BUFFOUT 4 DICTIONARY

LIST OF KNOWN CRASH LOG MESSAGES & ERRORS
WITH SOLUTIONS & FIXES (FALLOUT 4 ONLY)

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= Currently WIP =

AUTHOR NOTES

- **[CTRL] + [F] is your friend. Use it often, use it plenty and you will know mercy.**

- **If necessary, you can request editing access to add Comments and Suggestions in the online Google Docs version of this document. Or contact me directly for suggestions.**

INTRODUCTION

This document lists most common Buffout 4 crash log messages and errors, and ways to prevent or fix them. It's meant to be used with Crash Log Auto-Scanner as it will detect all known crash messages for you. Online version of this document is now available here!

-AUTOSCAN.md output files will show any detected crash log error messages right below the **CHECKING IF LOG MATCHES ANY KNOWN CRASH MESSAGES** section with **CULPRIT FOUND!** Search (CTRL + F) for these detected crash messages here and follow solutions / instructions.

EXAMPLE
Let's say you see this in the -AUTOSCAN.md output file:
 # Checking for BA2 Limit Crash..............CULPRIT FOUND! #

*Therefore, you would look up / search for **BA2 Limit Crash** in this document.*
It will also show the crash log / error message Priority Level (Ex. Priority Level: [5])
Crash errors / messages with a higher priority level should be looked up and dealt with first!

BINARY SEARCH
Sometimes, the fastest or only available solution relies on brute force.
The most efficient method for this is done through a binary search.

To perform a binary search, disable half of your mods and test each half in-game to see which half causes the crash. Once you determine which half crashes the game, disable half of the mods in that group to see which half crashes again. Repeat this procedure until you're left with just one mod, which should be that one causing the crash. Repack that mod into BA2 archives with CAO or simply disable / uninstall the mod if that doesn't help. Afterwards, enable all other mods.

Example with some mods A, B, C, D, E, F, G, and H:

A B C D E F G H

Crash

ABCD | ~~EFGH~~

Crash

AB | ~~CD EFGH~~

Crash

A | ~~B CDEFGH~~

No Crash

Therefore mod B must be causing the crash since the game didn't crash while only mod A was active, while it did crash when both mods A and B were active with all other mods disabled.

CRASH ERRORS / MESSAGES

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EXCEPTION_STACK_OVERFLOW (Stack Overflow Crash)
Usually caused by recursive Leveled Lists. Your Bashed Patch is most likely to be the source of this crash message, since it's used to merge NPC & Item Leveled Lists (LLs).

Solution: Disable your Bashed Patch. If crashing stops, you should try rebuilding the patch or create a Merged Patch in FO4Edit as it also covers Leveled Lists. If disabling or rebuilding the Bashed Patch doesn't help, this crash was likely caused by another mod with broken LLs.

In that case, run FO4Edit with your complete load order, select all plugins (CTRL + A), right click and **Check For Circular Leveled Lists**. After it completes the check, switch to the **Messages** tab on the right and see if there's any output. If nothing is shown, all of your mods are fine.

Be careful when adding mods that extensively make changes to Leveled Lists mid-save, since sudden and heavy changes to LLs during an ongoing game could also cause this crash.

Some early reports suggest the Reference Cap / Limit being at fault here. Run this script in FO4Edit with your full load order to check the reference count. If total reference count exceeds 2.1 million (2^21), disable mods with most references until you fall below this limit.

If all else fails, find the culprit through a binary search method, mentioned on the first page.

===

EXCEPTION_INT_DIVIDE_BY_ZERO (Bad Math Crash)
Likely caused by either Vsync / Refresh Rate settings or unsupported wav sound files.

Solution: Disable Vsync from all four possible sources or check after each one separately:

- Disable Vsync in INIs by running BethINI and unchecking Vsync in the General Tab

- Disable Vsync in GPU driver settings, guide for both Nvidia and AMD available here!

- Disable Vsync by setting ForceVSync to false in enblocal.ini (game installation folder).

- If you installed Vulkan Renderer, disable Vsync by setting **dxgi.syncInterval** to **0** in dxvk.conf

If disabling Vsync everywhere doesn't help, make sure your monitor's refresh rate is set to 60 Hz, instructions for this available here! And if that doesn't help, this crash was likely caused by an unsupported audio (wav) file and you'll have to find the culprit through a binary search.

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EXCEPTION_ACCESS_VIOLATION at 0x000000000000 (Null Crash)
Caused by mesh (.nif) files that are broken or are missing important properties.

