recovery.

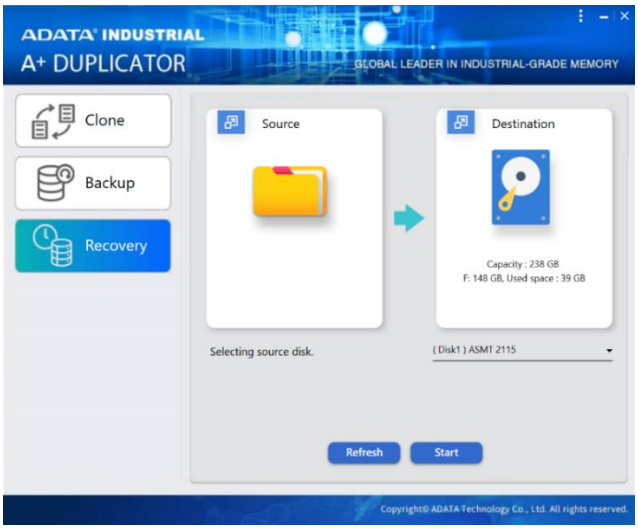
1. Find another computer and install A+ Duplicator.
2. Connect one external storage for stored backed up image files

NOTE: A+ Duplicator does not support to back up and store to its disk.

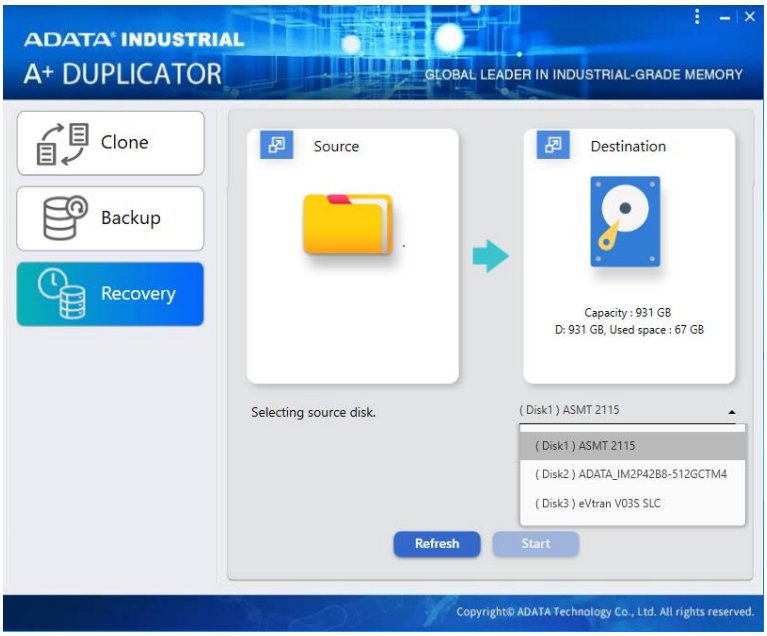
A+ Duplicator supports to recover with below configurations:

1. Image which was back-up from Onboard SATA and recover to Onboard SATA
2. Image which was back-up from Onboard SATA and recover to USB/SATA adapter
3. Image which was back-up from Onboard PCIe(M.2) and recover to Onboard PCIe(M.2)
4. Image which was back-up from Onboard PCIe(M.2) and recover to USB/PCIe adapter

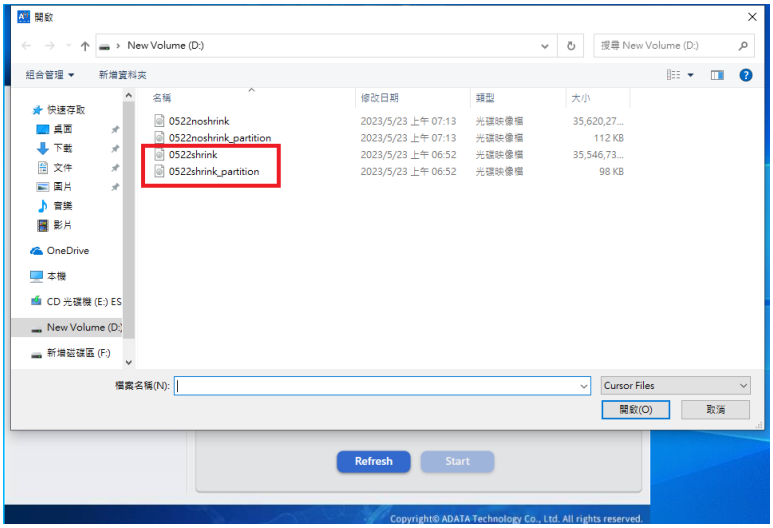
3. Launch A+ Duplicator Application
4. On the sidebar, click Recovery.



