# New in 7.1

## Macrium Image Guardian

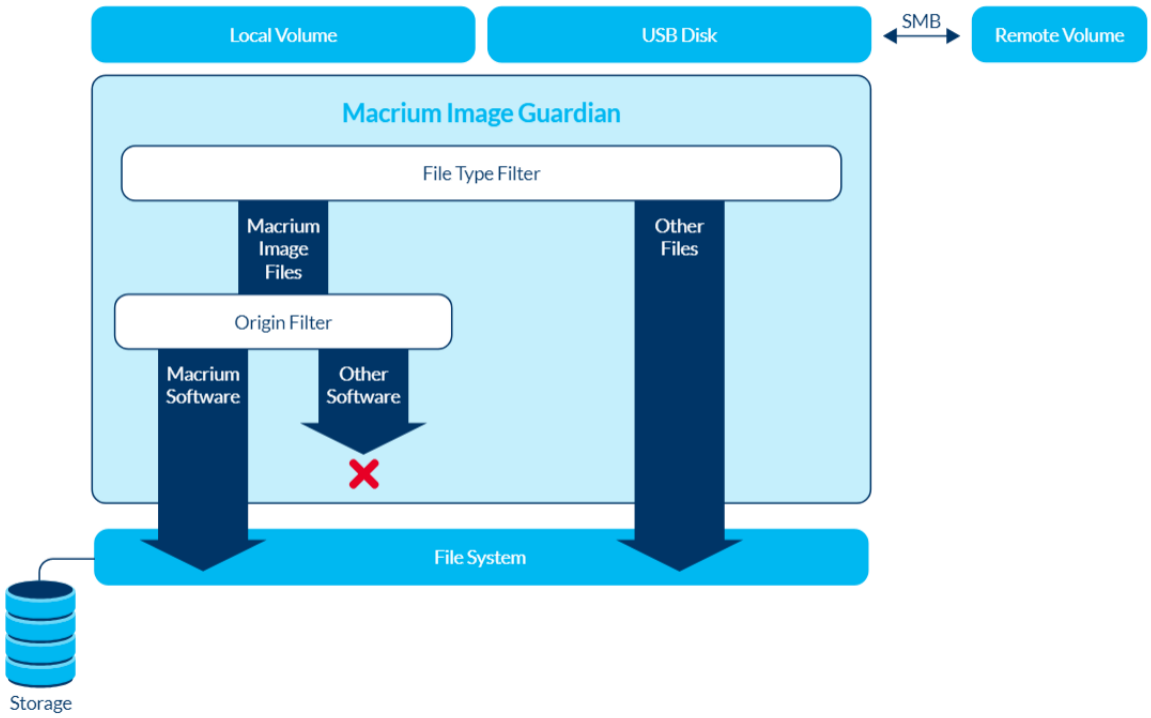
## Macrium Image Guardian Overview

**Macrium Image Guardian** protects your backup files from unauthorised modification.

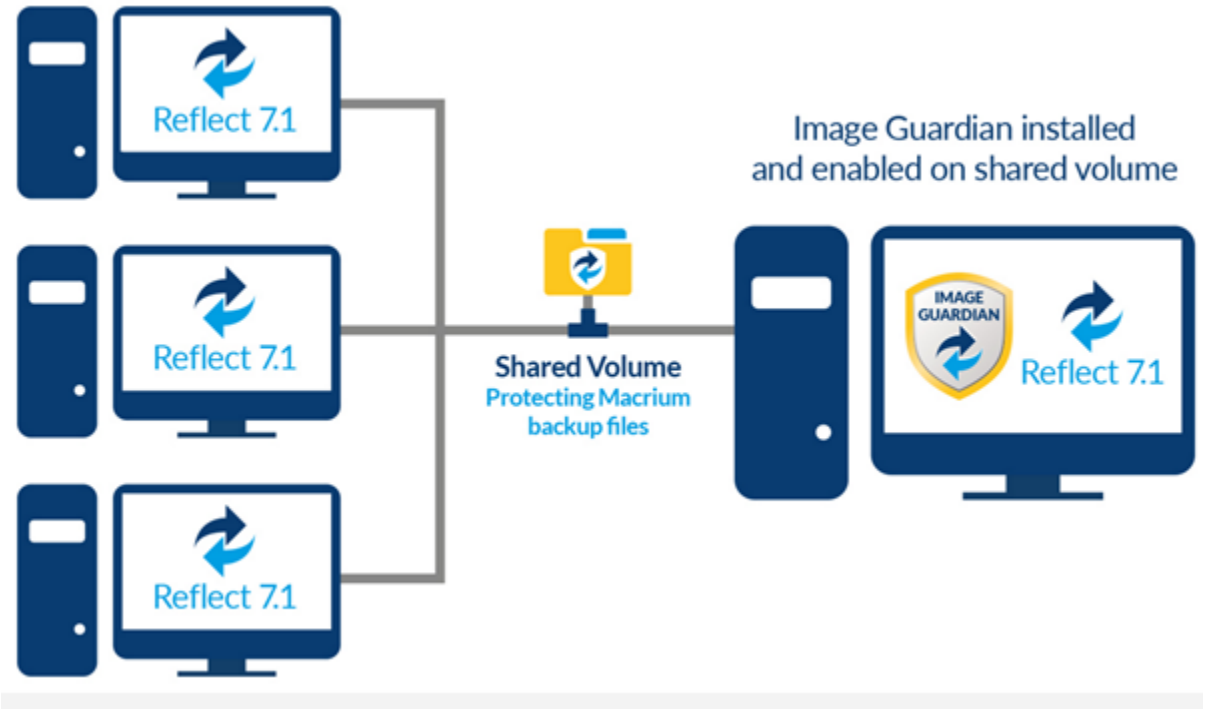
**MIG** grants write access to existing backups file for Macrium Reflect 7.1, any image tools created by us, and optionally, MS RoboCopy. All other process attempting to update existing backup files will be denied access.

