Xbox One Internal HDD Replacement Wiki

❖ Xbox One Partition Layout

➢ HDD has a GPT partition table & contains 5 partitions
- Items without sizes have no sizes listed as they will depend on the system

Normal Layout

❖ **Partition 1** *(Temp Content)* **41GB**
- *$sosrst.xvd* (50,596KB)
- *appswapfile.xvd* (2,109,584KB)
- *ConnectedStorage-retail* (9,548,892KB)
- *GDVRIndex.xvd* (103,628KB)
- *ScreenShots.xvd* (1,061,020KB)
- *temp00* (2,097,164KB)
- *temp01* (2,097,164KB)
- *temp02* (2,097,164KB)

❖ **Partition 2** *(User Content)*:
- PLS *(folder)*
- SharedStorage *(folder)*

❖ **Partition 3** *(System Support)* **40GB**:
- Controllers *(folder)*
- *cache0.cfg*
- *cms.xvd*
- *DataCollectionUploader_0*
- *LastConsole*
- *user.xvd*
- *WER.xvd*

❖ **Partition 4** *(System Update)* **12GB**:
- A *(folder)*
  - *SettingsTemplate.xvd* (37,144KB)
  - *sosinit.xvd* (11,964KB)
  - *sostmpl.xvd* (63,516KB)
  - *systemaux.xvd* (494,876KB)
  - *SystemTools.xvd* (466,44KB)
- B *(folder)*
  - *host.xvd* (49,364KB)
  - *SettingsTemplate.xvd* (120,784KB)
  - *sosinit.xvd* (11,964KB)
  - *sostmpl.xvd* (63,516KB)
  - *system.xvd* (1,667,660KB)
  - *systemaux.xvd* (820,596KB)
  - *systemmisc.xvd* (748,192KB)
  - *systemtools.xvd* (38,484KB)
- *updater.xvd* (63,644KB)

❖ **Partition 5** *(System Update 2)* **7GB**:
- *no data, empty*

❖ Rebuilding OS using OSUDT Downloads (from Xbox Support site)

➢ If your original HDD still boots, **only** utilize ***Windows WIM Commands*** below, then follow the 4 steps below
- After creating WIMs of **partitions 1**, **3**, & **4** on Windows, disconnect HDD, and reconnect to *nix OS:
  1. Run the ***xboxonehdd.py*** script utilizing name of replacement HDD name *(sdb, sdc, etc.)*: *python xboxonehdd.py sdb*
  2. Run the newly created script ***mkxboxfs.py*** (**not** mkxboxfs-500gb.py): *python mkxboxfs.py* (unmount all partitions afterwards)
  3. Reconnect HDD to Windows, apply the respective WIMs to their respective partitions; once done, reconnect to *nix OS
  4. Run the ***xboxonehdd.py*** script again, ensure all partitions are unmounted & connect HDD to Xbox One

❖ Prerequisites

1. Download **OSUDT1** & **OSUDT2**
   - support.xbox.com/en-US/xbox-one/console/offline-system-update-diagnostic-tool
2. Download from ***Scripts*** folder:
   - **gptutil.py**
   - **xboxonehdd.py**
   - **mkxboxfs-500gb.py**
   - https://github.com/JW0914/Wikis/tree/master/XboxOne/Scripts
3. PC/VM running Linux, such as *Ubuntu* or *PartedMagic*, both of which can be run from a liveCD

❖ Recommendations

➢ I strongly encourage making a WIM backup of **Partitions 1**, **3**, & **4** via Windows once all user content has been synced *(this will prevent you having to go through this again should you replace/upgrade the HDD)*.
- If rebuilding, I recommend doing so *after the rebuild,* as I'm not sure what, if anything, is added to partitions 1, 3, & 4 during the syncing of the Xbox Live Account

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❖ Windows WIM Commands

- **Z:** is the image save location
- **D:**, **E:**, & **F:** are the respective drive letters for Xbox One **partitions 1**, **3**, & **4**

➢ **Temp Content** *(D:\)*
- DISM /Capture-Image /ImageFile:**Z:\TempContent.wim** /CaptureDir:**D:** /Name:**"Xbox One Partition 1"** /Description:**"Temp Content"** /Compress:**max** /CheckIntegrity /Verify

➢ **System Support** (*E:*)
- DISM /Capture-Image /ImageFile:**Z:\SystemSupport.wim** /CaptureDir:**E:** /Name:**"Xbox One Partition 3"** /Description:**"System Support"** /Compress:**max** /CheckIntegrity /Verify

