

File Maintenance Tool - User Guide

A safe, scheduled file maintenance utility for Windows that automatically cleans up old files while optionally backing them up first.

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Quick Start

1. **Run the application** - Double-click `fileMaintenance.exe`
 2. **Complete the setup wizard** - Configure your backup location and paths to clean
 3. **The application will** - Scan configured paths, backup old files (if enabled), and delete them
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First-Time Setup

When you first run the application, a Setup Wizard will appear:

File Maintenance Tool - Setup Wizard

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Welcome to File Maintenance Tool Setup

Backup Location:

D:\backups

Browse...

Paths to Clean:

Path:

...

☒ Backup

Add

Path	Backup		

Remove

Settings:

Files older than (days):

7

÷

Log retention (days):

30

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☐ Show Advanced Options

Cancel

Save Exit

Setup Wizard Fields

Field	Description
Backup Location	Where to store backups before deletion (local drive or network share)
Paths to Clean	List of folders/files to process
Backup checkbox	Enable/disable backup for each path (checked = backup enabled)

How to Use the Setup Wizard

1. Backup Location

- Enter the path where backups should be stored
- Click **Browse...** to select a folder using the file browser
- Example: **D:\backups** or **\\server\share\backups**

2. Add Paths to Clean

- Enter a folder or file path in the "Path" field
- Click **Browse...** to select a folder
- Click **Add** to add it to the list
- Use the **Backup** checkbox to enable/disable backup for that path

3. **Save Configuration**

- Click **Save & Exit** to save your configuration and run the application

File Maintenance Tool - Setup Wizard

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Welcome to File Maintenance Tool Setup

Backup Location:

J:\Shared_Area\Lenier Ortiz Rodriguez\Test\Backup

Browse...

Paths to Clean:

Path: ... ☒ Backup

Add

Path	Backup	
C:\Users\vodril126\OneDrive - Medtronic PLC\My Pictures\Camera Roll	Yes	Remove
C:\Users\vodril126\OneDrive - Medtronic PLC\Desktop\programs	Yes	Remove

Remove

Settings:

Files older than (days):

7

 Log retention (days):

30

☐ Show Advanced Options

Cancel

Save Exit

Running the Application

Basic Usage

```
fileMaintenance.exe -days 7
```

This will delete files older than 7 days (after backing them up if enabled).

Interactive Run

Simply double-click the executable or run from command prompt:

```
fileMaintenance.exe
```

The application will:

- 1. Read configuration from `config/config.ini`
- 2. Validate backup location is accessible
- 3. Scan configured paths for files older than the specified days
- 4. Backup files (if enabled for that path)
- 5. Delete original files
- 6. Clean up empty directories
- 7. Generate logs

Configuration

Configuration is stored in `config/config.ini` in the same directory as the executable.

Example Configuration

```
[backup]
path=D:\backups

[paths]
C:\Temp\OldFiles, yes
C:\Temp\ToDelete, no
\\server\share\incoming, yes
C:\Logs\debug.log, no
```

Configuration Format

Section	Key	Description
[backup]	path	Backup destination root path
[paths]	(lines)	Paths to process with per-path backup control

Path Entry Format

```
path, yes|no
```

- `path` - The file or folder to process

- **yes** - Enable backup before deletion
- **no** - Delete without backup (use with caution)

You can also use comments:

```
; This is a comment
[paths]
; Folder with backup
C:\Temp\OldFiles, yes
; Folder without backup - CAUTION!
C:\Temp\ToDelete, no
```

Command-Line Options

Option	Default	Description
-days	7	Only files older than this many days are eligible for deletion
-log-retention	30	Log retention in days
-config-dir	<exe>/config	Config directory
-log-dir	<exe>/logs	Log directory
-no-logs	false	Console-only logging (no file logs)
-walkers	1	Concurrent path walkers
-queue-size	300	Job queue size
-max-files	0	Max files per run (0 = unlimited)
-max-runtime	30m	Max runtime
-cooldown	0	Cooldown between files
-retries	2	Copy retries