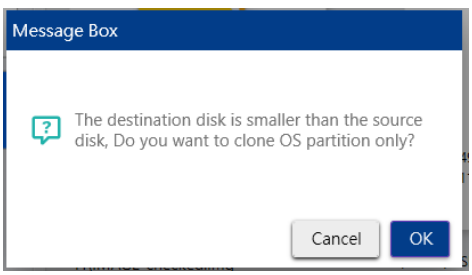
5. If Destination drop-down list does not list the disk which user would recover, user can click Refresh to reset Source disk image location and click Destination drop-down list.



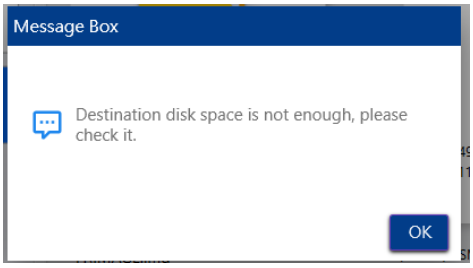
6. Click Source folder to select which image files user would recover. (There are 2 files must be required for recovering)



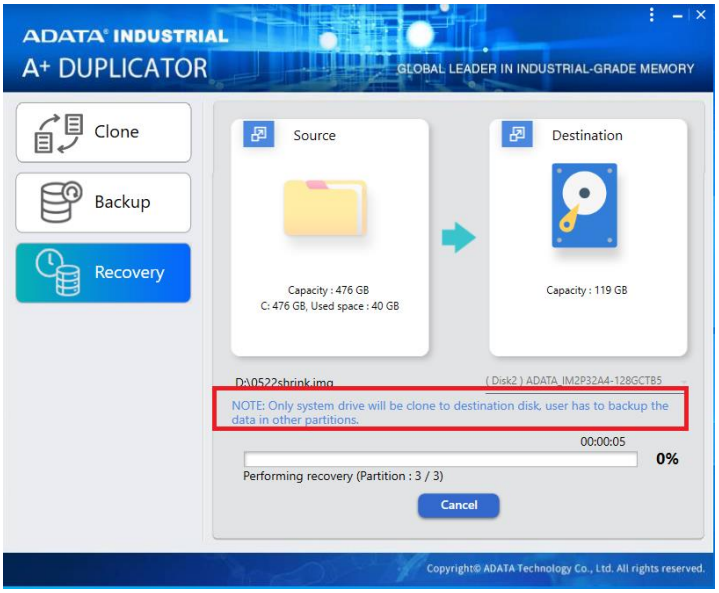
7. Click Start.
   I. If recovered size of destination is small than original backed-up disk, and user checked **Enable to recover to small capacity disk**. It will recover to destination disk with OS system (C:\) and shows below message.



II. If recovered size of destination is small than initial backed-up disk, user did NOT check Enable to recover to small capacity disk. It should show Destination Disk space is not enough.



8. Recovered process: There is a message to notice user it only recovers system drive to destination disk.



9. After recovered process completed, please take recovered disk and replace issued disk with recovered disk and boot with recovered disk.

NOTE: Destination must be ADATA SSD, otherwise Start Button cannot be clicked.

Troubleshooting

1. After running Clone or Backup, I did not see my source disk which was shrink if I checked **Shrink Source Disk** or **Enable to recover to small capacity disk**?

Answer: The shrink was happened during Clone or Backup process, source disk recovers to original configuration after Clone or Backup process was completed.

2. Why does my destination disk show OFFLINE after running clone or recovery?

Answer: After Clone completed, Windows signature of the destination disk and current disk will be the same. Microsoft Windows will set destination disk to OFFLINE to avoid confliction. Please shut down the system and replace current disk with cloned disk and boot with cloned disk. If you set online the destination disk at current system, it may break destination boot area.

3. After boot to cloned SSD or recovered SSD, I saw the unallocated partition in disk management?

Answer: 1. Clone or backup/recover, destination size is larger than source disk: A^+ Duplicator clone the original partition configuration to destination, the extra size will be set unallocated. 2. Clone or backup/recover, destination size is smaller than source disk: Due to destination size is smaller than the source disk, A^+ Duplicator will figure out the system partition. It has 100MB to 400MB extra size will be set to unallocated. User can use 3rd partition tool to move.

4. The process bar shows 100% but time remain continue to count during Clone、Backup、Recovery?

Answer: Due to some file resize computing, the process bar might not be precisely, please wait for clone completed message popup.

5. Why should I check **Shrink Source Disk** or **Enable to recover to small capacity disk**, is there any benefit?

Answer: For cloning from large disk to small disk, **Shrink Source Disk** must be checked, otherwise user cannot run cloning. For recovering to small disk, **Enable to recover to small capacity disk** must be checked or you only can recover to the same or larger disk. The performance of **Shrink Source Disk and Enable to recover to small capacity disk** will be better than tradition clone/recovery. We suggest to use this feature.

