

# Glasswall Meteor

**User Guide** 





# **About Glasswall Meteor**

# Security Made Simple

At Glasswall, we understand the importance of keeping your sensitive data as protected as possible. This is why we've created Glasswall Meteor - the quick and easy way to sanitize your files, from the safety of your own computer and secure network infrastructure. We designed the Glasswall Meteor app to be easy for you to deploy and simple for your team to use—no matter how tech savvy they are.

Using our advanced CDR technology, Glasswall Meteor quickly and proactively eliminates malware by rebuilding files to their 'known good' standards, so you can be assured that every file entering your organization is safe.

#### What is CDR?

CDR stands for Content Disarm & Reconstruction. Glasswall's CDR technology works by:

- → Inspecting a file's digital DNA
- Cleaning risky content according to set policy
- → Rebuilding to 'known good' standard
- → Delivering a safe & visually identical file

# **Key Features**

- → Seamless setup
- → User-friendly console
- Customizable policies
- → Risk-free file transfers
- → Reports for audit purposes

## **Use Cases**

- → Zero-day threat defense
- → Sanitize new files entering your organization
- → Legacy file clean-up
- → Sanitize website downloads and uploads

# **Getting Started**

Everything you need to install and begin using Glasswall Meteor.

## Minimum Requirements

- → CPU: 1 GHz or faster with 2 or more cores on a x84-64 (or x64) processor
- → RAM: 4 GB
- → Windows 10 (64 bit) and Windows Server 2019 onwards
- → Earlier versions of Windows may operate but are unsupported

## Supported File Types

- → Glasswall Meteor *Essentials* and *Pro* support many popular file types including (.pdf/.docx/.xlsx/.pptx/.jpeg/.png) and more.
- → For a complete list of supported file types, please refer to Appendix B.

You can visit www.glasswall.com to find out more.

## Microsoft Visual C++

Before you can begin installation of Glasswall Meteor, Microsoft Visual C++ runtime libraries need to be installed on your machine.

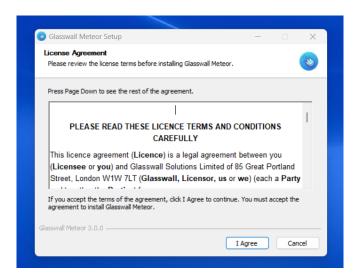
When you execute the Glasswall Meteor .exe file, you will be prompted to install it first.

## Installation

1. From your file explorer, double-click the executable file (*GlasswallMeteor...exe*) provided to you by Glasswall.

Read the licence agreement and if in agreement, click I Agree.

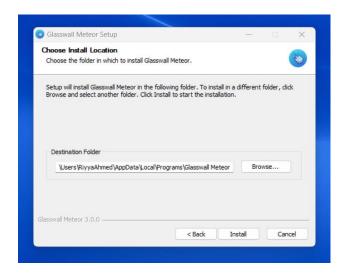
Note: you must accept the agreement to continue.



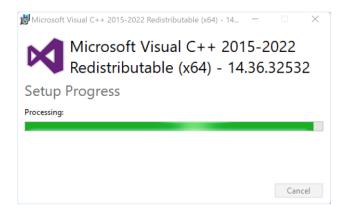
2. When the dialog box displays, select the type of installation required (all users or the current user) and click **Next** >.



3. Click Install.



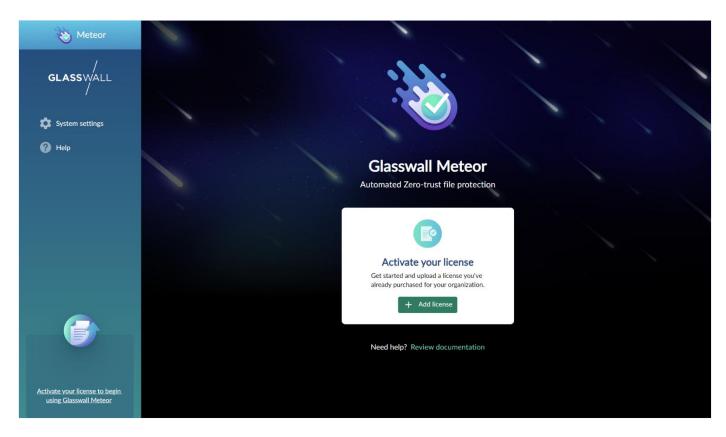
4. If you are prompted to install Microsoft Visual C++, click Yes.



5. Ensure that Run Glasswall Meteor is selected and click Finish.



## Glasswall Meteor will launch automatically.



To find out more about install paths and file storage, please refer to Appendix A.

#### Unattended Installation & Uninstallation

Glasswall Meteor can also be installed and uninstalled silently using Windows Command Line Interface (CLI).

#### Installation

Unattended installation is a procedure for installing software without user intervention.

#### Example:

"Glasswall Meteor Setup.exe" /S /D="D:\My Files" --force-run

/S :silent

/D :install directory

/allusers - Install for all users (requires command to be executed as Admin)

/currentuser - Install for current user only (default)

--force-run :to run directly after installation

#### Uninstallation

For Windows, an *uninstaller* is provided in the preferred installation directory. From the example above, this would be found in *D*:\My Files.