Recommended Settings for Network Shares

```
fileMaintenance.exe -days 7 -walkers 1 -queue-size 300 -max-runtime 30m -cooldown 50ms -retries 2
```

Console-Only Mode (No File Logs)

```
fileMaintenance.exe -days 0 -no-logs
```

Scheduling with Windows Task Scheduler

Recommended Schedule

Run twice daily (e.g., 6:30 AM / 6:30 PM)

Creating a Scheduled Task

- 1. Open **Task Scheduler** (search in Start menu)
- 2. Click **Create Basic Task**
- 3. Follow the wizard:
 - **Name:** File Maintenance
 - **Trigger:** Daily (or your preferred schedule)
 - **Action:** Start a program
 - **Program:** powershell.exe
 - **Arguments:** -NoProfile -ExecutionPolicy Bypass -Command "Start-Process -FilePath 'C:\path\to\fileMaintenance.exe' -ArgumentList '-days 7 -walkers 1 -max-runtime 30m -cooldown 50ms' -Priority BelowNormal -WindowStyle Hidden -Wait"

Task Settings



- ☒ Run whether user is logged on or not
- ☒ Run as soon as possible after a missed start
- ☒ Stop task if running longer than 1 hour

Viewing Logs

Logs are stored in the logs directory next to the executable.

Log Files

File	Description		
maintenance_YYYY-MM-DD.log	All log levels		
errors_YYYY-MM-DD.log	Errors only		
count_YYYY-MM-DD.log	Summary counts (files deleted per folder)		

 maintenance_2026-02-27.log	2/27/2026 12:24 PM	Text Document	36 KB
 count_2026-02-27.log	2/27/2026 12:24 PM	Text Document	1 KB

Sample Log Entry

```
[2026-02-27 10:30:15] [INFO] Starting maintenance run
[2026-02-27 10:30:15] [INFO] Path: C:\Temp\OldFiles (backup: yes)
```

```
[2026-02-27 10:30:16] [INFO] Backup location: D:\backups  
[2026-02-27 10:30:20] [SUCCESS] Backed up: C:\Temp\OldFiles\old-file.txt ->  
D:\backups\27Feb26\OldFiles\old-file.txt  
[2026-02-27 10:30:21] [SUCCESS] Deleted: C:\Temp\OldFiles\old-file.txt  
[2026-02-27 10:30:25] [COUNT] C:\Temp\OldFiles: 15 files deleted
```

Troubleshooting

Error: Backup path is not accessible

Symptom: Popup notification appears saying backup location is inaccessible

Solution:

1. Verify the backup path exists and is accessible
2. Check network share permissions (if using UNC path)
3. Ensure the backup drive is connected

Error: Configuration not found

Symptom: Application launches setup wizard every time

Solution: Run the setup wizard and save your configuration

Files Not Being Deleted

Possible causes:

1. Files are not older than the **-days** threshold
2. Path is not correctly specified in config.ini
3. Application ran with errors - check logs

Backup not accessible

[Backup Location Error Pop-up](#)

How to Modify Configuration

1. Edit **config/config.ini** directly with a text editor, OR
2. Delete **config/config.ini** and run the application to launch the setup wizard again

Safety Features

- ☒ **Backup before delete** - Files are backed up before deletion (when enabled)
- ☒ **No deletion if backup fails** - Original files are kept if backup fails
- ☒ **Path safety** - Prevents directory traversal attacks
- ☒ **Bounded resources** - Limited concurrency and memory usage
- ☒ **Network retry** - Automatic retry with backoff for SMB issues
- ☒ **Empty directory cleanup** - Automatically removes empty folders

Backup Folder Structure

Backups are organized by date for easy restore:

```
backupRoot/  
└─ 27Feb26/           (Date of the run)  
    └─ OldFiles/       (Source folder name)  
        └─ subfolder/  
            └─ file.txt (Preserves original structure)
```

Support

For issues or questions, check:

1. Log files in the `logs` directory
2. Configuration in `config/config.ini`
3. Re-run setup wizard to reconfigure