Macrium Reflect v7.2.4971

Date   16th June 2020

Bug fixes and Improvements v7.2.4971 - 16th June 2020

- **Legacy MBR Systems**
  - For MBR Windows 10 systems the 'Create an image of the partition(s) required to backup and restore Windows' now includes the Windows Recovery partition.
  - MBR systems using BitLocker for the Windows volume would require running 'Fix Windows boot problems' after a 'live' BitLocker restore. This has been resolved.
- **UEFI System detection**
  The Windows 10 2004 (May) update caused legacy MBR systems to be detected as UEFI. This has been resolved.
- **File and Folder Backup**
  File and Folder 'Folders to exclude' now permits trailing backslashes.
- **Macrium viBoot**
  viBoot Virtual Machine names are now limited to 100 characters. This prevents viBoot VMs from exceeding the Hyper-V name length limit.
- **Rescue Media Builder**
  - RMBuilder now prevents the boot menu being set for PE 3.1 on UEFI booting systems. PE 3.1 is legacy MBR only.
  - RMBuilder would incorrectly report that not enough free space was available when using 1GB flash media. This has been resolved.

Bug fixes and Improvements v7.2.4952 - 29th May 2020

- **Macrium Image Guardian**
  Some customers have reported erroneous MIG block notifications and a Macrium Service process crash. This has been resolved

Bug fixes and Improvements v7.2.4942 - 22nd May 2020

- **Backup Progress**
  We've added a live backup total progress bar to the Reflect task bar icon.
- **Backup blocked**
  A few customers have noticed backups hanging after completion which could prevent the next backup from starting. We've improved the communication between backup instances to prevent a potential race condition.
- **ReDeploy**
  Some customers have noticed poor CPU performance after redeploying to new hardware. ReDeploy has been improved to only reset CPU drivers if a CPU change is detected

Bug fixes and Improvements v7.2.4884 - 9th May 2020

- **Email Notifications**
  Some customers have reported that Reflect notification emails have been rejected by their email service providers. This has been resolved.

Bug fixes and Improvements v7.2.4861 - 23rd April 2020

- **XP Only**
  This is an XP only release that resolves the error "missing bcrypt.dll" when starting Reflect.

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Bug fixes and Improvements v7.2.4859 - 23rd April 2020

- **File and Folder Backup**
  We've excluded MS Volume Shadow Copy from participating in backups of removable drives. Previously, a File and Folder backup would report VSS errors before continuing if folders on a removable drive, such as a Flash drive, were included. VSS is not supported on removable media.
- **MS Exchange**
  Some customers have reported an application crash when running MS Exchange incremental backups. This has been resolved.
- **GPT Disk Layouts**

We've added an additional check to allow the GPT partition table to contain gaps when loading disk layouts in Reflect. It's possible that GPT partition tables can be non-contiguous if the disk has been formatted or updated using Linux.

- **Rescue Media**
  - o To distinguish between multiple Ethernet Adapters with a similar name, the Windows PE Network Adapter dialog now shows the MAC address of each adapter.
  - o Changing the rescue media staging area volume would not always remove all the files on the old volume. This has been resolved.
  - o If a new edition of Reflect is installed, e.g, Workstation to Server, the Rescue Media Builder will now prompt for a rebuild of the rescue media.

Bug fixes and Improvements v7.2.4808 - 25th March 2020

- **German Language Version Only**
  A program exception could occur when opening the verification dialog. This has been resolved.
- **Macrium Changed Block Tracker (MRCBT)**
  CBT could erroneously hang on to volume locks on some systems causing problems with scheduling system volume chkdsk events, USB drive ejection and OneDrive Personal Vault. This has been resolved.

Bug fixes and Improvements v7.2.4797 - 19th March 2020

In response to potential file system corruption issues that could arise from applying some recent Windows Updates, we have reviewed our data integrity checks and implemented new features:
See https://answers.microsoft.com/en-us/windows/forum/all/kb4535996/134c504e-bb55-4e3c-a5da-28794a4b6079

Note: The first Incremental after installing may take much longer than normal.

- **Changed Block Tracker**
  We've improved CBT to reset more robustly on System power failure, unexpected shutdown and unexpected device removal.
- **Repair option when verifying Image files**
  We've added an 'Attempt repair' option when verifying image files. If block corruption is detected and the live file system contains the original data then the block is repaired by replacing with the original data. Block corruption is exceptionally rare but this additional feature is designed to further mitigate file system and storage problems. We've also added an additional command line switch to the standalone verification utility.

  See https://knowledgebase.macrium.com/display/KNOW72/Verifying+image+and+backup+files
  and https://knowledgebase.macrium.com/display/KNOW72/Verifying+image+and+backup+files+from+the+command+line

  Note: Repair isn't guaranteed and will only be attempted if the originating source volume exists on the system performing the verification.