Please refer to Appendix A for default install paths.

#### Example:

"D:\My Files\Uninstall Glasswall Meteor.exe" /S

/S :silent

#### **Predefined Configuration**

System administrators may prefer to install the software with a configuration that limits users from making changes within the UI. A source JSON file can be referenced, and this will be copied to the 'config' folder under the ../AppData/Roaming/Glasswall Meteor path during the installation command.

#### Example:

"Glasswall Meteor Setup 3.0.0.exe" /ConfigPath="C:\config.json"

A sample config file, that is inactive by default will be copied into the same directory by default and does not require a 'ConfigPath' location to be provided. This can serve as a template for an active config.

Sample default 'config.json' file created in the config directory:

```
{
        "configActive": false,
        "readOnlyUI": true,
        "policyEditable": false,
        "defaultManualCleanFolder": "C:\\Users\\userabc\\Desktop\\clean",
        "auditFolder": "C:\\Users\\userabc\\Documents\\audit",
        "Syncs": {
                 "syncld1": {
                         "name": "examplesync1",
                         "sourceFolder": "C:\\Users\\userabc\\Documents\\examplesource1",
                         "destFolder": "C:\\Users\\userabc\\Documents\\exampledest1"
                 "syncId2": {
                          "name": "examplesync2",
                          "sourceFolder": "C:\\Users\\userabc\\Documents\\examplesource2",
                         "destFolder": "C:\\Users\\userabc\\Documents\\exampledest2"
                 "syncld3": {
                         "name": "examplesync3",
                         "sourceFolder": "C:\\Users\\userabc\\Documents\\examplesource3",
                         "destFolder": "C:\\Users\\userabc\\Documents\\exampledest3"
                 "syncId4": {
                         "name": "examplesync4",
                          "sourceFolder": "C:\\Users\\userabc\\Documents\\examplesource4",
                         "destFolder": "C:\\Users\\userabc\\Documents\\exampledest4"
                 "name": "examplesync5",
                         "sourceFolder": "C:\\Users\\userabc\\Documents\\examplesource5",
                         "destFolder": "C:\\Users\\userabc\\Documents\\exampledest5"
                 }
```

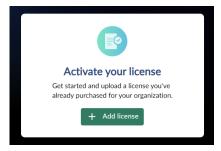
#### Explanation of example:

- The configuration is currently inactive, and therefore will be ignored on startup.
- The user interface is read-only, meaning that file paths cannot be modified.
- The content management policy is not editable.
- The default manual clean folder is located at "C:\Users\userabc\Desktop\clean".
- The audit folder is located at "C:\Users\userabc\Documents\audit".
- There are five syncs defined, each with a unique sync ID.
  - o Each sync has a name, a source folder, and a destination folder.
  - The source and destination folders are specified using file paths on the user's computer.

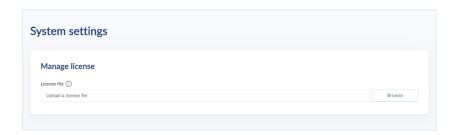
# License Management

# Activate your license

1. From the Glasswall Meteor launch screen, click + Add license.



2. From the *System settings* screen, click **Browse** to upload your license provided to you by Glasswall.



3. Once the license has been added, a pop up appears to inform you that the application will be relaunched. Click **OK**.



You are now ready to use Glasswall Meteor.

#### Silent Install

It is also possible to silently install Glasswall Meteor via the following command:

"Glasswall Meteor Setup 3.2.4.exe" /LicenseFilePath="D:\path\to\license\gwkey.lic" /S

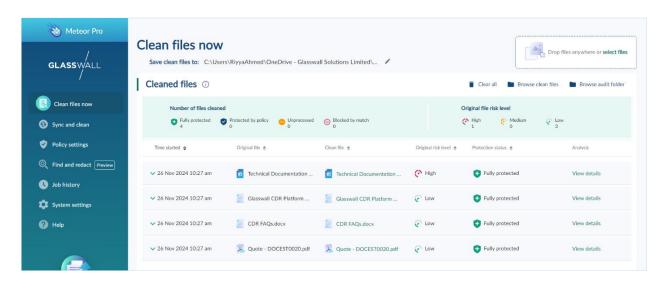
| <b>Note:</b> if you choose to install Glasswall Meteor silently, only Admins will be able to change the license via the application. |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

# File Sanitization

#### Clean files now

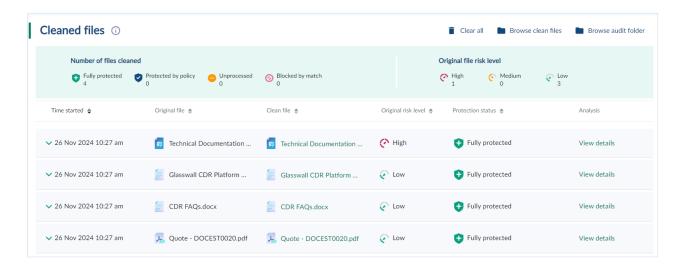
This option can be used to clean and rebuild files offline directly from your machine, without sending the file outside of your trust boundary.

