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FACSDiva Errors & Quirks

1. Preface

This guide covers several errors and unexpected behaviors associated with FACSDiva..

2. Failure to Open FACSDiva "Object Heap"

FACSDiva fails to open, displaying the following error in the console log (C:\BD\FACSDiva\log\console): "Error occurred during initialization of VM. Could not reserve enough space for object heap. Could not create the Java virtual machine.".
This issue can occur on older installations using 32-bit Java, particularly on a 64-bit system or an updated 32-bit system. 32-bit Java relies on a large, contiguous block of RAM, and if it cannot allocate this memory, it will fail to launch FACSDiva.

Option 1

- Right-click the FACSDiva icon on the desktop and select "Troubleshoot Compatibility"
- Choose the "Troubleshoot program" option, followed by one of the available options (e.g., The program worked in earlier versions of Windows but won't install or run now)
- Click Windows XP (Service Pack 3) and click Next
- Select one of the options (e.g., I don't see my problem listed) and click Next

Option 2

- Navigate to C:\Program Files\BD FACSDiva Software
- Edit the cmdbdfacs.bat file
- Search for "set maxHEAP" and modify the value to 1024
- Close and save the file
- Launch FACSDiva

Note: the maxHEAP value can be lowered further, but will limit the amount of memory available to FACSDiva.

3. Hardware Failure on Cell Sorters

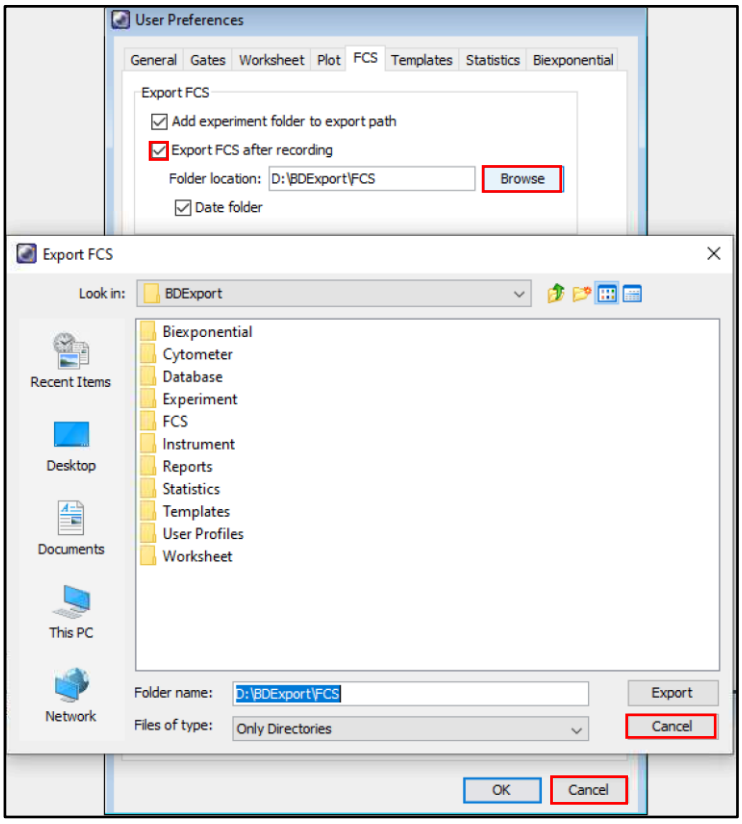
The Hardware Failure warning on cell sorters is often caused by permission issues with specific system files such as ipl.dll, iplw7.dll, and Cpuinf32.dll, which FACSDiva relies on to communicate with the hardware. The following procedure ensure the software has the required access to these files, which might have been restricted due to Windows security settings.

- Navigate to C:\Windows\System32
- Right-click each file, go to Properties and select the Security tab
- Click the “Edit” button under the “Group or user names” section
- Click the “Add…” button and type “Everyone” under the “Enter the object names to select” section
- Click Ok
- Select Everyone then check the “Allow” box for Full Control
- Click OK
- Click OK

4. Partial FACSDiva “Freeze”

Occasionally, FACSDiva may appear unresponsive to certain commands. However, if you can still navigate the top menus using the mouse, you may be able to regain full control by following the steps below - saving time by avoiding a restart of the stream on cell sorters.