- **Consolidation**
  We've also added verification and live repair attempt on verification failure for merged blocks during consolidation. If a data block fails verification when read for merging, the live file system is checked for the original block data.
- **Incremental Deltas**
  It was possible for a damaged Incremental index to go undetected when constructing a full index chain. This was a rare occurrence, but it could propagate further into the backup set. We have enhanced our detection code to prevent this from occurring in future.
- **Clone and restore**
  Display power saving settings are now honored during Clone and Restore operations. Previously the display would remain on regardless of the Windows settings.
- **Exchange**
  Exchange delta incs could fail to build if multiple volumes were present for Exchange DB and meta data/log files. This has been resolved.

Bug fixes and Improvements v7.2.4744 - 18th February 2020

- **Alternative Locations**
  The 'Alternative Locations' functionality could fail to work as expected and attempt to append to backup sets from the alternative location even if the primary location was available. This has been resolved.

  Note: When a backup runs, If the location contains an orphaned delta Incremental then the text **'.error_loading'** will be appended to the orphaned file name and the backup will continue. This will be indicated in the backup log as a warning.

Bug fixes and Improvements v7.2.4732 - 15th February 2020

- **Error: 'Error reading Image file'**
  Some customers have received 'Error reading Image file' when creating Delta Incremental Images. This has been resolved.
  We recommend re-building your rescue media if currently built with v7.2.4711 to ensure compatibility with your backup sets.
- **Volume detection**
  Reflect would fail to recognise file systems formatted on Dynamic volumes spanning disks with 4K sector sizes. This has been resolved.
- **Rescue Media Builder**
  - This release resolves a problem starting the rescue environment from the recovery boot created menu with v7.2.4711.
    Note: Running either this full installer or patch will automatically correct the current boot menu. If you continue to have problems then please launch RMBuilder and remove/re-add the boot menu.

  - Moving the PE staging files to a different drive would result in duplication of the boot\Macrium sub folder. This has been resolved.
    Note: If a corrupt PE staging folder structure is detected by RMBuilder then it will be automatically deleted.

Bug fixes and Improvements v7.2.4711 - 12th February 2020

- **Delta Index Saving Efficiency**
  We've improved the efficiency of saving Incrementals with large delta indexes.
- **Technicians USB**
  We've enabled the Technicians USB stick and ISO to run the portable version of Reflect on Windows Hyper-V and Server Core OS's.
- **Phantom partitions on GPT Disks**
  A corrupt GPT partition table on disk could cause Reflect to display 'phantom' disk partitions. This has been resolved.
- **Standalone Consolidation**
  Using the Standalone Consolidation tool, consolidate.exe, to consolidate Incrementals where an existing consolidated Inc is between the 'From' and 'To' Inc, could cause Reflect to erroneously try to locate a previously consolidated file when the backup set was opened. This has been resolved.
- **File and Folder**
  If a File and Folder backup definition included multiple root paths for the same drive but the drive letter was specified in both upper and lower case (eg, 'D:\Data\1' & 'd:\Data\2') then the backed up paths could be erroneously split at 'D:' & 'd:' when mounting the backup in Windows Explorer. This has been resolved
- **Alternative locations**
  Using 'Alternative locations' for a backup could break the 'Enforce an entered image or File and Folder backup file name' option in the global defaults. This has been resolved
- **Rescue Media Builder**
  - When building PE 10 rescue media, RMBuilder will now correctly detect any installed PE 10 ADK of version 1803 or later.
  - If RMBuilder found any file system errors while scanning a folder for drivers, the rescue media builder could close unexpectedly. This has been resolved.
  - When building PE 10 rescue media, RMBuilder would sometimes unnecessarily perform a full rebuild of the wim. This has been resolved.
  - Under certain circumstances, RMBuilder would not be able to swap between Windows PE and Windows RE. This has been resolved.
  - Checking and un-checking the Override Drivers checkbox will no longer cause drivers to change status from "Driver already present" to "Copy host drivers".

Bug fixes and Improvements v7.2.4601 - 24th December 2019

- **Image Mounting**
  Un-mounting an image failed if Windows Explorer was showing the mounted drive letter. This has been resolved.

Bug fixes and Improvements v7.2.4594 - 23rd December 2019

- **Image Mounting**
  A small number of customers reported that they could not mount Macrium Reflect images after dismounting a previously mounted image. This has been resolved.
- **viBoot**
  We've improved the ability for Reflect to detect bootable image files and enable the 'Boot Image' functionality

in Reflect.