- 1. From the Welcome screen or the side navigation menu, select **Clean files now**.
- 2. In the Clean files now window, you can input files in two ways:
  - → Drag & drop drop a file directly into the designated drop zone.
  - → File upload click select files to select and input a file from your machine.

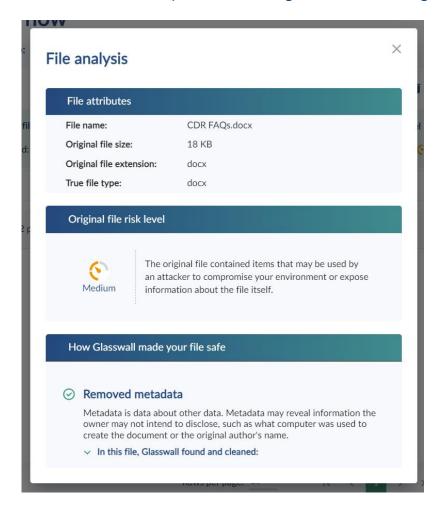


The file is instantly cleaned, rebuilt, and saved in the specified folder.

- 3. After your file has been processed and rebuilt, the following items are available for your reference:
  - → Time started the time you initiated the file processing.
  - → Original file lists the original file name.
  - → Clean file a link that allows you to choose where the cleaned file should be saved.
  - → Original risk level the level of risk assigned to the original file.
  - → Protection status confirmation that your file was successfully rebuilt.
  - → Analysis a detailed analysis and breakdown of the changes made to your original file during the sanitization process.



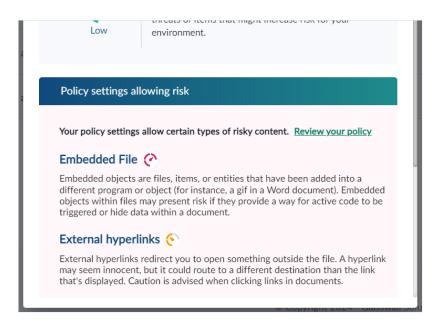
4. Click View Details to see a detailed report of the changes made to the original file.



The following content is included in the **File analysis** report:

- → File attributes
- Original file risk level
- → Prevented information leakage (metadata that has been removed).
- → Repaired broken document structure (objects & structures that have been repaired).

**Note:** if you have set custom policy settings allowing certain types of risky content, there will be an additional section *Policy settings allowing risk* displaying these. To remove them, you will need to review and amend your policy settings.

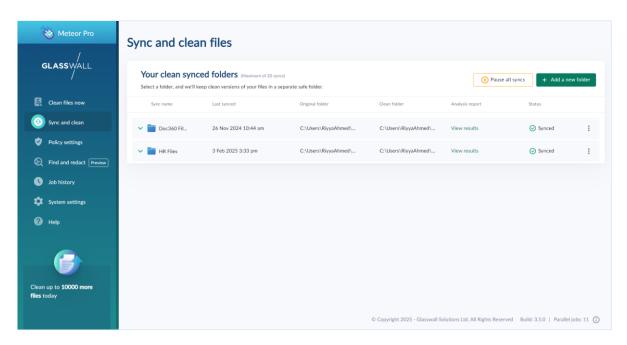


To find out more about the original file risk levels, and what the other file analysis details mean, please refer to Appendix C.

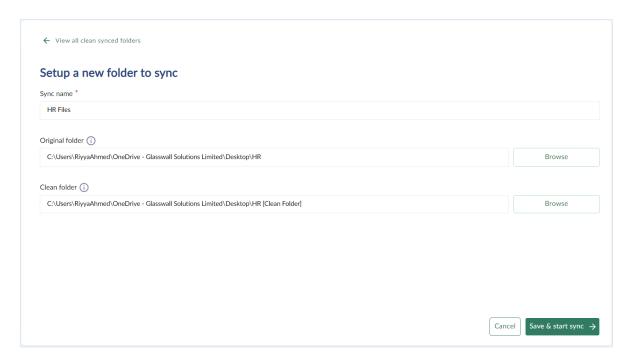
# Sync and clean

With Glasswall Meteor's 'Sync and clean' feature, you're able to setup folder synchronization's (a maximum of 20) which automatically perform CDR on any new files added to the folder, after which the sanitized files are added to a designated 'clean' folder.

1. From the Welcome screen or from the side navigation menu, select **Sync and clean**.

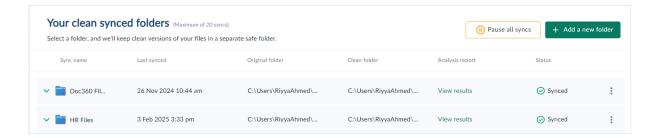


2. Click **Add a new folder**. You will arrive at the Setup a new folder to sync page.

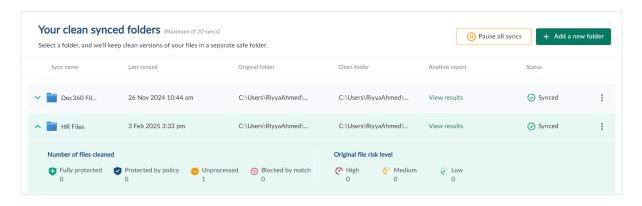


- 3. Enter a **Sync name**. This should help you easily identify the folder and its contents.
- 4. From the Original folder field, click **Browse** and select the desired folder.
- 5. From the Clean folder field, click **Browse** and select the desired folder.
- 6. Click Save & start sync.