6. After running back-up, there are 2 files which were generated in the stored location?

Answer: The image name will be user naming.img and user naming_partition.img. If user would change the name, both of them must be changed(XXX.img and XXX_partition.img).

7. Can I clone SATA disk to PCIe(M.2) or PCIe(M.2) to SATA?

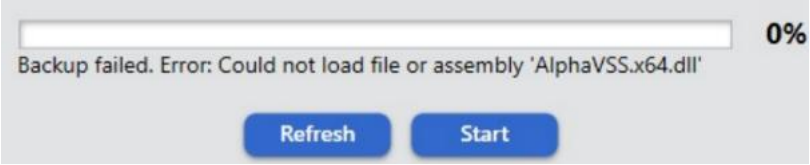
Answer: Due to SATA & PCIe driver of windows is different, it might not boot after clone by this configuration.

8. What does Refresh button usage?

Answer: In Clone section, Refresh button reset Destination drop-down list. If user plug in external

SSD after launched A+ Duplicator, please click Refresh to reset the list. In Recovery section, Refresh button reset Destination drop-down list and source image location.

9. Why does my A+ Duplicator shows this message after click Start?



Answer: Microsoft Visual C++ 2015-2022 Redistributable is required. Please install x64 Redistributable package and launch A+ Duplicator.

10. What .NET Framework version does A+ Duplicator use?

Answer: .NET Framework 4.8 is required to execute A+ Duplicator.

11. Does A+ Duplicator clone the data which was modified after click Start to clone?

Answer: A+ Duplicator only clones the current system before click Start. If user modified some file after click Start, these modifications do not clone to destination disk.

12. May I know the clone and backup/recovery speed?

Answer: A+ Duplicator clone and backup/recovery runs is dependent on many factors, such as CPU/memory and onboard SATA/PCIe, external USB 2.0/3.0.

A+ Duplicator uses computer resource to do clone and backup/recovery, please make sure all driver has been installed such as VGA driver.

13. Can I Clone or backup/recovery with different hardware configuration, such as IDE=>AHCI or AHCI=>IDE?

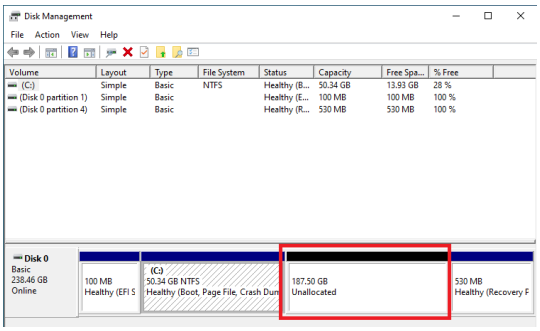
Answer: No, A+ Duplicator only support clone or backup/recovery from old drive and new SSD drive in the same controller mode (IDE=>IDE, AHCI=>AHCI). A+ Duplicator only supports IDE and AHCI mode

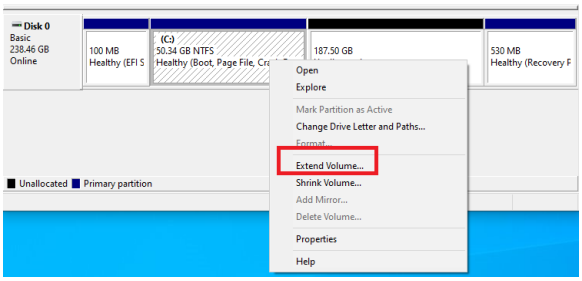
14. Does A+ Duplicator support to clone multi boot system?

Answer: No, it does not support multi boot system.

15. Why does my destination disk partition contain allocation location after cloning or recovering?

Answer: Due to better performance, A+ Duplicator uses windows shrink feature to do cloning and recovering. User has to move mouse to volume C and right click to Extend Volume to extend volume to original size in disk management after boot from destination disk.