- **Bitlocker system restore**
Automatic system restores for BitLocker encrypted system volumes could perform a 'BitLocker Removal' restore instead of the expected 'BitLocker Live' restore. This has been resolved.
- **VBScript & PowerShell**
The 'Run Once a Day' option when generating PowerShell and VBScript source files didn't behave as expected for scheduled tasks using the SYSTEM account. This has been resolved.
- **Verify File System**
The 'Verify File System' default image option was not honored if unchecked for scheduled images running using the SYSTEM account. This has been resolved.
- **Rescue Media Builder**
  - The default location for PE files has been moved back to $PROGRAMDATA$\Macrium\Reflect'.
  - On Windows 7, when building Windows PE rescue media, RMBuilder will now use the Dism.exe corresponding to the wim, rather than the Dism.exe from the WAIK.
  - On Windows XP, the radio button labels for boot menu options would sometimes be truncated. This has been resolved.
  - If the "override WinPE compatible drivers" checkbox was unchecked, custom USB drivers would sometimes not be included into the rescue media. This has been resolved.
  - If there was more than one version of the Windows ADK installed, RMBuilder would not copy required files from either installed ADK, and would instead prompt for a download. This has been resolved

Bug fixes and Improvements v7.2.4557 - 29th November 2019

- **Macrium Image Guardian**
While attempting to retrieve the status of a process that was closing, the MIG driver could inadvertently access an invalid address resulting in a BSoD. This has been resolved.
- **Rescue Media Builder**
  - On Windows XP, the rescue media builder would sometimes give a "WIM file not found" pop-up when there was a valid WIM file present. This has been resolved.
  - When performing an automatic restore on a system with multiple network adapters, the network adapter configuration process will be logged in more detail.

Bug fixes and Improvements v7.2.4539 - 18th November 2019

- **Server Plus Edition**
Exchange backups could crash after completion if the log file couldn't be written to. This has been resolved
- **Incorrect ReflectUI.exe Message Box**
On system startup an incorrect pop-up dialog box could be shown by ReflectUI.exe. This has been resolved
- **viBoot**
Images created by 'foreign' systems (not the same PC) could fail to enable the 'Boot Image' functionality in Reflect. This has been resolved
- **Macrium Image Guardian**
We've improved the security of MIG by enhancing the malicious injection of threads into running processes.
- **Change Block Tracker**
Minor performance and stability enhancements.
- **Rescue Media Builder**
  - On some systems with dynamic disks, it was possible for the location of the PE files to be incorrectly set, causing boot menu entries to fail. This has been resolved.
  - On USB-based rescue media, un-checking the "Check for devices missing drivers on boot" checkbox and rebuilding would sometimes not make the rescue media stop prompting for missing drivers. This has been resolved.
  - When building Technicians media, failing to create autorun.inf will no longer cause the rescue media creation to abort.
  - If the Windows ADK version 1607 was installed but a 64-bit PE 10 zip file was used to build rescue media, any subsequent 32-bit PE 10 builds would not prompt for an updated wim but would always use the 1607 wim from the ADK. This has been resolved.
  - RMBuilder could fail to detect a new version of Windows RE after a Windows update. This has been resolved.

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Bug fixes v7.2.4524 - Free Edition Only - 31st October 2019

- **v7.2.4523 Error**
Internet access through a proxy server could cause v7.2.4523 Free Edition to receive a program error when checking for updates. This has been resolved.

Bug fixes and Improvements v7.2.4523 - 31st October 2019

- **XP Boot Menu**
  Windows XP can now handle boot menu creation when the 'C:' drive has the compressed attribute set.
- **Auto System restore**
  A "Backup is running" message box could be incorrectly shown on Windows Vista when performing an automatic restore. This has been resolved.
- **SQL Continuous backup**
  The Start end End time calculations didn't take into account the local time zone. This has been resolved.
- **Rescue Media Builder**
  - On multi-boot systems, Windows RE WIM files for a different architecture to the current OS will now be ignored when scanning.
  - When building rescue media with a custom wim for a different architecture to the running OS (eg. a 32-bit custom wim on a 64-bit system), RMBuilder will now detect the architecture mismatch and will not try to copy drivers from the host OS.
  - On Windows Vista, RMBuilder would sometimes give "WIM file not found" error messages when a valid Wim file was present. This has been resolved.
  - Since Windows PE does not support wifi, Windows PE rescue media will no longer give Unsupported Devices messages for wifi devices.
  - In certain cases, 64-bit drivers could be automatically copied into the 32-bit drivers folder. This has been resolved.
  - USB root hubs will now be shown in the list of devices on RMBuilder's Devices And Drivers options tab.
  - If the Windows ADK is installed but a newer version of Windows PE is available from a zip file, RMBuilder will now build rescue media from the zip file wim rather than the ADK wim..
  - When performing an automatic restore on a system with multiple network adapters, the rescue media would sometimes not correctly set the network configuration for all adapters. This has been resolved.
  - USB Devices in RMBuilder now show the volume label as well as the drive letter.
  - The 'Backup Selection' dialog in Reflect and the 'Update Drivers' dialog in RMBuilder have been updated to allow for easier browsing for network folders.

