



AVSIM FSX/P3D/FS9 Crash-to-Desktop Guide

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Introduction -

This AVSIM Crash-to-Desktop (CTD) guide provides information on what you can do when you get one of those dreaded CTD's, tips on preventing, probable causes of CTD's, and some actual fixes for some known CTD's. For the purposes of this guide, a CTD includes incidents where the simulation freezes up during a flight or you receive a Blue Screen of Death (BSOD). Except for some rare known causes of crashes, each CTD **must be investigated** and this guide will provide you with some tools to assist you in finding the probable cause and taking corrective actions. We hope this guide will be sufficient and prevents you from the dreaded task of uninstalling/reinstalling your application, add-ons and/or Windows. While this guide mostly pertains to FSX and P3D, FS9 users can usually find probable causes to their crashes/freezes too by following the guidance here.

Actions to take if you decide to post a CTD in the AVSIM CTD Forum -

- Provide an AppCrashView report and copy and paste it in your topic or post
- Check Windows Event Viewer (if AppCrashView does not show any crash)
- Describe in detail what happened
- Provide your system specs if not already shown in your profile

Actions to take after a crash is encountered –

Some actions below require opening/moving hidden files located in **hidden system folders** (i.e., FSX/P3D.cfg, dll.xml, exe.xml, scenery.cfg).

For Windows 7

- Open Windows Explorer, click on '**Organize**' in the Menu at the top
- Click on Folder and Search Options
- Click on the **View Tab** and go to **Advanced Settings/Files and Folders**
- Click on **Show hidden files, folders, and drives**

- Click Apply. Close Windows Explorer then reopen.

For Windows 8.1 –

- Press Windows+S key to open 'Search'
- Type folder in the search box, then select Folder Options
- Click on View Tab and follow the instructions for Windows 7 above.

AppCrashView (click to download) - when you get a CTD, a Windows Error Report (WER) is generated by Windows. This report is not very detailed and Microsoft did not make it easy for you to find or interpret the report. AppCrashView interprets the Microsoft WER reports and provides more details. If you post a CTD in the AVSIM CTD Forum, you should copy and paste the latest crash report in your topic or post. Along with this, include your system specifications (if not already included in your profile).

Blue Screen of Death (BSOD) – if you receive a BSOD, this is more serious and requires immediate action on your part. Download and run the **BlueScreenView** program (click to go to the website to download this program). You can post a picture of the report (using the Windows Snipping Tool) and upload it to your post or provide the Bug Check String and the Bug Check Code.

Check the Windows 7/8 Event Viewer – The Windows Event Viewer can provide a wealth of information regarding your CTD or information about your crash that may not have been recorded in a Windows Error Report. Plus there could be other problems being reported that need to be fixed that could be causing your application crashes. You can get to your Windows Event Viewer by clicking on the Start Button and, in the Search box, type Event and then look up in the Menu and click on Event Viewer or use the guidance at the following link - **Opening Windows 7 Event Viewer**. Windows 8 users should follow the guidance at the following link: **Opening Windows 8 Event Viewer**. Once the event viewer is open, click on Custom Views and then Administrative Events (this provides all events from all Sources).

The Summary of Administrative Events will show you the various types of "Events". Critical (which should be fixed as soon as possible), Error, and sometimes Warning Events are what you should be interested in. Administrative Events will show you everything that happened to your computer each time you turned it on and while it was running from the day you installed your Windows OS.

Return to the default configuration - This is done by rebuilding your configuration; disabling add-on scenery; and disabling modules in your dll.xml or exe.xml as follows –

- **Rebuild Configurations** – Many CTD's can be fixed by renaming your configuration with another extension, such as fsx.cfg to fsx.orig, or you can move the file to a temporary folder, restarting the program and letting the configuration rebuild. The application configurations are hidden (C:\User\yourusername\AppData\Roaming\Microsoft\FSX or Lockheed Martin\P3D). It has been said my many experts that rebuilding your configuration is about the same as uninstalling/ reinstalling FSX, FS9, or P3D, as appropriate, as it removes tweaks or other parameters that you may have added and may be causing more harm than good.
- **Disable Add-on Scenery** – Disable all your add-on scenery in the Scenery Library (Hidden - C:\Program Data\Microsoft\FSX or LockHeed Martin\P3D), then run the program and see if this fixes the problem. If it does, then the problem is probably associated with one or more of your add-on sceneries. To find the offending scenery, enable your add-ons 3-4 at a time until the CTD returns.

- **Disable modules in dll.xml and exe.dll**– Sometimes a module you have installed is corrupted or is somehow duplicated in the dll.xml. You can check to see if any modules are the cause of your crashes by disabling all modules (except the first one). Change the parameter 'False' in the line <Disabled>**False**</Disabled> to **True** or simply move the dll.xml and exe.xml to a temporary folder and restart your program. If the problem is fixed, move the file back to the proper folder and enable each module one by one until the culprit is found.

Check for possible dll.xml corruption – Click on the following [**dll.xml troubleshooting guide from PMDG**](#).

Scan your system for **corrupt/missing** files (AKA - SFC \scannow).

Disable Tweaks – To disable tweaks that might be causing a problem, open up the appropriate configuration with Notepad and comment out the line items you do not want to have loaded. To comment out items, simply place two slashes (//) in front of the item(s) you want to disable. For instance:

```
//[Bufferpools] (note the two slashes before the entry. This will prevent the item to load)
//Poolsize=0
```

Whenever you are having issues, suspect the cause to be a bad tweak. Older systems prior to the Sandy Bridge Chipset might require tweaks to boost performance or stability but systems built after Sandy Bridge are mostly considered unnecessary and will cause problems if not properly employed.