- Navigate to the Edit menu and select User Preferences
- Click the FCS tab
- Check the “Export FCS after recording” box then click the Browse button
- Click Cancel twice to close the navigation dialog and the User Preferences windows



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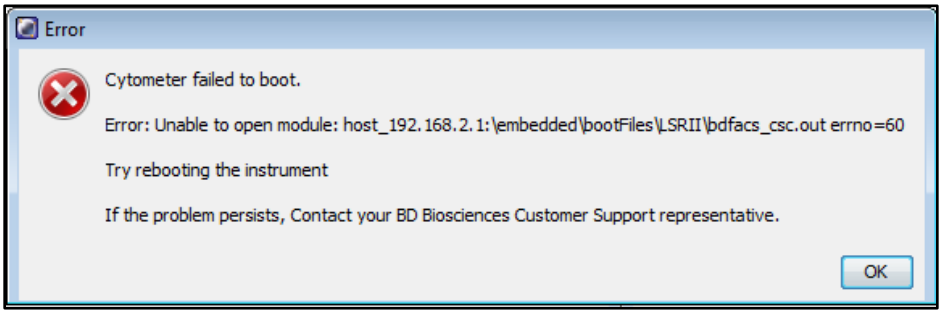
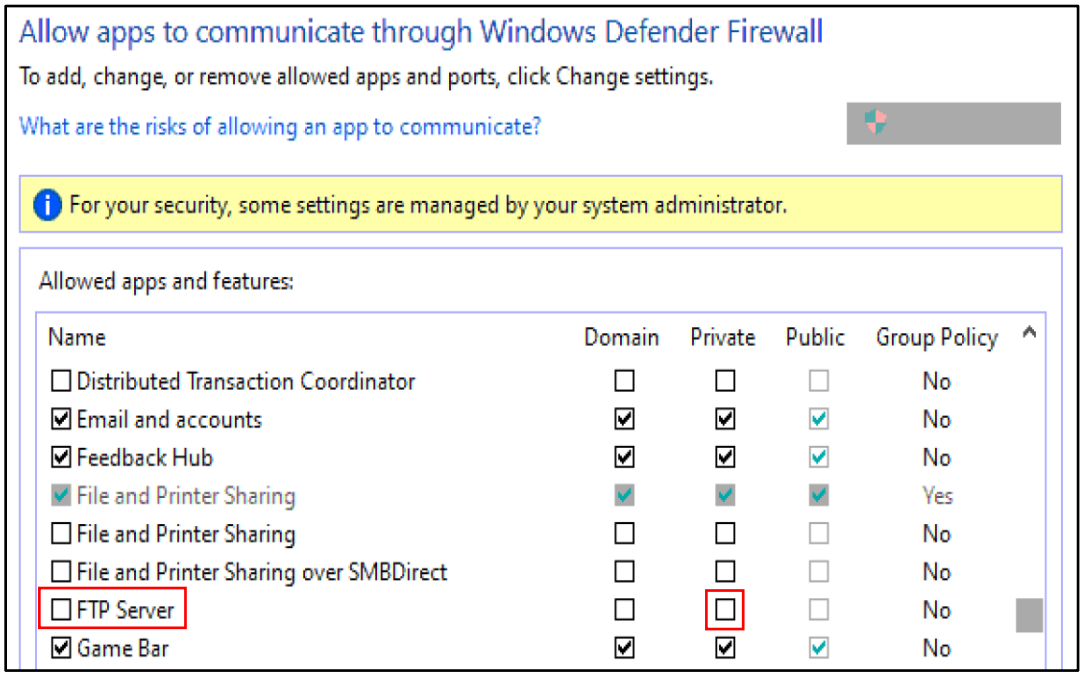
5. Failure to Boot

The error message “Cytometer failed to boot,” occurs when the system cannot access a required module via the FTP protocol. Specifically, the error message mentions an inability to open a module file (bdFACS_csc.out) due to errno=60, which typically indicates a connection issue between the workstation and the cytometer’s embedded computer (IP address 192.168.2.1).



This issue is more common on older cytometers and is often caused by Windows’ Firewall blocking the FTP server connection needed by the cytometer to function properly. If the firewall does not allow the FTP server application or port through, the system cannot access the boot files needed to initialize the hardware.

- Open the Control Panel and navigate to Windows Defender Firewall (or Windows Firewall on older systems)
- Click “Allow apps to communicate through Windows Defender Firewall
- Allow FTP Server through the Firewall by ensuring the Private box is checked under the “Allowed apps and features” section



- Restart the instrument and the FACSDiva software

6. FACSDiva Unresponsive During Data Export

Some versions of FACSDiva can become unresponsive when exporting a mixed experiment (plate + tubes) via the “Export > FCS files” command.

The workaround is to export plate and tubes separately.

7. FACSDiva Overwrites Plates During Export

Some versions of FACSDiva will overwrite a plate or plates when exporting an experiment containing multiple plates with identical layouts and specimen names.

To prevent plate overwrite, check the “Auto Increment” box (Edit menu > User Preferences > FCS tab).

8. CS&T Failure Related to Screen Resolution

On some analyzers and sorters (e.g., FACSymphony A5 and S6) equipped with ultrawide or 4K monitors, the CS&T Performance Check may fail, reporting incorrect delta PMT voltages. This issue is linked to the CS&T module (ISQ.exe) struggling to calculate certain statistics at high screen resolutions. Once CS&T begins reporting random delta PMT values, it will continue to do so until a new baseline is generated.

To prevent this behavior, resize the CS&T module window to approximately 12” by 9” when using an LG 34BL650 monitor.