Bug fixes and Improvements v7.2.4473 - 23rd September 2019

- **Server Core**
  Reflect was unable to launch on Windows Server Core due to missing 'oledlg.dll' module. This has been resolved.
- **Microsoft Exchange Mailbox Restore**
  When exporting emails to EML file, the resulting EML file will now also include any email attachments.
- **Macrium Image Guardian**
  Emptying the Recycle Bin when it contains Macrium Reflect image files will no longer result in a "blocked file operation".
- **Change Block Tracker**
  - CBT will now be suspended if a reboot is pending following an upgrade install.
  - On some systems, MRCBT could receive an malformed device remove notification for USB devices that would lead to a BSoD. This has been resolved.
  - When tracking an encrypted VeraCrypt volume, CBT would receive a lock notification for the wrong device which would eventually lead to a BSoD. This has been resolved.
- **Rescue Media**
  - We've added a task bar button to take screenshots in PE.
  - When making a backup through the rescue media, selecting "Shut down on completion" would sometimes reboot instead of shutting down. This has been resolved.
  - By default, on systems without WiFi adapters, the "Add WiFi Support" advanced option checkbox will now be unchecked. Systems which have previously built rescue media will be unaffected.
  - On systems with multiple network adapters, the rescue media would not always correctly load DHCP settings or other network settings for all adapters. This has been resolved.
  - Manually added wifi drivers were not copied into non-WinRE rescue media builds. This has been resolved.
- **Clone and Restore**
  - The target list view for both clone and restore could fail to scroll to the last physical disk. This has been resolved.
  - The "Restore Master Boot Record" settings in the Advanced dialog could fail to be applied. This has been resolved.
  - Using Macrium Reflect English language on German systems could cause backups not to be shown in the restore view. This has been resolved.
- **Email**
  - Notification email addresses with labels are now allowed. E.g, (FirstName LastName <fname.lname@example.com>).
  - Notification emails with long subject lines are now permitted.
  - The notification email send date could be omitted from the SMTP header. This has been resolved

Bug Fixes v7.2.4440 - 27th August 2019

- **Program Error(BSoD)**
  A system Blue Screen of Death (BSoD) could occur when imaging systems that contain ReFS formatted volumes. This has been resolved

What's New v7.2.4433 - 20th August 2019

- **Microsoft Exchange 2019**
  Support has been added for Microsoft Exchange 2019 for backup, restore and granular restore.
- **Update to TLS 1.2**
  The email option in Macrium Reflect has been updated to include TLS 1.2 support.
- **Rescue Media Files**
  The driver folders for WinPE/WinRE have been expanded to support multiple architectures and WIM versions.

Bug Fixes

- **Changed Block Tracker**
  The CBT communications protocol has been improved. **The first Incremental after installing may take longer than normal.**
- **Microsoft Exchange Mailbox Restore**
  During the same restore session if the same file was selected twice a mount error would be reported. This has been resolved.
- **Microsoft Exchange Backup to GUID path**
  The message "Not enough memory resources are available to process this command" could be displayed when backing up exchange to a volume guid path rather than a drive letter. This has been resolved.
- **USB host driver copy**
  USB devices could fail to be recognized if Windows PE/RE if the Rescue Media Builder had copied USB host drivers. This is now an optional setting in the RMBuilder 'Advanced' dialog and the defaulted operation for a fresh install is set to disabled. Please enable this option if necessary if you are having USB problems in the rescue media.
- **Rescue Media BitLocker unlock**
  The MS utility 'manage-bde.exe' could fail to run correctly in the rescue media. This has been resolved. **If this issue affects you then please re-create your rescue media after updating.**
- **VSS Log Deletion Error**
  VSS logs could be purged by date incorrectly. This has been resolved.
- **Technicians USB**
  The technicians license could be incorrectly copied to USB and ISO technicians media. This has been resolved. **If this issue affects you then please re-create your rescue media after updating.**
- **Microsoft SQL Restore**
  Server Plus could crash when attempting to restore the SQL tail log. This has been resolved.
- **viBoot Backup**
  When creating a backup from within viBoot a password was prompted for even if the base image was not password protected. This has been resolved.