Monitor VAS – The freeware or registered versions of the FSUIPC utility will allow you to monitor the amount of VAS remaining during a flight session. This might be valuable in troubleshooting Out-of-Memory (OOM's).

Startup program and then enter the Add-on Menu and select FSUIPC. Once FSUIPC is open, click on the Logging Tab and enter 024C under Offset and select S32 under Type. Select where you would like to have the usage displayed. The FS Window is for Full Screen sessions. The FS Title Bar is for Windowed Mode. AVSIM recommends you also check the Normal log file as this provides you information on how much VAS you had to start out with and then logs usage throughout your flight.

The VAS usage is displayed in Kilobytes (KB's). The value represents the amount of VAS left so, the lower the value, the more VAS being depleted. The max amount of VAS allowed in computers with 64 bit Operating Systems is 4GB's if running 32 bit applications like FSX. For 32 bit Operating Systems, the max amount of VAS allowed 2GB's but this can be expanded to a max of 3GB's with a switch like the /3GB switch. (NOTE: For more information regarding the /3GB switches for various Windows, please do a search with a search engine like Google or Bing as most members have upgraded to 64 bit Operating Systems).

To convert the KB's to the amount of GB's, you should use one of the Byte converters on the Internet like the following: **Byte Converter**. You will never see 4194304 KB's displayed as this equals 4GB's. You might see around 3GB's (3145728) remaining when you first start up FSX/P3D but that too would be unusual. Do not be concerned with the amount of VAS remaining when you first start up. It fluctuates during a flight session.

Members might be interested in a utility in the AVSIM Library called **Quantum Leap** which allows you to speed up your trip across the US or any ocean but it requires the payware version of the FSUIPC utility. According to the developer, "this utility was written to allow an

FSX aircraft established at cruise to "leap" to a point further along the flight plan track. It allows the user to select a nav fix or manually enter coordinates for the jump-ahead point, as well as setting a new time in the simulation to be set at the designated leap-ahead point. The primary objective was to leap forward on very long haul flights to eliminate long periods of droning or wrestling with accelerated flight. It was tested with the PMDG(r) 777 and 737NGX simulations, but will most likely work with most other add-ons."

Remove any overclocking – Many crashes are known to be caused by the instability of overclocking. Many members have been known to have run several stability testing after overclocking only to find that FSX/P3D still crashed and it was determined the overclock was not stable. To ensure the crash was not caused by a bad overclock setting, return the BIOS back to default or optimal default settings. You should first save your settings in your BIOS (most BIOS provide this capability) before changing your settings in case this does not fix your problem. Most modern BIOS will also allow you to 'Print' the various pages as an image to a memory stick or to your HDD.

Set Page File to 'System Managed Size' (default for Windows Operating Systems). This works best for most FSX/P3DV2 users. If you are a computer expert, you can set your own minimum/maximum settings but be aware that many crashes are caused by incorrect settings. Click on Start button, search for Page File. Look in menu and click on How to Change Size of Virtual Memory.

Disable startup programs – Many developers install programs that are intended to start up whenever you turn on your computer. These programs are used by the developer to schedule updates or run unnecessary processes in the background. They are not needed for the proper function of the application or Windows and they can all be disabled. Click on the Start button, type msconfig in the search box and hit enter and then click on the Start Tab. Disable all startup programs. Reboot your system.

Run DirectX Diagnostic Tool – This tool will check your DirectX, Video Card, and Sound Card installation and look for errors. Go to the Start button, type dxdiag in the search bar and then click enter. Review each tab for errors. Fix any errors found.

Delete/Rebuild your Facilities/Scenery Indexes and Shader Folders (see details in next section).

Run Process Monitor – Another investigative tool used to pin down a situation where your application freezes, crashes, or stutters/pauses during a flight is to run a utility called **Process Monitor**. During your flight, this utility monitors activity such as calling textures, AI aircraft schedules, ATC, weather updates, and scenery loading. When FSX/P3D stutters or FPS drop dramatically you simply write down the time it occurred. This is important as thousands of entries are made every minute, every second. Continue doing this throughout the flight. Of course, if it freezes, you will know what was going on before the application froze. This utility will not show you a definitive cause of your issue but it will show you what add-ons were being loaded about when you received the stutter, the long pause(s), and the freeze and you can further investigate by disabling that scenery, that aircraft, or whatever might have caused the event. One member used this utility to determine that My Traffic X, version 5.4c was the cause of a BEX/StackHash/NTDLL.dll crash he was getting. It was easy to disable My Traffic X in the Scenery Library and find that FSX no longer crashed.

AVSIM recommends you do not run a flight any longer than 60 minutes as the Process Monitor log becomes quite large (hopefully your application will freeze or crash by then!). For a 60 minutes flight, expect the file to be at least as large as 8GB's or tens of millions of captured events. Make sure you delete the log or move it to another drive after you have finished your testing to free up HDD space. Another recommended tip is to make sure you

use system time to mark the time of each event and do not use an external clock unless they are synchronized. Going through one minute of a process is a massive amount of data needed to be reviewed (it goes fast as thousands of entries just show a scenery being loaded).

To run this utility properly, you need to capture only FSX/P3D/FS9 events. It would be nearly impossible to find a possible glitch or issue if Windows events or other system activities were being logged too. AVSIM recommends opening of the Process Monitor when you are on the active runway and preparing to takeoff to save space on your HDD:

- Startup FSX/P3D/FS9, as appropriate, to the Setup Screen.
- Open Process Monitor
- Click on the Filter tab and then Filter....
- Click on Architecture and scroll down to Process Name
- Click on blank box and select FSX/P3D/FS9, as appropriate
- Click Ok or Apply

NOTE: AVSIM recommends you click on the filter tab again and then select 'Save filter...' and name your Filter – FSX (or P3D/FS9). Then, in the future, you can startup Process Monitor before opening your application and watch what is loading as your application loads to the Setup Screen.