➢ **System Update** (*F:*)
- DISM /Capture-Image /ImageFile:**Z:\SystemUpdate.wim** /CaptureDir:**F:** /Name:**"Xbox One Partition 4"** /Description:**"System Update"** /Compress:**max** /CheckIntegrity /Verify

➢ ***Apply WIM***
- DISM /Apply-Image /ImageFile:**Z:\TempContent.wim** /Index:**1** /ApplyDir:**D:** /CheckIntegrity /Verify

❖ Steps to Rebuild OS

1. Connect replacement HDD to PC & note what its device name is (*sdb*, *sdc*, etc.); then run the ***xboxonehdd.py*** script: *python xboxonehdd.py sdb* (where **sdb** is device name)
   a. If replacement drive is larger than original HDD, edit the ***mkxboxfs-500gb.py*** script so **DEV=/dev/sdb** equals your replacement HDD device's name, then run it: *python mkxboxfs-500gb.py*
2. Copy the following to **Partition 4**
   - **Folder A** should contain all **OSUDT1** files, ***except*** *system.xvd & updater.xvd*
     - host.xvd
     - SettingsTemplate.xvd
     - sosinit.xvd
     - sostmpl.xvd
     - systemaux.xvd
     - SystemTools.xvd
   - **Folder B** should contain *all* **OSUDT1** files, ***except*** *updater.xvd*
     - host.xvd
     - SettingsTemplate.xvd
     - sosinit.xvd
     - sostmpl.xvd
     - system.vxd
     - systemaux.xvd
     - SystemTools.xvd
   - updater.xvd (root of partition)
3. Unmount HDD mount points, run the ***xboxonehdd.py*** script again & connect HDD to Xbox One
4. Xbox will boot, begin to update, and fail about 25% of the way through
5. Shut down the Xbox One cleanly via a single touch *(do not hold the power button)*
   - *Failure to do this prevents one from doing what's next*
6. Replace ***OSUDT1*** files in **Folder B** with files from **OSUDT 2** *(copy and paste)*
   - ***Folder B*** is the actual update folder, with ***Folder A*** containing files from the previous update.
7. Reconnect drive to the Xbox One and boot up... It should continue the update and finish successfully.
8. Once you are at the Xbox Home Screen, shut down the Xbox completely via the menu (*must be fully shut down, **not** put into standby)*
9. Copy all files from each partition into 4 separate folders (*1 for each partition*) on a separate HDD **OR** utilize ***Windows WIM Commands*** above to capture WIMs of **partitions 1**, **3**, & **4**
10. Run ***mkxboxfs.py*** script (**not** *mkxboxfs-500gb.py*): *python mkxboxfs.py*
11. Copy all files back to their respective partitions **OR** apply the WIMs to their respective partitions
12. Once reconnected to the Xbox One, it should boot and display the correct size for free space.
    - *If you receive an error after reinstalling the HDD, you need to rerun the **xboxonehdd.py** script*

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WIM Sizes

- **TempContent.wim**
  - 416,895 KB
- **SystemSupport.wim**
  - 1,125,075 KB
- **SystemUpdate.wim**
  - 4,175,222 KB

WIM Verification

- **Verify WIM File**
  - DISM /Get-WimInfo /WimFile:**"Z:\TempContent.wim"**
- **Verify WIM File Index***(es)*
  - DISM /Get-WimInfo /WimFile:**"Z:\TempContent.wim"** /Index:**1**

WIM Information

- While one could make a WIM backup of the User Content partition, I don't recommend it if you have broadband internet, as xvd storage is efficient, and you'll have a resulting WIM image almost the exact same size as the used space on the partition.
  - Everything contained on the User Content partition is downloaded once your Xbox Live account is synced.

External Drives

- If Windows doesn't recognize external HDD/USB drives, flip the 1st sector bits from 99CC to 55AA with HxD
  - withinrafael.com/taking-a-peek-at-xbox-one-formatted-disks-in-windows
- You can also flip the bits using a *nix OS (where */dev/sdb* is the disk)
  - echo -en **'\x55\xAA'** | dd conv=**notrunc** of=**/dev/sdb** bs=**1** seek=**510** 2>**/dev/null** 1>&2
- Flipping the bits back to 99CC
  - echo -en **'\x99\xCC'** | dd conv=**notrunc** of=**/dev/sdb** bs=**1** seek=**510** 2>**/dev/null** 1>&2