What's New v7.2.4325 - 10th June 2019

- **Macrium Technicians License**
  We've improved the Technicians license product by adding the option to create a Technicians ISO image file and optical media. This offers the full functionality of the Technicians USB stick but also allows you to use it with Hyper-V VMs by attaching the ISO file to a DVD virtual device.
- **Clone and Restore Confirmation**
  We've added an additional confirmation check box when overwriting a Clone or Restore target disk. This offers Reflect users unfamiliar with the result of a Restore/Clone operation the opportunity to confirm or deny the overwrite operation.
- **ReDeploy**
  When attempting to ReDeploy Windows 7 using PE/RE 10 or Windows 10 using PE/RE 3.1 we now prevent IDE/ACHI services and drivers from being copied from the rescue media. This has caused un-bootable systems for some customers previously.
- **Rescue media USB drivers**
  Some customers have reported non-functioning USB devices which was corrected by updating the USB drivers in PE. Rescue media creation will now copy any USB OEM drivers from the host OS even if 'compatible' support is detected in the PE/RE base OS.
- **Changed Block Tracker**
  - The CBT tracking file format has been optimized and improved for efficiency and robustness. **This will require a reboot after installing and the first Incremental after reboot may take longer than normal.**
  - CBT and Reflect now ignore the PortableBaseLayer virtual disk used by the Sandbox feature in Windows 10 build 1903.

- **Uninstall tidy up**
  Unused .msi files in folder c:\windows\installer are now removed when uninstalling Macrium Reflect.
- **File and Folder Search**
  We've added path matching to the search criteria when searching File And Folder backups in the restore tab. Previously this was restricted to file names only.

Bug Fixes

- **Image mounting**
  In rare cases images could refuse to mount if insufficient access privileges were assigned to the 'C:\Windows\Temp' folder. This has been resolved.
- **Incorrect information in the Disk Details UI**
  Directly after starting Reflect, incorrect information was shown in the 'Details' section of the Tasks list in the backup tab. This has been resolved.
- **Rescue Media Builder**
  - After uninstalling Reflect, the windows module 'Wimmount.sys' could be incorrectly registered leaving other applications unable to mount VHD files. This has been resolved
  - Windows RE could fail to build on Server 2016. This has been resolved
- **BitLocker**
  BitLocker 'live' restores may have reverted to BitLocker 'removal' restores after the last update. This has been resolved. **If this issue affects you then please re-create your rescue media after updating.**
- **Changed Block Tracker**
  CBT could be disabled for a volume after a reboot forced by running 'chkdsk /f'. This has been resolved.

Server Plus Only - What's New v7.2.4230 - 22nd April 2019

Bug Fixes

- **Image Guardian**
  - MIG could block the creation of SQL backups. This has been resolved.

What's New v7.2.4228 - 21st April 2019

- **Image file loading speed improvement**
  Reduced the time taken for Reflect to read the indexes back from the previous files in the backup set. This is most noticeable when reading a large number of remote files.

Bug Fixes

- **Change Block Tracker**
  - Fixed an issue where a TRIM operation on a Registry hive would cause a dead-lock if some third-party software was holding a lock on the Registry.
  - Fixed an issue where CBT could not be enabled on some volumes if the list of file extents for the NTFS $LogFile spanned a 512 byte boundary.
- **Image Guardian**
  - Fixed an issue on some Windows 7 systems, where MIG was prevented from using the Microsoft cryptographic functions.
  - MIG could block the creation of SQL backups. This has been resolved.
- **viBoot**
  Creating an Incremental image of an encrypted/password protected image would fail with invalid password. This has been resolved.

What's New v7.2.4156 - 3rd April 2019

- **Large NTFS Cluster Sizes**
  Macrium Reflect now includes support for volumes formatted with the NTFS file-system that have a cluster size larger than 64K.

Bug Fixes

- **Change Block Tracker**
  - On some system using Microsoft Storage Spaces the option to enable CBT could fail. This has now been resolved and CBT fully supports Storage Spaces.
  - Performance Optimization. The frequency with which CBT flushes its internal state to disk has been reduced.
- **File and Folder Incorrect Progress Bar**

Reflect Monitor would show a sliding progress Marquee instead of the actual backup progress. This has been resolved.

- **WinRE Wi-Fi Connection**
  It was not aways possible to switch Wi-Fi networks when more than one network was available. This has been resolved.

- **PEExplorer**
  The PEExplorer application in the rescue media now includes a file deletion confirmation prompt.

- **'psvolacc.sys' error when browsing Images in Windows PE/RE**
  An incorrect error could be displayed when browsing images if the 'Enable access to restricted folders' option was selected in Windows PE/RE. This has been resolved

- **License Key Edition Change**
  When changing the installed edition of Macrium Reflect the previous license key could be retained after running the installer. This has been resolved

- **BitLocker Removal Warning**
  When resizing a restored BitLocker unlocked image the BitLocker Removal warning message box would not be displayed. This has been resolved

- **Various**
  Various small bug fixes and changes to improve Macrium Reflect.

Bug Fixes v7.2.4063 - 18th February 2019

- **Macrium Changed Block Tracker (MRCBT)**
  CBT could fail to attach to volumes where the "System Volume Information" folder was compressed with NTFS compression. This has been resolved

- **Macrium Virtual Image Boot (viBoot)**
  The viBoot backup functionality has been put back - viBoot can now take backups of its VMs again.