You can use the utility while in Full Screen mode or Windowed Mode. In Windowed Mode you can monitor what is happening instantly but it is best to run Process Monitor in Full Screen (unless you are seeing freezes in Windowed Mode).

When the flight is finished, immediately go to the Process Monitor application, click on it to bring it into focus, and hit Ctrl+E on your keyboard to capture the events (event logging will continue until you do this and make it more difficult to locate the cause of your crash). Shutdown FSX/P3D/FS9 and begin your investigating! You can also save the log for future investigations but remember the file will be as large as 8GB's or more and using valuable disk space.

Actions to take to prevent crashes –

Use AVSIM FSX Configuration Guide – for FSX users, use the guidance in this guide as it provides the best configuration settings that work for many FSX users.

Defragment your mechanical hard disk drives (HDD's). When FSX or P3DV2 are installed, files are thrown all over your HDD and fragmented. If you do not install FSX or P3DV2 to a Solid-State Drive (SSD), then you must defragment. You cannot defragment a SSD.

Delete/Rebuild your Facilities/Scenery Indexes and Shader Folders – These are temporary folders and should be deleted periodically (they will be rebuilt):

Facilities/Scenery Indexes are located in C:\Program Data\Microsoft\FSX\(\hidden). For P3D, instead of Microsoft\FSX, look in LockHeed Martin\Prepar3D v2 for the indexes. Delete the Facilities and Scenery folders. They will be rebuilt.

Delete the Shader folders located in C:\Users\(\your username)\AppData\Local\Microsoft\FSX\Shader10 and Shader folders (\hidden). The Shader 10 folder is created when you enable DX10 Preview in FSX. The Shaders folder for DX9 will always be created. For P3D

users, there is only a Shaders folder in C:\Users\(\your username)\AppData\Lockheed Martin\Prepar3D v2 folder. When you restart FSX/P3D, these folders will be rebuilt. Deleting these temporary folders has also been known to fix some CTD's.

Update Drivers – Microsoft does an excellent job providing updates for Windows and some drivers, such as for your keyboard, mouse, and video card. But they do not find updates for hardware drivers required for computer system stability. Usually, the manufacturer of your computer, like Dell or Hewlett Packard, will provide you updates for some of the hardware installed on your computer. You can also download and run a program that will scan your computer for updated hardware drivers. These drivers will be updates for your CPU, your motherboard, USB ports (which affect your controllers), SSD's, HDD's, printers, etc. There are several commercial developers who have programs that will scan your system for updates. Just use the Internet search engines, Google or Bing for **Drivers** or **Driver Updates** and you will get a list of programs you can download and run. The programs are freeware but, when drivers are found to be out-of-date, they will ask you to pay a small registration/license fee to download and install the updates for you. You can either pay or you can get the name of the out-of-date driver(s) from the list provided by the driver scanner program and then go to Google/Bing and search for the updated driver. Once found, you can download and install the driver yourself. Manufacturers constantly update drivers when they find issues with previous versions and it is one of the best things you can do to help maintain system stability (especially for newer systems).

Clean your system registry and Windows – If you are seeing signs of stability problems, such as freezes, crashes, or application errors, periodically use a Registry Cleaner such as CCleaner to keep your Windows System Registry clean, and efficient and this could restore smooth and stable operations. Most of these packages also offer additional tools to clean your temporary folders, remove malware/spyware, clean junk files, and remove files relating to your privacy like cookies, Internet browser history, and Internet browser cache. Some will also optimize your Internet connection, fix shortcuts, scan your disks for errors, and provide system and disk optimizations.

One area that is not usually cleaned by these programs is a hidden temporary folder located in User/Your Name/AppData/Local/Temp. All of these files and folders can be deleted and the ones required for your Windows session will be rebuilt when needed. If you receive an error that a file or folder cannot be deleted, it means it is still in use. Still, this folder can become quite large and take up valuable disk space so it should be periodically cleaned.

Remove any temporary, junk files, Internet cache files before cleaning your Registry.

Disable User Access Controls (UAC) – click on User Access Controls for details about this security program and how to disable it (this link provides procedures for Windows 7 but it works for Windows 8 too). It is suggested by many to disable UAC prior to installing any application or add-on. If you disable UAC, install an application, and then enable UAC, your application may not work properly.

Update Your Motherboard BIOS – Make sure the Motherboard BIOS is up-to-date. The latest can usually be found on the Motherboard developer's website, like ASUS, Gigabyte, Intel, Dell, or Hewlett Packard. Do not automatically update the BIOS. Look at what the update will provide. If it says it increases system stability, you should probably install it. Updates fix problems/bugs found after the Motherboard was built and the BIOS created.

Update Microsoft Visuals - Make sure your Microsoft Visuals are installed properly and up-to-date. Microsoft Visuals are used by developers to make sure their software is installed properly and as intended - <http://support.microsoft.com/kb/2019667>. The latest list of installed Microsoft Visuals is shown below, but may change due to frequent updates.