Solution: Disable the plugin responsible for this crash and contact its mod author. If the crash log doesn't mention the plugin or the file path where the bad mesh originates from, you'll have to find the mod causing this crash with a binary search. Example of a mod that can frequently cause this crash is Functional Displays though this mod can be actually fixed as described in this article!

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EXCEPTION_ACCESS_VIOLATION at 0x000100000000 (Active Effects Crash)
Seemingly caused by any broken script that adds Active Effects.

Solution: Disable the plugin that's causing this crash and contact its mod author.
The only currently known mod that can cause this crash is Mutant Menagerie

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nvwgf2umx.dll (Nvidia Driver Crash) | *Log will usually spam this DLL*
Nvidia specific crash log related to all driver versions 445 and above. Crashing happens at random or is consistent at certain places. Exact cause and relation to anything is currently unknown. Crash logs that spam this dll file / message don't provide any useful information whatsoever.

Solutions: Solution A) should work but if it doesn't or hinders performance, try the rest.
Other solutions aren't guaranteed to work. This crash might never completely go away.

A) Install Vulkan Renderer. This also should be the most consistent solution in all cases. You don't need to download FSR/Magpie, just the main Vulkan files. Here are the correct installation steps if you want to have both ENB and Vulkan Renderer working at the same time:

0.) Make sure you have the latest graphics drivers installed! Both AMD and Nvidia drivers already have the latest version of Vulkan API, so there's no need to run any included Vulkan installers.

1.) Manually download the latest Fallout 4 Vulkan 2.0 (obviously version for manual installation) and the main file from DLL (Native Mod) Loader , then extract their files separately!

2.) Manually download the latest ENB version for Fallout 4, then extract all files inside the WrapperVersion folder into your Fallout 4 game folder (where Fallout4.exe is located).

3.) Go to your Fallout 4 game folder and there create a new folder called NativeMods
After that, inside NativeMods create a new folder called ENB

4.) Inside your Fallout 4 game folder, you should see a **d3d11.dll** file which you got from the latest ENB version. Rename it into **ENB.dll** and move that dll inside Fallout 4 / NativeMods / ENB folder.

5.) Rename the **d3d11.dll** from extracted Vulkan Renderer files into **d3d11_vulkan.dll** then take that dll and all files from Vulkan Renderer and move them into your Fallout 4 game folder.

6.) Move the **d3d11.dll** from extracted DLL (Native Mod) Loader into your Fallout 4 game folder, then open enblocal.ini and edit the following lines so they match what's displayed here:

[PROXY]
EnableProxyLibrary=true
InitProxyFunctions=true
ProxyLibrary=d3d11_vulkan.dll

[GLOBAL]
ApplyStabilityPatch=true
UsePatchSpeedhackWithoutGraphics=false

CAUTION: When installing any ENB presets, DO NOT let them overwrite your enblocal.ini
Enblocal settings should always stay the same across **any and all** installed ENB presets.

Vulkan Renderer is working correctly once you launch the game and see the GPU stats screen in the top left corner. To disable stats, go to your Fallout 4 game folder, open dxvk.conf and set dxvk.hud = 0,scale=1

If you just want the FPS counter, change dxvk.hud = 0,scale=1 to dxvk.hud = fps,scale=1
Other solutions to this crash are listed below if Vulkan Renderer doesn't work out for you.

B) Use BethINI and switch from **Fullscreen** to **Borderless** mode or vice versa, or edit **fallout4custom.ini** in your Documents\My Games\Fallout4 folder by adding these lines:

[Display]
bBorderless=0
bFull Screen=1

OR for Borderless:

[Display]
bBorderless=1
bFull Screen=0

*Yes, **bFull Screen** needs to have an empty space between Full and Screen.*
MO2 users must also disable Profile Specific INIs in Profile Settings (Ctrl + P)

C) Apply the same solutions listed for all other crash types, most notably flexRelease_x64.dll, X3DAudio1_7.dll, d3d11.dll and DLCBanner05.dds This ensures that nvwgf2umx.dll crashes aren't related to other crashes and that you aren't experiencing multiple problems at once.

D) Disable any and all mods that edit Player / NPC faces or face features in any way. This includes mods like Looks Menu, Customization Compendium and mods that add NPC face replacers, companion face overhauls, high quality face textures or additional face features like hairs and tattoos. Narrow down the exact culprit through a binary search.

E) Completely reset your current ini configuration files, though you should make a backup first. INI reset is done by deleting all game .ini files inside your Documents\My Games\Fallout4\F4SE folder (delete any similar files generated by other programs in the same folder as well), then run the game once with Fallout4Launcher.exe up until the Main Menu, then exit the game and readjust your INIs with BethINI. If this doesn't help, you can restore your original INIs.