- **Backup Toast Notifications**
  Duplicate toast notification when restoring have been removed.
  When running backups, the toast notifications will now always show the backup definition file name.

- **PowerShell**
  PowerShell scripts running as scheduled tasks could hang after completion of a backup. This has been resolved.
  Note: Existing scripts do not need to change

- **Server Plus - Mailbox Restore**
  - o Mailbox Restore will no longer incorrectly report failures when restoring to multiple mailboxes at once.
  - o If one message failed to restore then subsequent restores could cause a program exception. This has been resolved.
  - o In rare cases, Mailbox Restore on Exchange 2016 would fail to restore messages with certain extended properties. This has been resolved.
  - o On certain domain configurations, Mailbox Restore on Exchange 2016 would not always be able to restore to all mailboxes. This has been resolved.
  - o PST file export for Exchange 2016 is now supported.

- **Server Plus - Exchange Backup**
  Exchange backups can now handle backups of Databases and System volumes with different sector sizes.
  Exchange encrypted Incremental backups could incorrectly force a Full backup. This has been resolved.

- **Backup Logs**
  Where consolidation/Retention rules are run *before* the start of a backup, the total time taken now includes the time taken for retention and consolidation.
  File And Folder email settings now include warnings and are positioned in the same log section as Image logs.

- **Various**
  Various small bug fixes and changes to improve Macrium Reflect.

Bug Fixes v7.2.3957 - 21st December 2018

- **Macrium Changed Block Tracker (MRCBT)**
  Some customers have experienced a Windows system exception causing a BSoD if the CBT feature was installed with v7.2.3954. This has been resolved.

What's New v7.2.3954 - 17th December 2018

- **Compatibility with Windows 10 Insider Preview 1809 (18290/8)**
  System Image files can now be mounted in the latest Windows 10 Insider Preview release. We've worked around the Windows Container Isolation File System (wcifs) bug that caused a GSoD with earlier releases of

Reflect.

Bug Fixes

- **Macrium Changed Block Tracker (MRCBT)**
  The following issues have been resolved...
  The number of error events that CBT writes to the System event log has been significantly reduced.
  On some systems, CBT could cause a BSoD if a third-party device driver split a request to read or write from a volume into multiple, smaller reads or writes.
  On some x86 systems, CBT could fail to read the NTFS transaction log due to a low memory condition. This resulted in a failed backup reporting a read error occurred due to insufficient system resources.
  Various dates reported by CBT were displayed in Coordinated Universal Time (UTC) format, not the currently configured local time zone format.
- **Backup End Toast Notification**
  The notification displayed when a scheduled backup completes now includes the xml backup definition file name.
- **Rescue Media Builder ISO File**
  If an alternative Windows 'temp' path was set with insufficient space for the ISO file then RMBuilder would not report an error and create an invalid file. This has been resolved
- **Various**
  Minor UI changes.

Bug Fixes v7.2.3906 - 29th November 2018

- **ISO File Creation Failure**
  RMBuilder could fail to create ISO image files. This has been resolved.
- **Macrium Image Guardian (MIG)**
  MIG could incorrectly display a blocking notification during consolidation when the consolidation target folder was a protected network share. This has been resolved.
- **Various**
  Various bug fixes and changes to improve Macrium Reflect.

What's New v7.2.3897 - 26th November 2018

Note: This patch will require a Windows reboot.

- **SMB 1.0 Support**
  We've added a check-box to re-enable legacy SMB 1.0 support in Windows RE and PE 10 version 1709 or greater..

Bug Fixes

- **Backup Completion Email**
  Backup completion emails could fail to send if the senders email was specified using the 'friendly name <user@domain.com>' format. This has been resolved.
- **Rescue Media Builder**
  The following issues have been resolved...
  An application error could occur if Windows RE couldn't fit on CD media.
  Old ISO files were not being deleted before creating new CD/DVD rescue media.
  External USB volume format failure.
  PE 10 rescue media would incorrectly show PE 5.0 in the Reflect application title bar
  SRT drivers were not being injected into the WIM when building rescue media.
- **One Drive update failure**
  Macrium Service would lock OneDrive.exe and prevent Windows Update from updating the OneDrive service. This has been resolved.
- **Macrium Image Guardian (MIG)**
  The following issues have been resolved...
  MIG would fail to detect that a Robocopy operation was accessing a backup target when Reflect was configured to use the unique volume identifier to locate backup drives.
  MIG could cause some Anti-Virus software to hang when inserting USB flash drives.
- **Macrium Changed Block Tracker (MRCBT)**
  The following issues have been resolved...
  A BSoD could occur after removal of a USB attached storage device.
  CBT would incorrectly attach to devices flagged as having removable media.
  A BSoD could occur if a user-mode application attempted to read an offline NTFS volume.
  CBT could block formatting of some NTFS volumes, causing the format command to stall at 99%.