Microsoft Visual C++ 2005 Redistributable	Microsoft Corporation	6/21/2013	300 KB	8.0.61001
Microsoft Visual C++ 2005 Redistributable	Microsoft Corporation	6/22/2013	2.68 MB	8.0.56336
Microsoft Visual C++ 2008 Redistributable - x64 9.0.30729.6161	Microsoft Corporation	6/23/2013	788 KB	9.0.30729.6161
Microsoft Visual C++ 2008 Redistributable - x86 9.0.30729.6161	Microsoft Corporation	6/23/2013	600 KB	9.0.30729.6161
Microsoft Visual C++ 2010 x64 Redistributable - 10.0.40219	Microsoft Corporation	7/13/2013	13.8 MB	10.0.40219
Microsoft Visual C++ 2010 x86 Redistributable - 10.0.40219	Microsoft Corporation	7/13/2013	13.7 MB	10.0.40219
Microsoft Visual C++ 2012 Redistributable (x64) - 11.0.60610	Microsoft Corporation	11/13/2013	20.5 MB	11.0.60610.1
Microsoft Visual C++ 2012 Redistributable (x64) - 11.0.60610	Microsoft Corporation	10/22/2013	20.5 MB	11.0.60610.1
Microsoft Visual C++ 2012 Redistributable (x86) - 11.0.60610	Microsoft Corporation	11/13/2013	17.3 MB	11.0.60610.1
Microsoft Visual C++ 2012 Redistributable (x86) - 11.0.60610	Microsoft Corporation	10/22/2013	17.3 MB	11.0.60610.1

This is a list of installed MSV's as shown in the Add/Remove Programs

Your application and most commercial add-ons will install the appropriate version when you first install the product if it is not already found on your system. For FSX/Acceleration (and most likely P3D), you will need to have the latest Microsoft Visual 2005 with SP1. SP1 was to be included with Acceleration but did not make it before the product was released. For FSX/P3D commercial add-ons you will need the latest version of Microsoft Visual 2008 and Microsoft Visual 2010. It is important to note that Microsoft Visuals are not, for the most part, backward compatible. Only the 32-bit version is required as FSX and P3D are 32 bit applications. Microsoft Update or a 64-bit application may install the 64-bit versions but they will not be used by FSX/P3D. FS9 users will have the latest Microsoft Visual runtime version installed when FS9 was first installed. However, FS9 add-ons may require later versions so we recommend you install the above Microsoft Visuals to ensure compatibility.

Make sure required Microsoft.net Framework Packages are installed and up-to-date - The appropriate Microsoft.net Framework packages are normally installed when you first install your application and commercial add-on programs if the appropriate package is not found. You will need versions 2.0 through the latest. You can see what versions are installed by going to your Windows Explorer and look for Windows/Microsoft.net/Framework/ (then the versions installed). Once the packages are installed, Windows Update will periodically update the packages. You can verify whether your versions are properly installed and up-to-date by using the [**.Net Framework Setup Verification Tool User's Guide**](#). Microsoft.net packages are used by developers to make sure the program runs in the way they intended, including memory management. The packages are, for the most part, not backward compatible.

Microsoft.net Repair Tool - Whenever you get a Microsoft.net error or Microsoft Visual C++ error (faulting module), run the Microsoft.net repair tool.

Increase Heap Limitation - There is a problem sometimes with Windows 7/8 users when too many Windows are open. This may cause an out-of-memory (OOM) crash. It is caused because of the desktop heap limitation. Here is the link to the Microsoft Fix-It program that will increase your desktop heap limitation: <http://support.microsoft.com/kb/947246>. This may or may not work with Windows 8.1 as it has not been tested. (NOTE: Supposedly this fix was installed with Windows 7, 64 bit but research by an AVSIM Staff Member found that the three settings in the Shared Section of the Registry key were not correct and had to be manually changed).

UIAutomationcore.dll - This module, placed in your main FSX directory (**not applicable to P3D/FS9 users**), will sometimes fix FSX from freezing up after hitting the FSX menu and also right clicking the menu repeatedly (20 or more hits). The Vista version of this module will stop FSX from freezing up when you hit the FSX menu or do a lot of right clicking inside of FSX several times during a flight session. Some AVSIM members have tried to duplicate this crash by repeatedly hitting the FSX menu and have been unsuccessful so the validity of this fix is questionable. The UIAutomationcore.dll is part of the

Microsoft.net package, released for various versions of Windows. We advise members as follows:

- This "fix" only fixes menu and right clicking crashes and will not prevent any other type of FSX crash.
- Use only if you have Windows 7, 64 bit installed. **Not for 32 bit Windows OS systems.** Based on an Internet search, it was found that many individuals have been wrongly advised to install the 64-bit version since they have the 64 bit version of Windows installed. This is wrong as FSX is a 32-bit application and doing so will have no effect on FSX.
- Windows 8, 64 bit users can try this fix for menu freezes but at your own risk. We believe it is incompatible. Some members who use Windows 8.1 have fixed an FSX crash by removing the module from their main FSX folder.
- Do not automatically place this module in your main FSX folder. Wait until a problem as described above occurs. There have been several incidents where this module has been found incompatible and has actually caused other types of CTD's. When the individual removes the module, CTD's stop.
- It has been proven beyond any doubt that the module will not fix any other type of FSX crashes. Any AVSIM member can see this by looking at AppCrashView reports in the AVSIM CTD Forum where the UIAutomationcore.dll in the main FSX folder loaded but the crash was caused by another module.

If FSX freezes up while going back and forth from the FSX menu or right-clicking your mouse during a flight, try placing one of the following 32 bit UIAutomationcore.dll modules into your main FSX folder:

Version: 6.05840.16386 - This 32 bit version was the Vista and pre-FSX SP1 version which seems to work the best for the majority of members. We recommend this version be installed.

Version: 6.0.6001.18000 - This version is the version used with Vista and FSX SP1. It is recommended by many computer experts throughout the flight simulator community but has caused problems for several as attested in our CTD Forum. This version is not readily available on the Internet except at a few commercial websites (i.e., Flight1 SimForums or PMDG) that believe this version is the proper one to install. If you find that the 16386 version did not prevent FSX menu freezes, you can conduct a search for the 18000 version. More information and discussions about the proper version can be found at the following link - <http://forum.avsim.net/topic/421820-wrong-version-of-uiautomationcoredll/>.