F) This crash might be related to third party software screen overlays, therefore it's advised to disable overlays from every running application that might have them, including: Discord Game overlay, Steam Game overlay, Riva Tuner Metrics overlay, GeForce Experience overlay, Windows XBOX Game Bar overlay and any other 3rd Party FPS overlay.

G) Turn off overclocking and custom game profiles in Nvidia GeForce Experience / MSI Afterburner. If you're running the game on a laptop, keep the high performance power plans enabled, but any other performance presets should be turned off. Make sure the power plan isn't throttling your laptop's graphics card, more info and solution found here.

H) Update your **Motherboard BIOS**. These updates can increase system stability, though their success rate on preventing this exact crash type is unknown. Since every board is different, you'll have to search for the motherboard model and update procedures yourself. Start with HWInfo, a free program that shows detailed motherboard info.

I) Enable V-Sync with your monitor refresh rate set at 60 Hz. FPS Limit tutorial with images available here. If that doesn't help, lock framerate to 60 FPS and disable High FPS Physics Fix mod if you have it installed. Locking the framerate can be done in several ways, though because the crash itself is driver related, you should do so directly from your driver settings.

J) Completely reinstall your graphics drivers with factory settings applied. If that doesn't help, downgrade to any version **445.xx or older** (442.74 or 442.92 are known to work in most cases).

Download links for these drivers can be found here. If you can't find working drivers on that site, try Advanced Driver Search and search for your GPU model (use HWInfo if you aren't sure). If older driver versions do not make the situation better, install the newest drivers for your GPU.

===

flexRelease_x64.dll (Nvidia Debris Crash)
Nvidia specific crash log. Caused by the Weapon Debris setting in the INI config file.

Solution: Install <u>this mod</u> or disable manually by adding these lines to fallout4custom.ini:

[NVFlex]

bNVFlexDrawDebris=0
bNVFlexEnable=0
bNVFlexInstanceDebris=0

===

X3DAudio1_7.dll | XAudio2_7.dll (Audio Driver Crash)
Likely caused by Windows OS or incorrectly compressed audio / sound files from mods.

Solution: Install <u>DirectX Runtimes June 2010</u>. Recheck or disable any mods that extensively edit audio files, for example combat music, ambient music, new radio stations, new sound effects, NPC or Player voice lines. If you get the same crash again, proceed to the steps below.

- Run Services.msc app, right click on Touch Keyboard and Handwriting Panel Service > Properties > Startup Type set to Disabled, then restart your PC.

- Open Windows Powershell or Console (CMD) in Admin Mode and copy-paste each command shown below. Press Enter after each one. After that, restart your PC.

regsvr32 xaudio2_7.dll

sfc /scannow

===

BSXAudio2DataSrc | BSXAudio2GameSound (Corrupted Audio Crash)
Caused by corrupted audio (.xwm) files that the game cannot process correctly.

Solution: Unfortunately, the only solution is to perform a binary search, as the log won't help. Your only hint is that the offending mod must contain .xwm (or .wav) audio files.

Most likely the audio file causing this crash has to be resaved with the correct properties. If you're a modder, check audio properties (bit rate, sample rate, etc) from base game audio files and make sure your modded audio files match them to prevent this type of crash.

===

tbbmalloc.dll (Generic Crash)
The game is either missing or it failed to load some Buffout 4 requirements,
OR this is simply a generic error that has no relevance to the crash log.

Solution: Make sure you haven't missed any Buffout 4 installation steps listed in <u>this article!</u>

- If you have **xSE Plugin Preloader** mod installed, open its xml file inside your Fallout 4 game folder (where Fallout4.exe is located) with a text editor of your choice and change line 14: *<LoadMethod Name="OnProcessAttach">* to **<LoadMethod Name="OnThreadAttach">.**

If that doesn't work, try <LoadMethod Name="ImportAddressHook">

- If the game fails to launch or crashes before the main menu, temporarily remove all Buffout 4 files and try again. If this works, restore all Buffout 4 files, then delete xSE Plugin Preloader.xml and IpHlpAPI.dll. xSE Preloader does not work for some players, but it's also not necessary for Buffout 4 and can be safely removed.

===

d3d11.dll (Rendering Crash)
Failure in rendering. Can be caused by many things and isn't limited to a single mod.

Solution: This crash is usually caused by **Classic Holstered Weapons** mod. Edit its INI file and set **IsHolsterVisibleOnNPCs** to **0** or remove the mod entirely. If this crash persists, make sure you didn't delete a core ENB / ReShade file or incorrectly configured Vulkan Renderer.