Bug Fixes v7.2.3858 - 12th November 2018

Note: This patch will require a Windows reboot.

- **Explorer Crash**
  Some customers have experienced a Windows Explorer crash if displaying the 'Backup Method' column when exploring folders containing Image files. This has been resolved.
- **Wi-Fi Drivers copied for Windows PE**
  Windows PE could incorrectly load Windows RE Wi-Fi drivers at start-up and stall the boot sequence. This has been resolved.
  If this issue affects you then please create fresh Windows PE rescue media after updating.
- **Rescue Media Builder**
  RMBuilder.exe could crash if invalid/non-writable media was inserted when burning optical rescue media. This has been resolved.
- **Rescue Media Builder**
  The Windows volume manager could cause a delay when a partition was created on USB media causing the media creation to fail. This has been resolved.
- **Backup Start Dialog**
  The delay time selected when a schedule backup starts was not being honoured. This has been resolved.
- **Backup Failure Emails**
  When upgrading pre-7.2 backup definitions, the option to include/exclude 'Cancelled' backups from failure emails was not saved. This has been resolved.
- **Windows PE 5.0**
  Windows PE 5.0 rescue media would incorrectly show 'PE 4.0' in the application title bar. This has been resolved.
- **Windows XP System Tray Icon**
  When running scheduled backups on Windows XP the Reflect Monitor system tray icon could be hidden. This has been resolved.
- **MIG Notifications**
  Macrium Image Guardian could show an incorrect blocking notification for ReflectBin.exe. This has been resolved.
- **Server Plus SQL backups**
  Macrium Image Guardian could block Server Plus backups of SQL databases. This has been resolved.
- **ShadowProtect incompatibility with CBT**
  Some customers have reported a Windows BSOD if StorageCraft ShadowProtect was installed. This has been resolved.

Bug Fixes v7.2.3825 - 2nd November 2018

- **Extended Windows Shutdown Times**
  Some customers have experienced extended Windows shutdown times and have been unable to perform a safe Removal of USB storage devices when the Macrium Changed Block Tracker (CBT) driver is installed. This has been resolved.
  Note: This patch will require a reboot. The **initial reboot** will still be using the previous CBT driver, so may take an extended amount of time to shutdown. **The new CBT driver will be active after the initial reboot.**
- **Windows XP/Vista/7 Scheduled Tasks Exit Code**
  Scheduled backups on Windows XP/Vista/7 could complete with code 0xff. Tasks would complete successfully but error as the application was unloading. This has been resolved.

Initial Macrium Reflect v7.2 Public Release v7.2.3811 - 30th October 2018

- **Initial v7.2 Release**
  Please see this KB article for more information on what's included.

Bug Fixes v7.1.3317 - 4th July 2018

- **Unable to restore to an uninitialized disk**
  Restoring to an uninitialized disk could cause the target disk not to be found and the restore to fail. This has been resolved.
  If this issue affects you then please create fresh Windows PE rescue media after updating.

Bug Fixes v7.1.3307 - 2nd July 2018

- **SQL Backup failure if TLS 1.0 is disabled**
  SQL DB authentication would fail if TLS 1.0 was disabled and TLS 1.2 enabled. This has been resolved.
- **Clone and restore error message improvements**
  When a clone or restore failed the error messages could display incorrect or cryptic error text. Typically you

may have seen 'Access Denied' for a failure, however the true cause of the problem would likely have been different. The error text now displays the initial and correct reason for the failure.

- **Clone target disk could not be found**
  A clone could fail with an unidentified target disk. This has been resolved.
- **MIG installation**
  Macrium Image Guardian could turn off after a reboot if installed for a single user as opposed to the default 'All Users'. This has been resolved.

Bug Fixes v7.1.3196 - 3rd May 2018

- **Incremental & Differential Image Corruption**
  Incremental and Differential images created since 17th April using Macrium Reflect v7.1.3147, 3159 or 3169 could be corrupt if the Changed Block Tracker (CBT) driver was involved in the Image creation.
  This has been resolved.

  Important: Please see here for more information on this bug.

Bug Fixes v7.1.3169 - 24th April 2018

- **Macrium Image Guardian**
  On some computers, a situation could arise where Macrium Image Guardian would raise its protection level to the maximum, indiscriminately blocking all modifications to any image file. This has been resolved.

Bug Fixes v7.1.3159 - 18th April 2018

- **Macrium Image Guardian**
  Driver file 'mrigflt.sys' was incorrectly signed in the previous update. This has been resolved.

What's New v7.1.3147 - 17th April 2018

- **Macrium Image Guardian**
  The Macrium Image Guardian system components have been updated to provide enhanced performance and reliability.
- **Backup definition encryption state change mid backup set**
  Macrium Reflect will now start a new backup set if the encryption settings in a Backup Definition is changed.

