# Job Aid BD FACSDiva™ Software Administrator tasks: Data management

This job aid contains instructions for managing your data generated in BD FACSDiva<sup>™</sup> Software. Performing these tasks will protect against data loss and help maintain your computer's performance. For more information about working with and managing your data, see the Data Management chapter in the BD FACSDiva<sup>™</sup> Software Reference Manual.

## Before you begin

Determine the user preference selections needed based on the software behavior your lab would like to implement. The user preferences are user-specific so any preference selections will need to be made for each user profile.

#### Setting user preferences

- (1) Select Edit > User Preferences. Click the FCS tab.
- 2 In the Export FCS section, you can make the following selections based on the behavior needed:
  - Select the **Add experiment folder to export path** checkbox to automatically place exported files into a folder named the same as the experiment.
  - Select the **Export FCS after recording** checkbox to automatically export FCS 3.0 files to the Folder location once data is recorded.
    - Change the Folder location to export the FCS files to a different folder than the default.
    - Select the **Date folder** checkbox to automatically add a dated folder to contain your FCS files.

🕗 User Pr	eference	25					
General	Gates	Worksheet	Plot	FCS	Templates	Statistics	Biexponential
Export	Export FCS						
A 🗹	Add experiment folder to export path						
E)	Export FCS after recording						
Fo	Folder location: D:\BDExport\FCS Browse						
	☑ Date folder						

# Exporting and importing FCS files

Manually export the FCS files to export FCS files in 2.0, 3.0, or 3.1 file format. Auto-export automatically exports FCS 3.0 format. You can import files in FCS 2.0, 3.0, or 3.1 file formats.

## **Exporting FCS files**

- ① Select the experiment, specimen, plate, or tube containing the data file(s) you want to export as FCS files in the Browser.
- 2 Select File > Export > FCS Files.
- (3) Make the appropriate selections in the Export FCS Files dialog.
  - Under Gated Events, select a gate to only export data included in the specified gate.
  - Under File Version, select the exported FCS file version needed. Default is FCS3.0.
  - Select the Parameter Type:
    - Select None to not export that parameter.
    - Log can only be selected for exporting FCS 2.0 files.
- (4) Click **OK**.
- S Verify that the directory path is appropriate. Click Save. TIP: Click Details to view which files you are exporting.

Export FCS Files					
Gated Events	Gated Events				
All Events 🧹					
File Version					
○FCS2.0 ●FCS3.0 ○FCS3.1					
0 rcs2.0 @ rcs3.0 0 rcs3.1					
Parameter	Parameter Type				
FSC-H	Linear Log ONone				
FSC-H SSC-A	Linear Log None				

🛃 Save Export	
Directory Path	
D:\BDExport\FCS	Browse
Save	< <details cancel<="" th=""></details>
Relative Dir Path	File Name
Training	Cells_Unstained_001.fcs
Training	Cells_2 color_002.fcs
Training\	Compensation Controls_Unstained
Training\	Compensation Controls_FITC Stain
Training	Compensation Controls_PE Stained

#### **Importing FCS files**

Files can be imported into BD FACSDiva<sup>™</sup> Software for analysis. To import files into another software program, refer to that software's user documentation for instructions.

- Open an existing experiment or create a new experiment in the Browser.
- Select File > Import > FCS Files.
- 3 Navigate to the appropriate location and select the files you want to import.

Import FCS fi	es			×
Look in:	Dated folder	$\sim$	🏂 📂 🛄	
Recent Items	6-color Example			
Desktop	File name:			Import
	Files of type: All Files		~	Cancel

④ Click Import.

## Exporting and importing experiments

Export after each significant experiment, import experiments as needed.

#### **Exporting experiments**

- ① Select one or more of your experiments in the Browser.
- (2) Select File > Export > Experiments.
- ③ Make the appropriate selections in the Export Experiments dialog, including verifying the directory pathway.
- Click OK.

Export Experiments				
Delete experiments after export				
	Directory Export         O Zip File Export			
Directory:	D:\BDExport\Experiment		Browse	•
Experiment		Date		
2 color experiment		6/16/228	3:46:13	^
				J
				×
	[	ОК	Cancel	

#### Importing experiments

- In the Browser, select the folder you want to contain the imported experiment.
- 2 Select File > Import > Experiments.
- (3) Navigate to the experiment folder or Zip file to be imported.
- ④ Select the folder containing the required experiment.
- 5 Click Import.

Import				×
Look in:	dated fold	er v	🏂 📂 🛄	
Recent Items	6-color E	ample		
Desktop				
Documents				
This PC	File name:	6-color Example		Import
<b></b>	Files of type:	Directories and Zip Files	$\sim$	Cancel

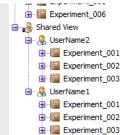
# Managing data

Administrators should perform these steps weekly to prevent data loss and improve system performance.

#### Exporting experiments

As an administrator, you have access to each user account's experiments. Export any experiments in the Browser that have not already been exported.

Expand the Shared View folder in the Browser.
 Expand the user accounts to display their experiments.
 Select File > Export > Experiments.
 Make the appropriate selections in the Export Experiments dialog, including verifying the directory pathway.



5 Click OK.

#### Transferring files to long-term storage

Transfer experiments and other files to long-term storage.

- (1) Copy exported experiments from the BD Export folder or custom location to a network drive, cloud server, or removable media such as a flash drive.
- 2 Copy any files exported or created by the software that you'd like to archive to a network drive, cloud server, or removable media such as a flash drive. See *page 7, Locations of Important Files* for more information about the files.