If you have <u>Vulkan Renderer</u> installed, recheck your <u>enblocal.ini</u> and <u>dxvk.conf</u> settings and make sure that you've properly installed all Vulkan Renderer files and correctly renamed each <u>d3d11.dll</u> file from both Vulkan Renderer and ENB for the Native Loader mod.

 - Disable any antivirus software (Avast, Bitdefender, Malwarebytes, McAfee) or add Fallout 4 and Mod Organizer 2 to their Ignore list, as they might be blocking some important mod files.

- If you have <u>Looks Menu</u> installed, open **Buffout4.toml** in Fallout 4 \ Data \ F4SE \ Plugins folder with a text editor and make sure that F4EE is set to True under [Compatibility]

Very rarely, this crash can be caused by any active GPU overclock profile, either through your GPU drivers or MSI Afterburner. Disable any overclocks and run your GPU on stock / default settings to check if they caused this crash. Tune or lower your overclock settings if necessary.

Even more rarely, this crash can be caused by corrupted INI files, so you'll have to reset them.

INI reset is done by deleting all game .ini files inside your Documents\My Games\Fallout4\F4SE folder (delete any similar files generated by other programs in the same folder as well), then run the game once with Fallout4Launcher.exe up until the Main Menu, then exit the game and readjust your INIs with BethINI. If this doesn't help, you can restore your original INIs.

===

cbp.dll (Body Physics Crash)
Mods that add different body physics or change the female body usually trigger this crash.
Caused by either these mods or a compatibility issue with Classic Holstered Weapons.

Solution: Make sure you've installed all patches, that all mods are in the correct order or simply disable Classic Holstered Weapons to confirm it's causing the crash.

Correct installation procedures, paraphrased from and credit to [chew222](#) for the solutions:
- In Bodyslide, choose **CBBE Body** (NOT CBBE with Physics and NOT Cherry Hotalings)
- Make sure you have the latest version of [CBP](#). If you keep crashing, try version [0.1.9](#).
- Download and install armor and clothing mods **without** physics and batch build.

skeleton.nif | *Variation of the issue above. CHW mod specifically does not like custom skeleton meshes which physics or body mods usually modify. You can also try [this mod.](#)*

If you get this crash message / error without CHW installed, another reason for this crash could be [Unique Player](#) and other similar unique body mods. Disable such mods to confirm.

And if you're running your game with **Advanced Animation Framework** and adult content oriented mods, switch to an older [Looks Menu](#) version **1.6.18**, as newer versions tend to break certain body (erection) morphs and can cause a crash if C key is pressed during character creation. For all other AAF and adult mod related problems, visit the [AAF (Dagoba) Discord Server](#)

===

bdhkm64.dll | **usvfs::hook_DeleteFileW** **(BitDefender Crash)**
BitDefender antivirus is blocking some game files, crash occurs while trying to save the game.

Solution: Add **Fallout4.exe** , **f4se_loader.exe** and **ModOrganizer.exe** to BitDefender's whitelist / ignore list or disable BitDefender completely while running the game.

===

DLCBannerDLC01.dds **(DLL Crash)** | **Do not confuse it with the error listed below.**
Crash seems to be caused by a sudden data overflow in modded / custom .dll files.

Solution: If the crash occurred while starting the game in MO2, simply restart your PC and this crash should go away. If crashing persists for whatever reason or it happens during gameplay, start disabling any mods that have their own or load custom .dll files. *(Ex. High Heels System, Place Everywhere, Uneducated Shooter, Unlimited Survival Mode…)*

This crash can also be rarely caused by corrupted Windows files. To fix any issues with your current Windows installation, open Command Prompt in admin mode and run these commands:

sfc /scannow
DISM.exe /Online /Cleanup-Image /Restorehealth

For more details about these commands and extra tips, see [this video](#).

Even more rarely, this crash can be caused by corrupted INI files, so you'll have to reset them.

INI reset is done by deleting all game .ini files inside your Documents\My Games\Fallout4\F4SE folder (delete any similar files generated by other programs in the same folder as well), then run

the game once with Fallout4Launcher.exe up until the Main Menu, then exit the game and readjust your INIs with BethINI. If this doesn't help, you can restore your original INIs.