Install Scenery Configuration Editor – Download and install the **Scenery Config Editor** tool (click to go to the website and download). You can use this tool to install or remove your add-on scenery. It will look for any errors in your scenery.cfg and fix them. You can rearrange the order of the scenery instead of moving scenery up or down in the Scenery Library. Most importantly, you can use this tool to disable all of your FSX/FS9 add-on scenery and enable only the scenery you will be using during a flight plan. This will reduce your chances of running out of memory because you ran out of Virtual Address Space (VAS) (see explanation of VAS in the Known/Probable Causes of CTD's section).

Keep FSUIPC Utility Up-to-Date – Make sure you have the latest version of the **FSUIPC Utility** installed, freeware or payware (required for some add-ons; traps some fsx crashes like the G3D.dll CTD; provides VAS usage; and more). AVSIM suggests making a link to your desktop to the FSUIPC.log. This will allow easy access to the file after completion of a flight to see how many CTD's were trapped or VAS usage.

Virtual Memory Settings – Set your Virtual Memory (Page File) to “System Managed Size. To locate this setting on your computer, click on the Start button and, in the search box type Virtual then look up in the menu and click on “How to Change the size of virtual memory. To reduce some stuttering in FSX/P3D, make sure you enable a Page File (System Managed Size) for each HDD that you have FSX/P3D files located.

FSX/P3D Installation - Install FSX/P3D in a non-default folder such as C:\FSX or C:\P3D (see Sharing and Security Permissions below). AVSIM recommends using the following guidance from PMDG for uninstalling or reinstalling (will work for P3D too) - **How to Uninstall/Reinstall FSX.**

Sharing and Security Permissions – If you installed FSX/P3D in the default installation folders (i.e., C:\Program Files (x86)), you should make sure all of your FSX/P3D folders and add-ons like your weather programs are shared so they can interact. If you have FSX/P3D installed outside the default folder, such as C:\FSX, D:\P3DV2, then you just need to check and make sure all permissions and sharing have been set by your Administrator or System. You do this by going to the main FSX or P3DV2 folders, right clicking on the folder name and then selecting Properties. Once open, look at the Share tab. If it states ‘not shared’ then click on ‘Advanced Sharing’ and make sure the Share box is ticked. Click OK and then click on the Security tab. Once open, click on ‘Everyone’ under Group or usernames then look and verify permissions for ‘Everyone’ is allowed for ‘Everyone’ (full control, modify, read, write, etc.).

Take Ownership - You can also download and run a program called **Take Ownership** (click to go to the link for more information and a link to the program). When this utility is installed, it will provide you another option when you right click a folder. Instead of clicking on Properties, click on Take Ownership. Allow the program to run until it has fully completed the tasks. Sometimes it will appear the program has stalled or stopped. It is just thinking.

Known/Probable Fixes for CTD’s and Freezes –

Before you begin - A known cause for a CTD or freeze is rare. Almost all crashes have to be investigated using techniques in the first section of this guide. The following known or probable fixes were gleaned from the AVSIM CTD Forum and other forums/blogs in the flight simulation community. Hopefully the following recommendations will fix your issue:

Access Denied – If you are getting errors indicating “Access Denied” it usually occurs due to permission issues. See Take Ownership above.

AContain.dll - related to AI aircraft and it removes AI aircraft around your aircraft as you are flying. Make sure you have the latest version of FSUIPC installed as it somehow works with this module. Reduce your AI settings - not above 40%. What AI program is installed? Is the default AI program still running? If you are still having problems, suggest uninstalling any add-on AI program. Ships and boats are also controlled by the acontain.dll so make sure those settings are not too high. Individuals who have had crashes as a result of this module have been advised to completely uninstall FSX, run a freeware system cleaner such as CCleaner, then temporarily disable any anti-virus program and disable UAC, then reinstall.

AI_Player.dll - The faulting module was the ai_player.dll which is the module that controls your AI (a commercial AI program or the default).

- Could be something wrong with an AI model or object. If you have MyTrafficX, you can disable AI in the Scenery Library to see if this fixes the problem. If so, then this is the problem. If you have another AI program installed, then disable that program to see if the program is causing your crashes.
- Problem occurs occasionally in the Seattle area with FTX/Orbx Pacific Northwest. This may have been fixed by now but check the FTX/Orbx forums and search for AI_Player.
- Caused by freeware airports in the area that has static aircraft or their own AI aircraft and flight plans. Disable the add-on airport and see if problem is gone. If you have any FSDT, Flight Beam airports, do not disable them. They are not the problem.
- AI programs like MyTrafficX has AFCAD's for hundreds, maybe thousands of airports in the MyTraffic/Scenery folder. Anyone of these could be the cause of the ai_player crash. In this case, make sure you have the latest version of your AI program installed.

API.dll – Indicates you are close to running out of memory (OOM).

- Recommend lowering FSX/P3D/Display driver settings.
- Disable unneeded add-on sceneries.
- See explanation of Virtual Address Space below in discussion regarding Out-of-Memory.
- Recommend lowering LOD_Radius (if above 4.5) and/or Texture_Max_Load (if above 1024).
- Check BufferPools parameter in FSX.cfg and disable (fix for many). Parameter not recommended for P3DV2.

Application will not start or cannot get to application setup screen.

- If you have FS Dream Team, Flight Beam, or Blue Print scenery, the Add-on Manager is probably corrupted. Reinstall the latest Add-on Manager.
- For FSX - Make sure Microsoft Visual C++ 2005 with SP1, 32 bit version, is installed.
- For P3D – Make sure Microsoft Visual C++ 2010 with SP1, 32 bit version, is installed.
- Remove, rename or repair the Logbook.bin in your Documents/Flight Simulator X Files folder (for FSX). For P3DV2, the logbook.bin is in the same folder as the P3D.cfg.
- See also Freezes When Loading Flight below.