The folder and its status are now displayed under the Your clean synced folders page.



7. Click **View results** to see a list of the cleaned files within the synced folder, showing the total number of files cleaned, their status, and original file risk level.



# Sync Cloud Folders

Glasswall Meteor allows users to set up automatic folder synchronizations with various cloud drives.

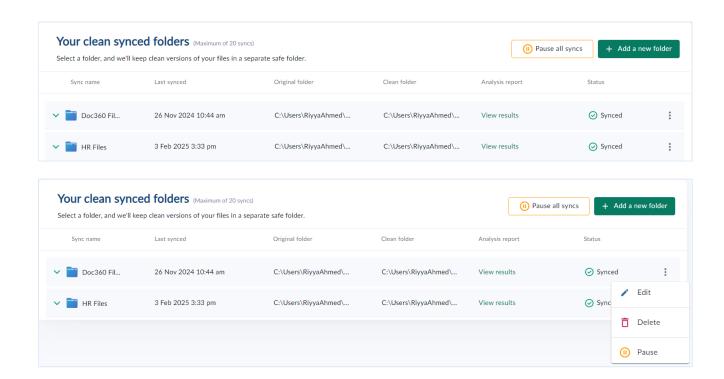
You can find step-by-step guides on syncing the following cloud drives on docs.glasswall.com:

- Box
- <u>Dropbox</u>
- Google Drive
- One Drive

#### **Edit or Delete Folders**

You're also able to edit or delete any actively synced folders displayed in the *Sync and clean* section.

On the far right of the folder listing, click the vertical ellipsis icon to view a dropdown list and make changes as required.

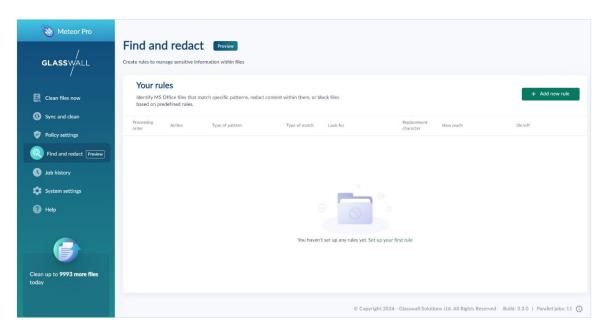


## Find and redact

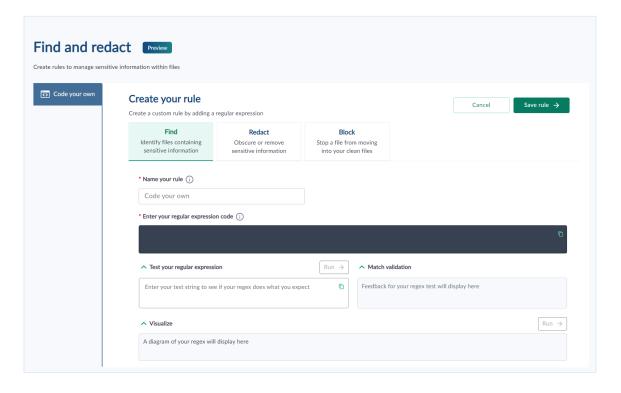
Glasswall Meteor's *Find and redact* tool is a data loss prevention feature which allows users to set customized rules to identify and remove sensitive information in Office documents.

Note: this feature is currently only available in 'preview' mode.

1. From the Welcome screen or from the side navigation menu, select **Find and redact**.



2. Click **Add new rule**. You will arrive at the *Create your rule* screen.



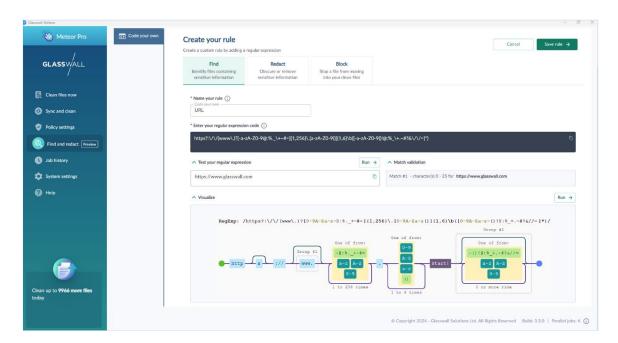
3. Select the appropriate tab for the custom rule you would like to create.