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DLCBanner05.dds (Archive Invalidation Crash) | *This file is mentioned with all DLCs installed. Other dds files may be referenced if you don't own all DLC content.*

Solution: Archive Invalidation isn't enabled. Enable it through BethINI or manually by adding these lines to Fallout4Custom.ini inside your Documents\My Games\Fallout4 folder:

[Archive]
bInvalidateOlderFiles=1
sResourceDataDirsFinal=

Yes, sResourceDataDirsFinal must remain blank.

===

ParticleSystem | MasterParticleSystem (Particle Effects Crash)
Most commonly caused by mods that add large amounts of visual effects, particles or particle effects specifically, for example Extreme Particles Overhaul (3.0) or the Fireflies mod.

Solution: Disable any mods that edit particle effects or increase particle count to prevent such crashes. Mods that add other visual effects may also contain custom ini files that increase the **iMaxDesired** value above the default 750 or to ridiculous values. (EPO increases it to 500 000).

Watch out for these ini files and delete them or set their **iMaxDesired** value to 2500 or less.

===

Papyrus | VirtualMachine (Script Crash)
Caused by a desync in the scripting virtual machine that can even result in a partially or completely corrupted save file.

Solution: One of the scripted mods that your save depends on is either missing or it got corrupted. Manually download the latest version of ReSaver and extract it somewhere.

Run Resaver.exe and open your latest save with it, then select Clean > **Remove Unattached Instances** and Clean > **Purify FormLists**. If the same crash messages persist, that save is most likely unsalvageable. Try reverting to an older save or simply start a new game. You should never permanently disable or uninstall scripted mods from existing saves, mid-playthrough.

Sometimes, this crash can be caused by an incorrect F4SE installation or by other mods that unintentionally overwrite F4SE script files (usually by including copies of F4SE scripts with the mod files). Therefore, recheck your F4SE installation and see if any mods overwrite scripts that they shouldn't. You can check this most easily with MO2, Enable Archives Parsing in settings.

===

PipboyMapData (Equip Crash)
Rare crash caused by specific animation calls for first / third person modes when certain (broken) items are equipped. Other things might be causing this crash, be aware of false positives.

Solution: If this crash triggers consistently while interacting with any object, jumping or drawing weapons, then it most likely is caused by the equip crash. If that's the case, enter the console command **player.unequipall** to unequip and move all equipped items to your inventory.
This will also unequip your Pip-Boy, so enter **player.equipitem 00021b3b** to bring it back.

If crashing stopped, equip the same items. If it crashes again, then one of the equipped items is definitely bugged and deducing which one shouldn't be hard from this point.

==

GamebryoSequenceGenerator (Plugin Order Crash)
Caused by incorrect load order of your plugins (ex. patches loading before mods they patch).

Solution: Check your load order with [Wrye Bash](). Incorrectly ordered plugins will be mentioned after running the Plugin Checker or when trying to create a Bashed Patch.

You can also scroll through the plugin list and look for **orange boxes** next to plugin names, these aren't ordered correctly. Reorder them until their boxes become green or yellow. Yellow boxes can be safely ignored. Watch out for red boxes, as these plugins have missing requirements and won't be correctly loaded, so you should disable any such plugins.

==

GridAdjacencyMapNode | PowerUtils (Grid Scrap Crash)
Notorious crash that occurs when power grids become corrupted in nearby settlements.

Solution: Make sure you have [Workshop Framework]() installed, as it has the option to automatically scan and fix corrupted power grids. If Workshop Framework doesn't catch it in time and you get the same crash afterwards, get as close to the settlement or location that triggers the crash, open ingame console with ~ (tilde) and enter this command: **cpg 1**

- Credit to [jordoncue123]() for this solution: If you still can't get close enough to the settlement before it crashes, enter console commands **tcl** and **player.setav speedmult 10000** and quickly fly into the settlement before the area gets loaded, then use the **cpg 1** command. Afterwards, enter **tcl** again and **player.setav speedmult 100** to enable collision and reset your speed.

- Grid Scrap Crash is a type of crash triggered by corrupted power grids in settlements. Corruption can occur when you disable or uninstall mods with objects already connected to power grids, or you have a scrap mod that deletes such objects via Papyrus scripts. This results in orphaned entries in the power grid that become ticking time bombs.

==

LooseFileAsyncStream (BA2 Limit Crash)
You went over your BA2 limit, which triggers after reaching a certain number of total BA2 archives

loaded by the game. This limit varies between players and can decrease or increase based on the size and number of installed mods. Exactly why this happens is a mystery.

Solution: Mods that have the smallest (in terms of bytes) BA2 archives should be unpacked with the Cathedral Assets Optimizer until crashing stops or you get a different crash message error. This limit might have something to do with the file handle limit, but every attempt to discern a possible pattern or value was met with failure. Let me know if you have a better idea.