ATC.dll – Three possible solutions –

- It occurs on a change of frequency (TWR to GND for example) and is associated with other frequencies used in your plan. Try entering removeatc=yes in the General section of FSUIPC.INI.
- There are minor issues where the file atc.dll, responsible for containing the viewing graphics display during game play, encounters errors in displaying multiple image streams, especially when it renders multiple overlays. If you have multiple displays and/or multiple Windows open, there is probably a conflict or problem with the configuration. Troubleshoot.
- Make sure your memory modules in your BIOS are properly configured (i.e., match timings and voltages as some BIOS have been known to not manage these settings properly). See CPU-Z, SPD Tab and make sure settings are the same in the BIOS.

Atiumdag.dll – The atiumdag.dll is shown as the faulting module in the crash report and is caused by your ATI Video Card drivers or display driver settings (most likely drivers). Roll the driver back to an earlier version.

BEX – For more information click on the following - **Buffer Exception Overrun or Buffer Overrun**. See also StackHash and NTDLL.dll discussions.

CTD's After Long Flights – See OOM, NTDLL.dll, and StackHash below. Also try deleting your temporary Shader, Facilities and Scenery Index folders. See **Delete/Rebuild your Facilities/Scenery Indexes and Shader Folders** discussed in previous section.

Control.dll – Delete or rename the FSX.cfg, restart FSX and let the configuration rebuild.

D3D9.dll – The d3d9.dll or **ntdll.dll** is shown as the faulting module in the crash report. This is most likely caused by installation of SweetFX or the ENB Series Modules. Remove the D3D9.dll modules (there are several) from your main FSX folder. These two hacks of DirectX files have been popular to many FSX/FS9 users but found to be the Source of several CTD's. Most likely the module is not configured properly for your computer system and you should conduct some searches here on AVSIM and elsewhere for the best configurations. Several members have been extremely successful in getting these modules to work properly. The following ENB Series files are installed in the main FSX directory and should be moved to a temporary directory if you are seeing crashes or graphics anomalies: D3d9.dll, D3dx9_40.dll, D3dx9_26.dll, and ENB Series.ini. SweetFX installs the following files that should be moved to a temporary directory if problems occur: D3d9.dll, D3d9.fx, Dxgi.dll, Shader.fx, and the injector.ini.

D3D11.dll – Remove Windows Update KB2670838. CTD also occurs with SweetFX installed. Be wary removing the KB if you are using IE10 or IE11 as it will uninstall those programs and go back to IE8. If you reinstall IE10 or IE11, the KB will also be reinstalled.

DINPUT8.dll – Indicates a DirectX problem and/or video card issue. If you have a video card overclocking program like Gigabyte OC Guru, remove or disable it. It could also be a problem with the video card overclock.

FE.dll – If this is the faulting module, it indicates you have texture problems on an aircraft repaint or an AI aircraft.

Freezes While Loading Flight – Many times the FSX/FS9/P3D might appear to freeze at startup. If the program closes with a message from Microsoft and then restarts, then, there is a legitimate problem. Check the AppCrashView or Event Viewer for information as discussed above. You need to check exactly where the event occurred while loading (i.e., at 10%, 27%, 82%, etc.) and identify what was being loaded when the program quit and then restarted as this might be a clue as to what went wrong. If it happened while loading terrain, it could be a corrupted installation of an add-on or missing textures. If the program freezes at say 27% for two or three minutes, then, most likely a Windows program is running in the background and using all the resources to load your flight. One of the biggest culprits is Internet Explorer not completely shutting down. You can go into the Task Manager, look under the processes tab, and close programs that appear to be using excessive amounts of resources. Once you do this, your flight plan should load immediately.

Freezes may occur when loading a flight if you have too many photoscenery enabled in your scenery.cfg. Sometimes these appear to be freezes but FSX/P3D is just loading all of the

photoscenery enabled in your program and this could take up to 20 minutes. Once loaded, you may see a black screen in the aircraft display window and, if you click Fly Now, it may take another 20 minutes for your program to load or result in a freeze. Disable any photoscenery you will not be using during a flight session.

Freezes During Flight – Freezes are most commonly caused by –

- High application/display driver settings. Check.
- High settings within commercial weather programs like REX, ASN, and OPUS. Check. Some raise settings to the highest texture settings (4096 HD) within weather programs and/or texture programs like REX. This coupled with high applications LOD_Radius and Texture_Max_Load settings may take up too many resources and application will freeze.
- Complications with weather server updates. Application may try to update the weather and the weather server is down or cannot comply with a request.
- Running out of Virtual Address Space (VAS) especially on one hour or longer flights (see VAS/OOM discussions).
- Bad tweaks. BufferPools and or Affinity Mask are most often attributed to freezes. Rebuild the application configuration to see if this fixes the problem or disable the tweaks.
- ENBSeries Module – DirectX hack for better visuals.
- SweetFX Module – DirectX hack for better visuals.

G2D.dll - The g2d.dll is indicated as the faulting module in the crash report. This module handles plain text messages, like the frame rate counter and those other plain text messages you see periodically while running FSX and the plain text words in the FSX Menu, like the words Options, View, etc. There may be something corrupted in your dll.xml which loads menu items. It has been fixed by rebuilding the FSX.cfg (deleting or renaming the FSX.cfg and then restarting FSX). Some others have fixed this problem by uninstalling/reinstalling the video card drivers or going back to a previous version.

G3D.dll – The g3d.dll is indicated as the faulting module in the crash report. For most users, this will be fixed by installing the most recent version of the **FSUIPC Utility**. The freeware or payware version will fix most of these CTD's. You can see how many errors were trapped by looking at the FSUIPC.log located in the FSX/Modules folder.