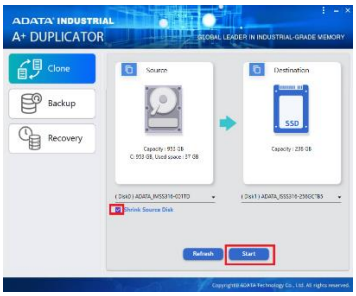




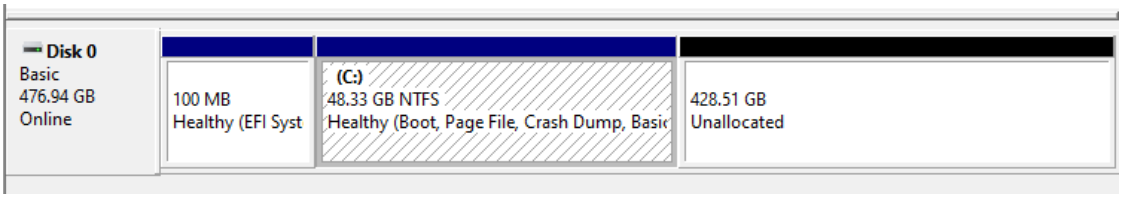
Limitation

- The Source Drive has been converted to a dynamic disk, A+ Duplicator does not support this properly.
- If you have installed 3rd party's recovery software on your computer, A+ Duplicator may not function properly.
- Please install the correct driver (**VGA**) before running A+ Duplicator Clone and backup/recovery.
- In Clone/Recovery feature: Only system drive (C:\) clone/recover to destination disk and Recovery partition does not clone to destination disk if the size of destination disk is smaller than the size of source disk.
- A+ Duplicator only supports to clone and backup the Source disk which an operating system has been installed.
- A+ Duplicator does not support on encrypted disk.
- After cloning or backup/recovery the source disk to the destination disk, their data sizes may be different due to some page files and hibernation files.
- A+ Duplicator does not support to clone or backup multiple operating systems.
- If computer ran into sleep during cloning or backup/recovery, please close A+ Duplicator and re-run clone or backup/recovery. Please turn off sleep mode during cloning or backup/recovery.
- A+ Duplicator only supports to clone/backup OS which was followed normal install process.
- After using **shrink** feature to clone or **Enable recover to small capacity disk** to backup/recovery, the destination disk shows different size between original disk and destination disk. User can use **Extend volume** in disk management to extend to correct volume.

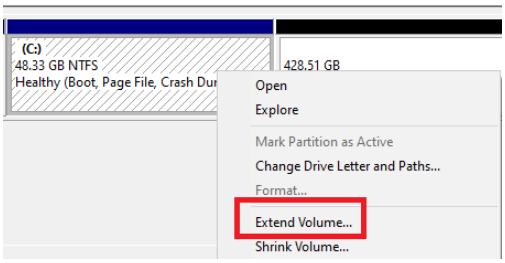
1. Clone to Small disk:



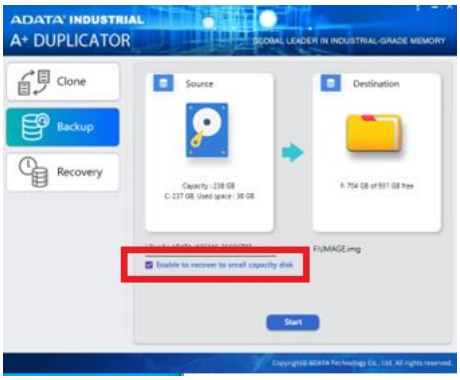
Destination disk after cloning:



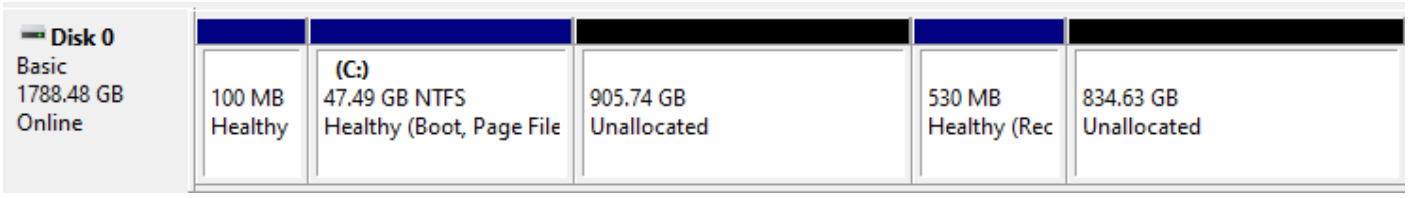
Using Extend Volume to extend Drive C:



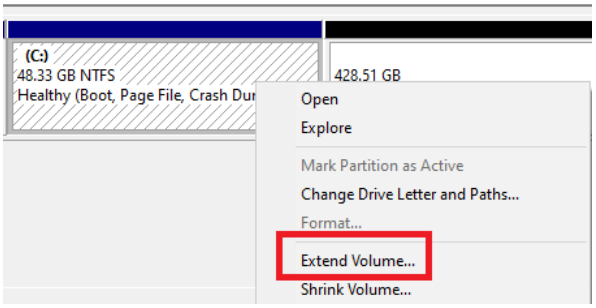
2. Backup image with checking **enable recover to small capacity disk**:



Destination disk after recovering:



Using Extend Volume to extend Drive C:



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