To see the correct amount of total BA2 archives you have currently loaded:

MO2 – Run **Explore Virtual Folder** from the main dropdown menu (next to the Run button), then in the virtual folder window navigate to Tools > Search or press Ctrl + F to open search. In the search window, both Search Subfolders and Case Insensitive must be checked. In the Filename line type in .ba2 and press the Search button. Number shown will be your total BA2 archive count.

Vortex – Navigate to your Fallout 4 / Data folder and search for *.ba2 with File Explorer's search bar. Your total ba2 archive count will be the number shown in the bottom left corner.

Keep in mind that your actual BA2 limit might change after unpacking or uninstalling a few mods.

===

LooseFileStream (Mesh (NIF) Crash) | Do not confuse with the error above.
Exact cause is currently unknown, but possibly related to corrupt mesh (.nif) files.

Solution: See Create2DTexture solution below. In some cases, the crash log might also mention names of plugins or meshes that the crash most likely originates from, under the **STACK** section.

===

FaderData | FaderMenu | UIMessage (MCM Crash)
Caused by incorrectly loaded Mod Configuration Menu, or one of other interface mods.

Solution: Reinstall Mod Configuration Menu manually by placing the MCM folder into your Fallout 4 / Data folder. If crashing persists, start disabling mods that edit the Pip-Boy / Inventory / Trading / Workbench interface in any way, for example sorting / tagging mods (VIS-G, FallUI Item Sorter) or mods that modify the interface appearance (DefUI, FallUI).

It's also not advised to use both DefUI and FallUI at the same time, use either one or the other.

===

PathingCell | BSPathBuilder | PathManagerServer (NPC Pathing Crash - Static)
NavMesh | BSNavmeshObstacleData | DynamicNavmesh (NPC Pathing Crash - Dynamic)
NPCs cannot find a correct path due to conflicting or deleted navmesh/pathing data.

Solution: The log will usually mention the names of plugins that contain pathing data causing the crash under the **STACK** section. Change the load order or disable these plugins. You can also check if any mods contain deleted navmeshes by running the Plugin Checker from Wrye Bash.

For cases where the log doesn't mention anything useful, your best bet is to start disabling mods that add new or change existing locations (new buildings, interiors, etc) until crashing stops. This crash can also rarely be caused by mods that change NPC AI, like Pack Attack or certain stealth mods. If disabling those doesn't help, you'll have to find the culprit through a binary search.

==

DefaultTexture_Black | NiAlphaProperty | (Material (BGSM) Crash)
Caused by older CAO versions or corrupted texture material (.bgsm) files.

Solution: If you used older versions of Cathedral Assets Optimizer to pack your mods into BA2s, you'll have to reinstall these mods as their files are likely and irreversibly corrupted.

Update CAO to **5.3.13+** since this and newer versions are actually safe to use. Do NOT use CAO versions 6.0.X, these aren't compatible with Fallout 4. Otherwise, you'll have to perform a binary search to determine which mod caused the crash, as the log itself is useless.

==

BSMemStorage | DataFileHandleReaderWriter (Plugin Limit Crash)
You went over the plugin limit, having more than 254 total active ESM and ESP plugins combined.

Solution: Reduce your ESM/ESP plugin count below 254. I recommend that you run this script in FO4Edit which will flag some plugins as ESL , since plugins with .esl extension or ESL flag count towards a separate limit of 4096 plugins which you'll never have to practically worry about.

==

SysWindowCompileAndRun | BSResourceNiBinaryStream | ConsoleLogPrinter
(Console Command Crash) *Rare crash triggered by improperly scripted console commands.*

Solution: If you're using the **sStartingConsoleCommand** in your mods or INI files, make sure to recheck/delete it. Might be also caused by modded script files with incorrect console commands or just bad scripting in general. Not much info since these crashes are very rare.

==

hkbVariableBindingSet | hkbHandIkControlsModifier | hkbBehaviorGraph | hkbModifierList
(Animation / Physics Crash) *Caused by conflicting animations (Lowered Weapons mod) or other injected data from mods with custom dll files such as Weapons Framework or Tactical Reload.*

Solution: Make sure you've installed all required patches for the aforementioned mods. Weapons Framework requires additional steps to make it work with other combat mods, while most modded weapons will require patches to prevent Tactical Reload from crashing your game.

Other weapon mods with custom DLLs can also cause this crash due to a conflict between them or due to missing patches. If nothing helps, you'll have to disable these mods to prevent crashes.