For every rule, the following actions can be assigned:

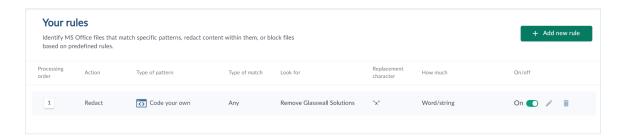
- **Find** identify files containing sensitive information.
- **Redact** obscure or remove sensitive information.
- **Block** stop a file from moving into your clean files.
- 4. Enter a name for your new rule in the **Name your rule** field.
- 5. Add your regular expression code in the corresponding field.

Note: currently the regular expression matching is case insensitive.

6. If you selected the *Redact* tab, enter the appropriate character in the **replace your character** field.



7. Click Save rule.



Once a rule is created, it will be applied to all files processed via *Clean files now* or *Sync and clean*.

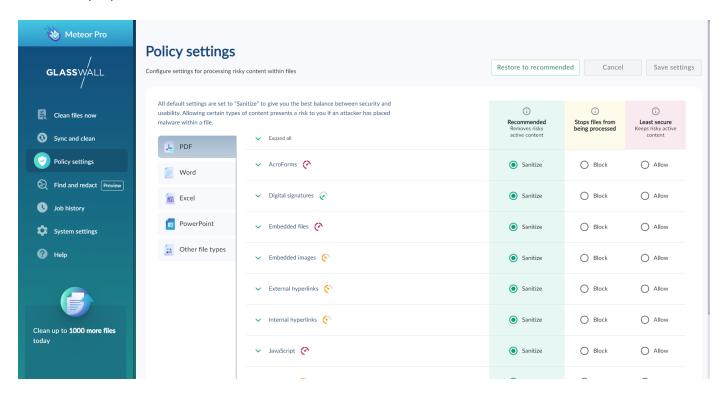
# **Useful Information**

# **Policy settings**

When using Glasswall Meteor, you're able to set your own preferences or 'policies' for each of the supported file formats.

Policy settings are used to specify whether active content is sanitised (removed from the file), allowed (left in the file) or disallowed (the file is not rebuilt).

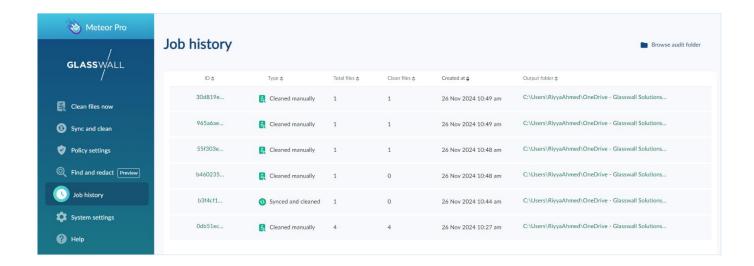
→ From the side navigation bar, select **Policy settings**. The numerous settings for each file format are displayed.



To find out more about Policy settings, please refer to Appendix D.

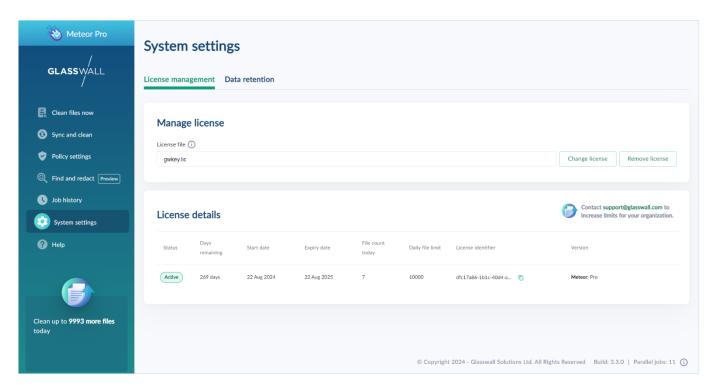
# Job history

If you would like to view a list of all previously processed files, you can do so via the *Job history* section.



# System settings

If you would like to change or remove your Meteor license, or find out the license details, you can do so via the *System settings* page.



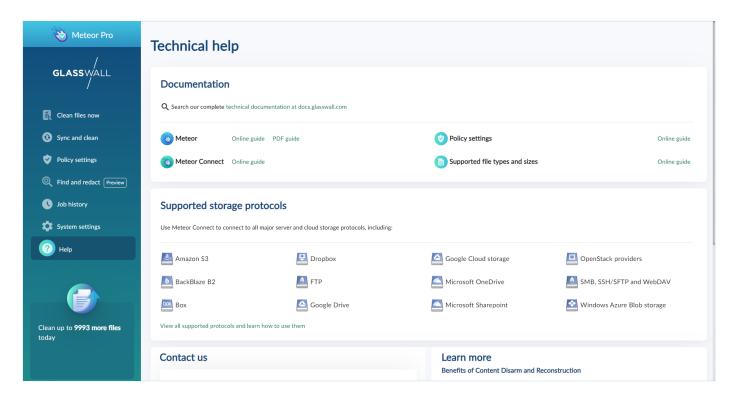
## Copy clean & original files

Under *System settings*, you also have the option to decide whether you would like to copy the clean file, as well as copying the original file via the *Data retention* section.

| Copy files to audit folder: Copy clean files (i) Copy original files (i) |  |
|--|--|
|--|--|

# Technical help

From the Help window, you can access our online and offline Glasswall Meteor documentation as well as contact our Customer Support team and inquire about upgrading.