Garbled Menu in FSX – Your dll.xml is corrupted. Usually does not result in a CTD but FSX is unusable until this is fixed.

HRESULT: 0xc000014B error – Mostly occurs in networked computers. This is a Microsoft.net error. The 0xc000014B is a "broken pipe" exception. A pipe is a communication channel between two applications (such as FSX/P3D and an add-on program like ASN or OPUS, or network). SimConnect offers add-ons the possibility to use pipes to communication with FSX. A "broken pipe" is a situation where one of the pipes no longer exists, while the other tries to communicate using the pipe. A typical scenario would be fsx crashing and then ASN or OPUS tried to use the pipe (communications channel) and the "pipe" was broken. The 014B exception would then occur. Check your network setup or an application that uses SimConnect and troubleshoot.

Run the **Microsoft.net Repair Tool** – Whenever you get a Microsoft.net error like above or Microsoft Visual C++ error (faulting module), run the Microsoft.net repair tool.

Kernelbase.dll – No known fix but some have solved this problem by updating or reinstalling their video card drivers. Scan your system for **corrupt/missing files** (click for how to). Disable startup programs by opening the Run command on your computer and typing **msconfig** in the box. When open, look at the Startup tab and disable all startups (they are all not needed for operation of your computer).

Kernel32.dll - The kernel32.dll belongs to system memory management so consider it like an out-of-memory (OOM) crash. Reduce your settings.

Menu Freeze – If FSX freezes while using the FSX Menu, install the UIAutomationcore.dll. See section on preventing CTD's.

MSVCR80.dll, MSVCR90.dll, or MSVCR100 – belongs to Microsoft Visual Redistributable C++ 2005, 2008, 2010 respectfully.

- Run the **Microsoft.net Repair Tool** – Whenever you get a Microsoft.net error or Microsoft Visual C++ error (faulting module), run the Microsoft.net repair tool.
- Uninstall FSX SP2 if installed, uninstall it via the Windows Add/Remove program (it will not remove FSX, just SP2). Restart your system. Reinstall FSX SP2. Restart your system.
- Uninstall FSX Acceleration if installed, do the same procedure as for SP2 except remove Acceleration, Restart, install Acceleration, Restart. These actions will not remove your configuration files like FSX.cfg, scenery.cfg, dll.xml, exe.xml but if you want to be safe, back them up first.
- If the above does not work, uninstall Microsoft Visual 2005, 2008, or 2010, as appropriate in your Add/Remove Programs. Go to the website (see section above regarding Microsoft Visuals), download and reinstall.

NTDLL.dll – Several possibilities as follows:

- Quote from Microsoft Techs – “Heap metadata can become corrupted and it has been identified by Microsoft as one of the most common causes of application failures. When an application crash shows the faulting module as ntdll.dll along with the Memory Access Violation (0xc0000005), then Windows places the application on a watch list and, if the application crashes at least four times or more in an hour, the fault tolerant heap service will configure the application to use the fault tolerant heap service in the future” (Source - Chapter 10, Memory Management, Windows Internals, Part 2: Covering Windows Server 2008 R2 and Windows 7 by Mark E. Russinovich, David A Solomon, and Alex Ionescu). The service is part of the Security Center service so you need to make sure this service is turned on. If the ntdll.dll is placed on the watch list, this information will be shown in the Event Viewer (Admin Events). See also Increase **Heap Limitation** in the **Actions to Take to Prevent Crashes** section of this guide.
- **MyTrafficX** version 5.4c is installed. It is believed to be caused by an AI scheduling programming error. Go back to the 5.4b version or make sure no external AI program schedule is activated (i.e., the 2012 or 2013 Schedules on the developers website). The default schedule appears to be okay for most. Check the developers support forums for updated information and possible bug fixes.

- System overheats or you have wrong timings/voltages set for your installed RAM or CPU voltage. You might be able to fix by returning your BIOS to Optimized Defaults or lowering your overclock by one point from say, 4.4GHz to 4.3GHz.
- Remove the **UIAutomationcore.dll** from the main FSX folder, if installed.
- Check your dll.xml for duplicate entries or any corruption. Some have fixed the NTDLL.dll CTD by removing duplicate entries and/or old software entries where the software is no longer on your system.
- Disable User Access Controls (UAC) (see the section above for more information).
- Update hardware drivers for your computer (especially on new computer systems) (see Driver Update information in this guide).

Nvlddmkm.dll –

- Belongs to NVIDIA Video Cards only.
- Usually caused by changing video card's Base Clock Offset or Memory Clock Offset.

Out-of-Memory (OOM) – The following points apply in regards to VAS -

- FSX and P3D are currently 32-bit applications. A 64-bit operating systems is limited to 4GB of VAS no matter how much RAM (system memory) is installed. A 32-bit operating system is limited to 2GB of VAS with a "switch" to provide up to 3GB's.
- OOM's relate to VAS, not physical memory.
- VAS is not the same thing as the virtual memory (page swap file) that you can adjust in your system settings. A large page file or virtual memory swap file does not protect anyone from the 4GB VAS limit.
- VAS is effectively a pre-allocation of everything FSX/P3D can potentially access during a flight. It will fluctuate over the course of a flight and over different areas.
- Microsoft.net Framework packages reserve a chunk of the VAS and then commit memory from that chunk. For this reason, it is important you have the proper versions of .net installed and they are up-to-date.
- See also API.dll above.