Generally, any mod that changes existing weapon animations or adds custom ones, adds cloth physics to outfits, hair, flags or any other animated objects can trigger this type of crash message, so disable such mods if this crash is still a problem and recheck your game.

===

Create2DTexture | DefaultTexture (Texture (DDS) Crash)
Special type of crash that usually gives a warning message. Commonly caused by corrupted textures or incorrectly resized texture files (ex. 1024 x 1260 instead of 1024 x 1024).

Solution: This warning can sometimes generate a crash log and that log will usually contain names of any .dds or .BGSM files (or .nif in case of LooseFileStream) that caused the crash.

Try searching for these files in your installed mods folder and disable any mods that contain them. If crashing persists or such files cannot be found, you'll have to do a binary search.

Another possible method of preventing this crash is to pack as many of your mods into BA2 archives with Cathedral Assets Optimizer. Do not use Archive2 as it can break cubemaps.

===

dxvk::DxgiAdapter | dxvk::DxgiFactory (Vulkan Settings Crash)
Caused by incorrect Vulkan Renderer installation or settings.

Solution: Recheck your enblocal.ini and dxvk.conf settings in your Fallout 4 game folder and make sure that you've properly installed all Vulkan Renderer files and correctly renamed each d3d11.dll file from both Vulkan Renderer and ENB for the Native Loader mod.

===

KERNELBASE.dll | MSVCP140.dll | DxvkSubmissionQueue (Vulkan Memory Crash)
Caused by a sudden failure in device (vulkan) memory allocation.

Solution: This could be simply a rare occurrence but if you get this crash often, you'll have to reduce memory usage as much as possible. Close unnecessary background programs and services while running Fallout 4 and pack as many of your mods into BA2 archives.

To further reduce memory usage and increase performance, install Previs Repair Pack and place its non-esm plugins last / at the bottom of your load order, so they load after all other mods.

===

BGSQueuedTerrainInitialLoad (LOD Crash)
Caused by unpacked or corrupted Level Of Detail (LOD) files.

Solution: If you've already generated new LOD for your load order with FO4LodGen, make sure that these LOD files are packed into BA2 archives with Cathedral Assets Optimizer.

If you still get the same crash with packed LOD files or after removing your generated LOD, you'll have to generate new LOD and pack it again. If crashing persists, one of your installed mods has corrupted LOD files and you'll have to perform a binary search to find that mod.

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BGSDecalManager | BSTempEffectGeometryDecal (Decal Crash)
The game is unable to render certain decals (bullet wounds, blood splatter, bullet impacts, etc.) on a certain armor, clothing or outfit piece, or possibly any other broken mesh that was hit or shot at.

Solution: The autoscan log can be very misleading for these crash messages, so try to visually confirm the exact armor, clothing or outfit (or other nearby mesh) that crashes the game when worn by the player or nearby NPCs while being hit by bullets / other projectiles.

If that's not possible, you'll have to perform a binary search and disable mods with armor, clothing or outfits that could possibly have such a broken mesh, until crashing stops. In some cases, reducing decal quality with BethINI might also help prevent this crash.

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BSD3DResourceCreator (MO2 Extractor Crash)
Uncommon crash caused by extracting BA2 archives with MO2 Extractor.

Solution: If you recently used MO2 and unpacked BA2 archives with it during mod install, you'll have to disable MO2's Extractor and reinstall these mods. Disable the Extractor by opening MO2 Settings (Ctrl + S) > Plugins and uncheck the BSA Extractor enabled option.

If you haven't used MO2 Extractor and you're getting this crash, it's likely that one of your installed mods has corrupted / broken loose files. You'll have to perform a binary search with that in mind to find the culprit. Notify the mod author if necessary. Make sure to handle all of your BA2 packing and extracting needs with Cathedral Assets Optimizer from now on.

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nsStartMenu_InputMapping | RemapHandler (ControlMap Crash)
Call Stacks: *+0x7FF612B7C9EA*
Crash caused by either broken or incorrectly generated ControlMap file.

Solution: Remove ControlMap_Custom.txt file from your Documents\My Games\Fallout4 folder and check if you get the same crash. If there's no such file there, search your installed mods folder or the Fallout4 / Data folder and remove all ControlMap_Custom.txt available files.

The only currently known mod that can cause this crash is Toggle Aim

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BGSWaterCollisionManager | TESWaterForm [?] (Water Collision Crash)
Game is unable to handle water collision with an item / interactable object.

Solution: IF YOU GET THIS CRASH, CONTACT ME AS SOON AS POSSIBLE. (You need to disable any **PLACED ITEM** records referenced through Form IDs in the autoscan log by using FO4Edit.)