# **Archive Support**

The Archive Support functionality ensures users can safely access archive files.

#### **Features**

- Process archive files containing a nested limit of up to 5 archive levels.
  - o Archive files exceeding 5 nested levels will result in a failure message.
  - Archive files containing unlimited unarchived nested level folders and files are supported (within limitations of your file counter).
- Once an archive file is processed, the risk level is displayed within Glasswall Meteor for each individual file, however your designated Clean Folder will only contain the clean archive file.
  - You will need to extract the individual cleaned files manually using a file extracting software.

#### Note

- Encrypted or Password protected archive files are **not** supported.
  - These won't be processed, resulting in a failure message.
- Archive files containing any individual file(s) above the standard supported size (1024 MB) are not supported.
  - These won't be processed, resulting in a failure message.
- The file counter will decrease based on the number of files contained inside the processed archive file.

#### Removable Media

Glasswall Meteor can also interact with files on removable media such as a USB drive or memory card.

Although the application can ensure unknown files are inspected for malware, hidden software programs could also be present, and may get triggered when the media connects to a network machine. This is why it is important that an endpoint protection solution such as an antivirus program is always used in conjunction with Glasswall Meteor, so that any unauthorized software execution is blocked.

If endpoint protection needs to be disabled for any reason, please ensure that all removable media is disconnected from your machine.

## **Disclaimer - Importance of Endpoint Protection**

Glasswall Meteor's main advantage is neutralizing risks that are undetectable by most endpoint protection solutions (such as Windows Defender). Sometimes malware can evade detection, particularly if threats evolve by changing their file signatures and objectives during runtime. Therefore, it's important that an antivirus solution should continue to be used in conjunction with Glasswall Meteor.

Although the Glasswall Meteor can provide superior protection against known and unknown malware threats, it's not designed to provide automated and continuous scanning of risks in every file on your machine. Glasswall Meteor is designed to analyze specific files and remove file-based threats. For example, when a file is downloaded from an untrusted source via the Internet, Glasswall Meteor can perform CDR analysis and sanitize the file. This proactive approach is useful because the malicious creator of the file may assume that antivirus is unlikely to detect a relatively new piece of malware.

Endpoint protection services will likely not be aware of Glasswall Meteor, so any unknown file entering your organization will end up being quarantined. If your antivirus intervenes and stops Glasswall Meteor from analyzing the file, you may experience a delay until the task times-out (45 seconds), and the analysis status will be returned as 'Failed'. In this scenario, your antivirus has correctly protected your computing environment. For the Meteor app to perform CDR on a file that has been identified as malicious, you would need to *temporarily* disable your antivirus. Disabling of antivirus features should **only** be performed by a trained operator. Unless you really need to view the sanitized version of the original file made safe by CDR, disabling endpoint protection is not recommended.

On average, the Glasswall Protection Advantage is around 18 days for files that evade being recognized by Threat Intelligence feeds.

Have more questions?

support@glasswall.com www.glasswall.com

# Appendix A - Install Paths

#### Software Path

Glasswall Meteor installation places a shortcut to your desktop.



If the 'all users' option was selected, the shortcut will point to the following software installation path:

→ C:\Program Files (x86)\Glasswall Meteor\Glasswall Meteor.exe

If the single user option was selected, the shortcut will point to the following software installation path:

→ C:\Users\[username]\AppData\Local\Programs\glasswall-meteor\Glasswall Meteor.exe

#### Working Directory Path

Glasswall Meteor creates a working data folder at the following location on each individual machine:

→ C:\Users\[username]\AppData\Roaming\glasswall-meteor

#### Clean File Path

You can change where your sanitized files are stored once they have been sanitized, however the default location is set as:

→ C:\Users\[username]\AppData\Roaming\glasswall-meteor\clean

**Note**: It is important to keep clean files separate from original source files, which could contain malware.

#### **Audit Folder Path**

The Glasswall Meteor retains a report of all actions performed, so that users can analyze what risky items or broken document structures were found in the source file.

The audit folder location can be found at:

→ C:\Users\[username]\AppData\Roaming\glasswall-meteor\audit\_folder

Each processing job (which can include one or more files) will have a new folder created with an eight-character name. For each file processed as part of the job, a folder is created using a universally unique identifier (UUID) to record the artefacts that are created as part of the CDR process.

Four sub-folders are created under each UUID parent folder.

- 1. **Report** This contains the master analysis XML file, which is the most detailed report about what was found in the original file.
- 2. **Analysed** This contains a digest of information about sanitisation and remediation items that were found in the original file. The details are contained in *.json* files within the folder. Where sanitisation occurs, potentially risky content has been removed. Remediation relates to deviations from the industry specifications for the file format, and how they have been repaired.
- 3. **Original** This contains the original file that was provided to the Glasswall Meteor. Caution should be exercised as this file has not been protected by CDR. The document is preserved to protect the audit trail.
- 4. **Clean** This contains an additional copy of the clean file, which has undergone CDR and is therefore safe to interact with.