Some common causes of OOM's:

- Running out of **Virtual Address Space (VAS)**. Happens mostly during flight sessions longer than one hour in commercial add-on aircraft and over commercial add-on scenery and airports with a lot of eye-candy.
- LOD_Radius 4.5 and/or Texture_Max_Load above 1024. AVSIM recommends a LOD_Radius no higher than 6.5 and a Texture_Max_Load setting above 2048. This includes add-on applications that increase texture resolutions above their default or texture compressions to 32 bit (i.e., from the default of DXT5 or DXT1).
- Disable BufferPools setting in program configurations. Comment the lines out in your FSX configuration as follows: `//[Bufferpools]` (note two slashes in front of parameter). `//UsePools=0`. This tweak not recommend for P3DV2.
- Disable add-on Photoscenery not used for a flight session. Add-on's such as FTX/ORBX may contain some photoscenery. Photoscenery will load if enabled even if you are not flying in that part of the world.
- High settings in weather programs. Going beyond the defaults set by the developers is dangerous in many cases.

Click on following link for more information about **VAS Management and Stopping OOM's** . The link has some and recommended solutions that are discussed in this guide too.

Panels.dll – Usually fixed by loading the default Cessna first and then the aircraft you want to fly.

PMDG_737NGX.dll –

- Removing the uiautomationcore.dll from the main FSX directory has fixed this crash - <http://forum.avsim.net/topic/350915-pmdg-737ngxdll-crash/>. Could have been a wrong version of the uiautomationcore.dll (that some say fixes all FSX crashes).
- Check throttle or controller connected to your computer. Make sure you are using the drivers that came with the device. Might be a conflict using FSUIPC utility control features for your controller.

Sim1.dll CTD – This crash is caused by a corrupted or incompatible aircraft texture, most likely the latter. Look at recent aircraft installations, especially from previous versions of flight simulator. Right click on FSX.exe in your main FSX folder and select 'Properties'. Once open, click on the compatibility tab and check "Run as Administrator".

Simprom.dll –

- Most likely a problem with the installation of Acceleration. Try uninstalling Acceleration (go to Add/Remove Programs; look for FSX and click on uninstall. It will only uninstall Acceleration. FSX will still be there). Run FSX once and see if this fixed the program. If so, reinstall Acceleration with Admin privileges. Run FSX again to make sure the problem is fixed.

If problem not fixed -

- Remove your FSX or P3D.cfg and let the configuration rebuild.
- If this does not fix the problem, rename your logbook.bin in the My Documents/Flight Simulator X Files folder and try running FSX again. If that works, then you might want to download from the AVSIM Library a program called **FSX Logbook Recovery 1.1** and try to repair the one you renamed.

StackHash – See also BEX and NTDLL.dll above. There is no module on your computer system named StackHash so no need to look for it. If the StackHash is shown as the faulting module, it will have four characters next to it like StackHash_0a9e. That represents the memory address of where the fault occurred. Do not try to look for it. You will not find it. There is no known solution (except one) to BEX/StackHash errors other than reinstalling Windows and FSX but some have accidentally fixed their problem by lowering fsx/display driver settings, rebuilding the FSX.cfg, changing voltages/overclocking settings in the BIOS, disabling all scenery add-ons in the Scenery Library, and/or shutting down FSX only in Windowed Mode and starting up in Windowed Mode but never in Full Screen. One known solution is disabling MyTrafficX 5.4c in your Scenery Library. An AI schedule might be causing this crash as the schedule may be looking for a flight and it cannot be found. There are also AFCAD's that come with MTX and some of those may contain objects. If disabling the program in the Scenery Library works, then you should reinstall the product and use the default schedules. Disabling DEP has worked for some but it is not the recommended solution. FSX/P3D will not allow you to disable DEP. It can only be done by a freeware program that you can download from the Internet (search Google). It has not worked for many others.

Terrain.dll - Usually indicates high scenery/terrain settings in FSX/P3D, especially Autogen.

Visualfx.dll – The visualfx.dll is used to display an FSX effect. An effect needed for an aircraft or scenery may not be located in the Effects folder and, when the effect is called by the program, it cannot be found and FSX crashes. The CTD occurs mostly with aircraft not properly installed and/or the default flight (shown in the [Userinterface] Situation= line in your fsx.cfg) may be corrupted when a new default flight is set up. The solution in this case is to rename your fsx.cfg to fsx.orig, restart FSX and let the fsx.cfg rebuild. It has also been fixed by returning the default textures into the main texture folder. This can be done through a backup or conducting a FSX repair installation.

VMCX_AP.dll – This is a problem with AES, VistaMare (a security program for AES) and SimConnect. One member fixed this by removing the VistaMare folder in the FSX directory and then launching AES help. This rebuilt the VistaMare files needed for AES.

Weather.dll – delete wxstationlist.bin and default .wx file associated with your default flight. They will be rebuilt. This crash can be caused by FSX/P3D settings too high or bad tweak (BP tweak mentioned most often). If you have a commercial weather program that has cloud textures or a program that furnishes cloud textures such as REX, FEX, then lower settings and make sure DX5 compression is used and textures are 512 or 1024. This coupled with high settings FSX/P3D may produce this crash.

Window.dll - The window.dll in the main FSX folder is used by FSX to take advantage of the capabilities of DirectX9. When using DirectX9, FSX calls on the window.dll functions to automatically minimize, maximize or restore the FSX window. For instance, the function 'WindowInit' is called to whether the window is currently minimized or maximized. The 'WindowFree' function can set the focus on the window and check whether the window has current focus. The dll has many more functions. This error has been fixed by reinstalling video card drivers (WHQL – no BETA).

WHAT AVSIM MEMBERS CAN DO TO HELP –

There are many reasons and variables that cause BSOD's/CTD's and it would be impossible to list every situation in this guide. However, if you are aware of an actual fix for a FSX or P3DV2 CTD/BSOD, please PM Jim Young (firehawk44) with your suggestion(s) and, if accepted, we will include the fix in the next update of this guide.