### Removing data from the browser

- Select the now archived experiments in the Browser, keep your folders in place to maintain your filing structure. To select multiple experiments from several folders, Ctrl+click the experiments.
   NOTE: When you delete a folder, you delete all experiments within the folder.
- 2 Press the Delete key, or right-click one of the selected experiments and select **Delete**.

## Using the BD FACSDiva<sup>™</sup> Data Manager Utility

The BD FACSDiva<sup>™</sup> Data Manager Utility shortcut is installed on your workstation desktop. Use it to back up the current database to network drive, cloud server, or removable media such as a flash drive and replace or restore the current database with a stored copy.

- (1) Exit BD FACSDiva<sup>™</sup> Software, if necessary. The utility cannot start when BD FACSDiva<sup>™</sup> Software is running.
- 2 Start the utility by double-clicking the shortcut on the desktop.

#### Backing up the database

To back up your database to another storage medium, see the documentation provided with your computer.

If the workstation is connected to a network, files can be backed up directly to a mapped network drive.

NOTE: Backing up does not free up space on the hard drive because the original files are retained.

During a backup, the Data Manager utility copies the current database and associated list-mode data to a specified location. The database can be backed up to any location on the hard drive provided sufficient memory is available.

(1) Verify the path of the backup folder in the Directory field. To change the path, click the Browse button.

**NOTE:** You should back up files to a hard disk or network device other than the one containing the database to avoid both the current database and the backup copy being lost if the hard disk crashes.

**TIP:** To keep track of backups, save each backup in a separate folder. Click the **Browse** button and select a new folder.

- (2) Click Backup.
- (3) Click **OK** to dismiss the dialog.
- A Navigate to the backup folder to verify the backup. Your backup should contain:
  - BDFACS.db
  - BDFacs.log
  - BDData folder

**NOTE**: Make sure your most recent backup is valid before you discard or overwrite a previous version.

🛛 Data Management Utility 📃 🔳	
Backup Restore	
This Backup utility helps protect your BD application data from accidental loss due to hardware or storage media failure. It makes a copy of the database, including all list mode data, and stores it in the location you specify below	V.
Storage Media	
Directory	
D\BDExportDatabase Browse	
Backup	



## Restoring a database

Restore a database to replace the current database with a backup copy.

$\bigcirc$	Start the Data Manager utility.	Data Management Utility	
2	Click the <b>Restore</b> tab.	Backup Restore This Restore utility restores your BD application data from a backup copy, it replaces the existing datab including all list mode data, with the backup copy in the location you specify below.	)ase,
3	Locate your database backup.	Restore Files to: Storage Media Directory	
4	Click <b>Restore</b> .	D\BDExport\Database E	Browse Restore
5	Click <b>OK</b> in the warning to continue.		
	<b>NOTE:</b> Once you start this process, the current database will be overwritten and replaced with the backup. Any data on the current database will be lost.	BDRestore Warning WARNING! All experiments and event data from your	
	A progress box appears, followed by a message that the backup is complete.	current, active database will be lost! Database content at the time of this backup will be restored.	
6	Click <b>OK</b> .	OK Cancel	
7	Click <b>Yes</b> to replace any existing database files with the backup files.	Data Management Utility × This folder contains similarly named files. Would you like to replace the existing files?: bdfacs.db Yes No	

## Defragmenting the hard disk drive

Hard disk drives (hdd) need to be defragmented weekly to create contiguous files that the software can read more efficiently. Solid state drives (ssd) should not be defragmented.

(1)	Select Start > Windows Administrative Tools > Defragment and
	Optimize Drives.

- (2) Do one of the following:
  - If the Media type states Solid state drive, click **Close**. You do not need to optimize your drive.
  - If the Media type states Hard disk drive, click **Optimize** to start the process.

			1	
Drive	Media type	Last run	Current status	
🖴 OSDisk (C:)	Solid state drive	06/04/2021 3:07 AM	OK (3 days since last run)	
			Analyze	Optimize
			V Analyze	Optimize
cheduled optim	ization			
				😌 Change setting
On				
	ng optimized automatically.			· · · · · · · · · · · · · · · · · · ·

# Locations of important files

**NOTE**: Some BD files are in the folder (ProgramData) that is hidden from view unless the user account has administration privileges. These files are noted in bold in the following table.

Item	File types	File location
BD FACSDiva™ Software	User documentation	C:\Program Files\BD FACSDiva Software
	Log files	D:\BD\FACSDiva\log
	Sort reports	D:\BD\FACSDiva\Sort Reports
	User tracking logs	<programdata>\BD\Shared\YearMonth.csv</programdata>
BD Database	Database (.db)	D:\BDDatabase
Exported BD FACSDiva™	Biexponential editor settings	D:\BDExport\Biexponential
Software files	Cytometer configurations	D:\BDExport\Cytometer
	Database export files	D:\BDExport\Database
	Experiments	D:\BDExport\Experiment
	FCS files	D:\BDExport\FCS
	Batch Analysis and Specimen Reports	D:\BDExport\Reports
	Statistics	D:\BDExport\Statistics
	Templates	D:\BDExport\Templates
	User profiles	D:\BDExport\User Profiles
	Worksheet graphics	D:\BDExport\Worksheet
BD <sup>®</sup> CS&T Application	CS&T system files	<programdata>\BD\FACSDiva\CST\Archive</programdata>
		D:\BD\FACSDiva\CST\LogFiles

Class I Laser product This material is for training purposes. For Research Use Only. Not for use in diagnostic or therapeutic procedures.

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