Additional files (config.\*) relate to the content management policy and the settings provided to the Glasswall engine during the CDR process for the file.

# Appendix B - Feature Capabilities

# Glasswall Meteor Essentials - Supported File Types

| File Type                     | Extension(s)                                    |  |
|-------------------------------|---|--|
| Word Binary File Format       | .doc, .dot                                      |  |
| Excel Binary File Format      | .xls, .xlt                                      |  |
| PowerPoint Binary File Format | .ppt, .pot, .pps                                |  |
| PDF Documents                 | .pdf  |  |
| Office Open XML Documents     | .docx, .docm, .dotx, .dotm                      |  |
| Office Open XML Workbooks     | .xlsx, .xlsm, .xltx, .xltm                      |  |
| Office Open XML Presentations | .pptx, .pptm, .ppsx, .ppam, .potm, .ppsm, .potx |  |
| JPEG Images                   | .jpeg, .jpg, .jpe, .jif, .jfif                  |  |
| PNG Images                    | .png  |  |
| GIF Images                    | .gif  |  |
| Enhanced Meta Files           | .emf  |  |
| TIFF Images                   | .tif, .tiff, .geotiff                           |  |
| BMP Images                    | .bmp, .dib                                      |  |
| SVG Images                    | .svg  |  |
| WebP Images                   | .webp   |  |
| Windows Metafile Format       | .wmf, .wave                                     |  |
| Waveform Audio Files          | .wav  |  |
| MP2 Media Files               | .mpg  |  |
| MP3 Media Files               | .mp3  |  |
| MP4 Media Files               | .mp4, .m4a, .m4p, .m4b, .m4r, .m4v              |  |

# Glasswall Meteor Essentials - Capabilities

- → Meteor *Essentials* analyzes and protects up to **150** files in a **24**-hour period, during your software subscription period.
- → Meteor Essentials can process individual files up to 25 MB in size.
- → To analyse and rebuild archive files such as .zip, Glasswall Meteor *Pro* is required.

# Glasswall Meteor Pro - Supported File Types

| File Type                     | Extension(s)                                    |  |
|-------------------------------|---|--|
| Word Binary File Format       | .doc, .dot                                      |  |
| Excel Binary File Format      | .xls, .xlt                                      |  |
| PowerPoint Binary File Format | .ppt, .pot, .pps                                |  |
| PDF Documents                 | .pdf  |  |
| Office Open XML Documents     | .docx, .docm, .dotx, .dotm                      |  |
| Office Open XML Workbooks     | .xlsx, .xlsm, .xltx, .xltm                      |  |
| Office Open XML Presentations | .pptx, .pptm, .ppsx, .ppam, .potm, .ppsm, .potx |  |
| JPEG Images                   | .jpeg, .jpg, .jpe, .jif, jfif, .jfi             |  |
| PNG Images                    | .png  |  |
| GIF Images                    | .gif  |  |
| Enhanced Meta Files           | .emf  |  |
| TIFF Images                   | .tif, .tiff, .geotiff                           |  |
| BMP Images                    | .bmp, .dib                                      |  |
| SVG Images                    | .svg  |  |
| Webp Images                   | .webp   |  |
| Windows Metafile Format       | .wmf  |  |
| Waveform Audio Files          | .wav, .wave                                     |  |
| MP2 Media Files               | .mpg  |  |
| MP3 Media Files               | .mp3  |  |
| MP4 Media Files               | .mp4, .m4a, .m4p, .m4b, .m4r, .m4v              |  |
| Zip Archive Format            | .zip, .7z, .iso, .rar                           |  |

# Glasswall Meteor Pro - Capabilities

- → Glasswall Meteor Pro analyzes and protects between **1,000-10,000** files in a **24**-hour period, during your software subscription period.
- → If you require a software licence to process more files each day, please contact the support team. Glasswall Meteor Pro can process file up to 1 GB in size.
- → Archives such as the .zip file format are supported by Glasswall Meteor Pro.

# Glasswall Meteor Version Comparison

|   | Glasswall<br>Meteor<br>Essentials                                  | Glasswall<br>Meteor Pro   | Glasswall<br>Clean Room   |
|---|--|---|---|
| Maximum Files<br>Per Day                      | 150  | 1,000-10,000  | 10,000+   |
| Supported Document Types                      | PDF, Word,<br>Excel,<br>PowerPoint,<br>Images, Audio<br>and Movies | PDF, Word,<br>Excel,<br>PowerPoint,<br>Images, Audio,<br>Movies and<br>Archives | PDF, Word,<br>Excel,<br>PowerPoint,<br>Images, Audio,<br>Movies and<br>Archives |
| Adjustable<br>Content<br>Management<br>Policy | Yes  | Yes   | Yes   |
| True File Type Detection                      | Yes  | Yes   | Yes   |
| Audit Trail Folder                            | Yes  | Yes   | Yes   |
| Maximum File<br>Size                          | 25 MB  | 1 GB  | 100 MB  |
| Nested Archive<br>Support                     | No   | Yes   | Yes   |
| Operating<br>Systems                          | Windows 10/11<br>Windows Server<br>2019                            | Windows 10/11<br>Windows Server<br>2019   | Machine Image<br>or Managed<br>Kubernetes<br>deployment                         |
| Customer Support                              | Standard<br>Included   | Standard<br>Included  | Standard<br>Included  |
| Deployment Type                               | Desktop  | Desktop &<br>Server   | Server  |

# Appendix C - Risk Levels & File Analysis Details

Glasswall Meteor processes files to ensure they are safe from threats. Once a file has been deconstructed and rebuilt, the application assigns a *Risk Level* to the original file. These risk levels, explained below, provide users with a high-level summary of the level of threat the original file contained.



