

# File System (Exports, Imports, Uploads, Downloads)

## Background

This checklist should be used to ensure that the file system, server and database are interacting with user input and the front end correctly.

## Exports

- Verify data matches the admin.
- Verify that any “Totals” columns align with the proper content.
- Verify that all browsers can download the file (Firefox doesn’t always handle spaces well in the filenames, for example).
- Verify that filtered reports are exported with filters applied.
- Verify that sorted data in the admin is sorted in the export.
- Test large exports to determine the breaking point of an export.

## Imports and file parsers

- Verify that correct info is stored in database and/or admin when import is complete.
- Verify error handling for following situations:
  - Wrong file type
  - Missing required information
  - Broken file (e.g. unclosed XML tags)
  - Incorrect data types in required fields
- Perform any relevant checklists from your security protocols (e.g. file upload vulnerabilities, directory traversal, command execution, and/or XML bombs).

## File Upload widgets

- Test with a variety of image formats/parameters:
  - Test Image upload size thresholds: *under* ~100KB, ~1MB, *over* ~3MB.
  - Test with corrupt image (image(s) that “cannot be read”; these can typically be viewed on a pc/mac with no issue, but ColdFusion/Java or application-level software can’t actually *read* the image).
    - Ensure graceful handling of error/validation/timeout scenarios above.
    - Consider different *interpolation algorithms* (for <cfimage>) for balance of image quality and upload performance.
- Test with invalid file types.
- Test with special characters in the file name (test on Mac - their rules for filenames are different than Windows).
- Test in several browsers.
- Test on mobile devices.

- Perform any relevant checklists from your security protocols (e.g. file upload vulnerabilities, directory traversal, command execution, and/or XML bombs).

## Downloads

- Verify that the downloaded file is not corrupt.
- Verify that the download works the same in all browsers (for example, if links use the “download” attribute, Internet Explorer will just treat it like a normal link).
- Verify that downloaded file paths cannot be used for Directory traversal or other security threats.