**MIG** protects local **NTFS** volumes and allows Macrium Reflect 7.1 and later to use the protected volume as a shared network resource.

**Macrium Image Guardian protection architecture**




**Macrium Image Guardian protecting backups in a networked environment**




In the above illustration, the PC sharing the backup repository (Shared Volume) has a full install of Macrium Reflect, including **MIG**. A local drive is shared over the network and **MIG** has been enabled on that drive in the Macrium Reflect user interface.

The other PC's on the network can backup to this shared drive and **do not** require MIG to be installed. Backup file write access is automatically granted to Macrium Reflect 7.1, and later, write access for earlier versions of Macrium Reflect and other processes will fail.

The PC hosting the share with **MIG** installed can be used as a standalone Macrium Reflect installation. The protected drive will prevent unauthorised access to backup files on that drive if the local PC creates backups to the protected volume.

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## Macrium Reflect Free Edition

**Now licensed for commercial as well as personal use.**
We've relaxed the licensing for the Free Edition and it is now permitted to install and use this popular product in a commercial environment. Please note that this is still an unsupported product and, as always, we encourage upgrading for full functionality and support. Please see Upgrade from Macrium Reflect 7 Free for more information on the benefits of upgrading.

**Windows 10 Task Scheduler compatibility**
Macrium Reflect Free Edition now uses Windows Tasks Scheduler 2.0 API to overcome the problems with Windows 10 and the previous TS 1.0 API.

**Macrium viBoot**
Instant virtualisation of Macrium Images is now included in the Free Edition installer.

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## New viBoot VHDX provider

When creating a new virtual machine **Macrium viBoot** will now create a Microsoft Virtual Hard Disk (.VHDX) file that's re-directed to an existing Macrium Image file (.MRIMG) and a differencing .VHDX that contains changes generated by the running Virtual Machine. Previously, a Macrium Image file was used to create a virtual SCSI disk which was then mounted in a Virtual Machine. The latest version is a huge improvement and offers greater persistence and performance. It also allows us to offer additional functionality in the future, such as compatibility with other virtualisation environments including VMWare and VirtualBox.

These new .VHDX files are stored in the designated Macrium viBoot Repository (default "C:\ProgramData\Macrium\viBoot" but configurable from within Macrium viBoot) and remain open until the Macrium viBoot virtual machine is deleted.

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## Improved handling of Volume Shadow copy Service (VSS) unresponsive errors

Previously, if VSS were to become unresponsive due to COM+ or VSS writer configuration issues then this could cause Images or File and Folder backups to hang indefinitely. When this happened, subsequent scheduled backups would permanently queue until either the hanging backup was ended in Task Manager or the PC rebooted.

7.1 includes a default 15 minute VSS timeout that will cause a "VSS Timeout" error message in the log followed by a retry without VSS Writers, or termination:

```
Backup aborted! - Failed To Create Volume Snapshot. VSS Timeout
```

The timeout can be changed by setting a registry entry. Please create this entry if it doesn't exist:

| | |
|---|---|
| **Key** | HKEY_LOCAL_MACHINE\SOFTWARE\Macrium\Reflect\VSS |
| **Name** | CreateTimeOut |
| **Type** | DWORD |
| **Value** | 900 (Default) number of seconds |

## Macrium Reflect Workstation Edition now logs Windows Events

Previously, Macrium Reflect operational Windows Events were only logged for Macrium Reflect Sever and Sever Plus editions. Macrium Reflect Workstation edition now includes the same event logging.