A high-risk level means the original file contained items that are frequently used by attackers to compromise your environment.



A medium risk level means the original file contained items that may be used by an attacker to compromise your environment or expose information about the file itself.



A low risk level means the original file did not appear to contain any threats or items that might increase risk for your environment.

#### How Glasswall Made Your File Safe

This section lists the threats removed within the file structure, as well as active content sanitised (removed) from your file according to the policies set by you or your company.

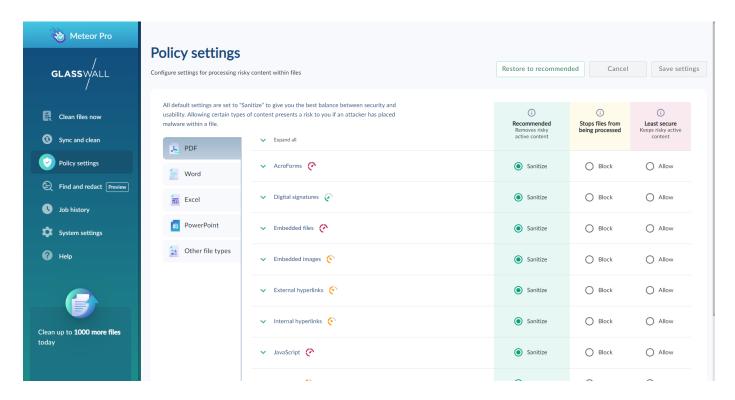
There are various types of actions performed across all supported file types:

- → Unrecognised objects hidden within the file structure that are not defined in the 'known good' specification, are removed.
- → Where possible, components of a file that deviate from the manufacturer's specification are corrected back to the standards set in the specification. Otherwise, an issue is reported.

To find out more about Policy Settings, and how to change them, please refer to Appendix D.

# Appendix D - Policy Settings

The **Policy settings** section allows you to customize how different file formats are handled by the application.



As a default, we recommend setting all content management settings to *Sanitize*. This will provide the best balance between security and usability. Allowing certain types of active content presents a risk to you if an attacker has placed malware within a file.

You can choose to disallow files with certain criteria, but this will block CDR from being performed on those files. For these files, the rebuild process status will be marked as *Can't be cleaned*.

#### **Definitions**

#### **Sanitise**

The file is analysed and rebuilt with the defined active content removed.

→ For example, you can specify that macros are sanitised (removed) from Word files.

#### **Allow**

The file is analysed and rebuilt with the defined active content left intact (the object is not removed).

→ For example, you can configure Word so that macros are allowed (not removed) from Word files.

#### **Disallow**

The file is analysed but not rebuilt if the defined active content is found during analysis.

→ For example, you can specify that macros are disallowed from Word files. Word files are analysed and if macros are found the file is not rebuilt and is not made available to you.

#### Acroform

An 'Acrobat Form' in addition to looking like a form, may also contain active code (e.g., JavaScript) which could be malicious. They can also be used to hide objects inside other objects.

#### Macros / JavaScript

Macros & JavaScript are forms of active code, which may be benign in nature, but all too often are used by bad actors to mount an attack against the user or receiving system when expressed in a business document.

#### **Actions all**

An action within a PDF may be benign, but it's designed to make the document dynamic. An attacker may use the action to trigger active code (e.g., JavaScript) or send data to a URL. The functionality can be misused to cause harm to the recipient.

#### **Digital signatures**

The source document may have been signed with a digital signature. Whilst the signing may not represent a threat, if the ownership and trust of the certificate chain has been compromised, this could trick a user into viewing a document that could contain something malicious. The sanitise setting is a good option to select if there is any doubt about the provenance of the document.

#### Dynamic data exchange

Dynamic Data Exchange within Microsoft documents is known to present risk as the protocol may be used to execute malicious code on the recipient's computer.

#### **Embedded files**

Embedded objects within files may present risk if they provide a way for active code to be triggered, or to hide data within a document.

#### **Embedded images**

Embedded images within files may present risk if they provide a way for malicious content to be hidden inside the image.

#### **External hyperlinks / Internal hyperlinks**

External and internal hyperlinks may appear innocent. However, a link in a document may appear to have a different destination than the real link. Caution is advised when clicking on links in documents.

#### **Review Comments & Metadata**

Metadata can reveal information which the owner may not intend to disclose to the recipient, such as review comments, tracked changes, or the original author's name.