UNSOLVED CRASH MESSAGES / ERRORS

CAUTION: These messages and their related explanations / solutions are still not confirmed. They are listed here simply for tracking purposes and for future auto-scanner updates.

If YOU get any of these messages / errors and want to help us determine their exact cause, please post the following info in the posts section HERE or in ⭐-poet-mods-feedback channel if you're in the Collective Modding discord server. Only one place is enough.

1.   Post the FULL **Crash Log** (and NOT the autoscan log, just the actual crash log).

2.   Describe the situation you were in when the crash occurred. When/where does it crash? AND try to be specific! Was it in combat? While opening the pipboy? While entering or exiting a location? During game startup? While interacting with a workbench? Etc. This will save us from headaches of having to constantly ask so we can easily determine exact problems and causes.

3.   If you already did a binary search, disabled a certain mod / plugin or performed specific steps and that stopped the game from crashing, let us know so we can confirm it on our side!

BGSCombinedCellGeometryDB | BSPackedCombinedGeomDataExtra | BGSStaticCollection TESObjectCELL (?) *(Precombines Crash)*

Missing, conflicting or corrupted precombine / previs data?
See if you get this crash with OR without Previs Repair Pack

Unhandled exception "EXCEPTION_BREAKPOINT"
(Interface / Menu Crash 1) Very rare. Some sort of menu / interface crash?

Mods possibly causing this: Immersive HUD / VIS-G Item Sorting

HUDAmmoCounter | BSScaleformTranslator (?)
(Interface / Menu Crash 2)

Possibly related to Better Locational Damage or other specific weapon mods.

PlayerCharacter | 0x00000007 | 0x00000008 | 0x00000014
(Player Character Crash) Very common.

Crash logs are too broad to determine anything useful. Maybe player animation related? Anything that triggers a player specific animation, pose or effect can cause this crash.

Disable such mods first to see if you can pinpoint the exact culprit. If not, you'll have to do a **binary search (best procedure in most cases)**. Example of mods that can trigger this crash:

-   Mods that require or depend on Advanced Animation Framework
-   Mods that require or depend on Immersive Animation Framework
-   Any adult content related mods (poses, sex scenes, animations, etc.)
-   Weapon specific or custom (tactical) animations (running, crouching, ADS, etc.)

ShadowSceneNode | myID3D11DeviceContext | BSDeferredDecal | BSDFDecal | gz%
(Overclock Crash)

Any of these error messages could possibly indicate that GPU overclock caused the crash.
If you overclocked your GPU through driver settings or MSI Afterburner, disable all overclock
profiles and run the game on default GPU settings, then see if you can reproduce the crash.

BGSSaveFormBuffer
(Save Crash) Currently no idea.

BGSProcedurePatrol | BGSProcedurePatrolExecState | PatrolActorPackageData
(NPC Patrol Crash)

Almost certainly a pathing issue, but could be due to broken or missing navmeshes, messed up
patrol points or NPC AI not working correctly. Disable any mods that modify NPC AI like Pack
Attack. See if you can isolate the crash to a single location, disable any mods that might edit it.

BGSProjectile | CombatProjectileAimController
(NPC Projectile Crash)

Mainly associated with Deathclaw and Behemoth boulder throws as they have built in auto-aim,
though why these projectiles have trouble tracking the player and trigger this crash is unknown.
The only currently known mod that can cause this crash is Respawnable Legendary Bosses

BGSMod::Attachment | BGSMod::Template | BGSMod::Template::Item
(Item Crash)

Likely conflicting item records or bad item data, exact logic behind it is currently unknown.
Crash log should always mention the plugin(s) responsible for this crash.

ButtonEvent | MenuControls | MenuOpenCloseHandler | PlayerControls | DXGISwapChain (?)
(Input Crash)

Either DefUI / FallUI related or conflicting hotkeys in some way, needs more info.

BGSSaveLoadManager (?) | BGSSaveLoadThread (?) | BGSSaveFormBuffer (?)
Call Stacks: *+0CDAD30 | +0D09AB7 (Bad INI Crash)*

Very limited information, but this crash could be caused by bad INI configuration files.
Resetting all INI files in your Documents\My Games\Fallout4 folder should resolve this.

INI reset is done by deleting all game .ini files inside your Documents\My Games\Fallout4\F4SE
folder (delete any similar files generated by other programs in the same folder as well), then run
the game once with Fallout4Launcher.exe up until the Main Menu, then exit the game and
readjust your INIs with BethINI. If this doesn't help, you can restore your original INIs.