Bug Fixes

- **Technicians Portable USB Add Drivers**
  The Add Drivers Wizard in the technicians portable USB stick could fail to detect the correct version of Windows PE when reporting supported devices. This has been resolved
- **File and Folder Restore toast notifications**
  When restoring File and Folder backups, incorrect toast notifications could be displayed. This has been resolved
- **SQL backup error if the Computer DNS name is greater than 15 characters**
  For SQL backup, if the default SQL instance name was used and the Computer DNS name didn't match the Computer NetBios name then the backup could fail. This has been resolved
- **ReflectMonitor**
  Pressing the 'Escape' key while viewing ReflectMonitor would cause termination of the ReflectMonitor session. This would cause a delay when restarting and possible loss of log data in the monitor Window. This has been resolved
- **Various**
  Various bug fixes and changes to improve Macrium Reflect.

Bug Fixes v7.1.2963 - 17th March 2018

- **Windows 7/10 32 Bit BSOD when booting**
  A Windows Update on the 13th March has caused some Windows 7 and 10 **32 bit** systems to fail to load Windows after updating. The error occurs when kernel mode driver 'pssnap.sys' loads at boot time. This update removes 'pssnap.sys' from boot time configuration. **Note: Simply deleting the file is insufficient to resolve the problem.**
  We recommend that 32 bit installations of Macrium Reflect on XP, Vista, Windows 7, and Windows 10 upgraded from Windows 7, 32 bit operating systems update to this release.
  If you have already updated Windows and experience this error then please see this KB article for a solution: https://knowledgebase.macrium.com/display/KNOW7/Windows+7+32+bit+BSOD+after+MS+Windows+Update
  If you have not yet updated Windows then please update to this version of Macrium Reflect to enable Windows to update without problems.

After updating, XP, Vista and Windows 7 32 bit systems, will no longer have 'pssnap.sys' available. If MS VSS shadow copies fail, then your backups will no-longer fall back to using 'pssnap'. Please ensure that any VSS errors are resolved to successfully complete your backups.

Bug Fixes v7.1.2917 - 27th February 2018

- **Rescue media crash at boot**
  The rescue media could fail to boot and cause a run time error. This has been resolved.
  We recommend creating fresh Windows PE rescue media after updating.

What's New v7.1.2899 - 21st February 2018

- **mrcbt.sys Update**
  The Macrium Changed Block Tracker driver mrcbt.sys has been updated to comply with the new kernel mode driver requirements for the Insider Preview and subsequent public release of Windows 10.
  This **resolves** the problem discussed here:
  https://knowledgebase.macrium.com/display/KNOW7/Windows+Insider+Preview+17063+BSOD
- **New command line parameter '-noconsole'**
  A new parameter is available in the command line, -noconsole, that enables redirection of stdout and stderr. Please see here for more information:
  https://knowledgebase.macrium.com/display/KNOW7/Sending+backup+log+output+to+a+text+file+in+PowerShell

Bug Fixes

- **File and Folder search date parameters**
  When searching for files in File and Folder backups, if the From and To dates were the same then this would result in no results found. This has been resolved.
- **Backup priority setting**
  A bug with the backup priority setting forced backups run with the lowest priority set to run at highest. This has been resolved.

What's New v7.1.2885 - 1st February 2018

- **Missing files reported when mounting backups**
  When mounting backup files, if required files are missing from the backup set then the original file names are now listed in the error message box.

Bug Fixes

- **Synthetic Full re-started backup sets**
  If all incremental images are deleted from a backup set with a synthetic full image, and the set is 're-started' by creating another Incremental then the error 'Invalid Parameter' would occur when mounting the Incremental image file. Additionally, a restore of this Incremental may result in the Full being restored. This has been resolved.
- **ReDeploy improvements for NVMe host controllers**
  When migrating a system to an NVMe booting device, ReDeploy required the user to specify vendor drivers for this hardware, even when the target OS has native support. This has been resolved.
  We recommend creating fresh Windows PE rescue media after updating.
- **Macrium viBoot**
  When running on systems configured in any language other than English, Macrium viBoot would sometimes fail to display information about virtual machines. This has been resolved.

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Bug Fixes v7.1.2833 - 14th January 2018:

- **MIG Service install problem**
  The Macrium Image Guardian Service could fail to start. This has been resolved.
- **EXT 4 File System image size**
  Linux EXT 4 file system images could be unnecessarily large. This has been resolved.
- **Free Edition prompt for Windows PE rebuild**
  The Free Edition of Macrium Reflect could prompt for a rebuild even if the rescue media was up to date. This has been resolved.

Bug Fixes v7.1.2817 - 8th January 2018:

- **No drive letters assigned for cloned/restored partitions**
  Cloning and restoring multiple consecutive partitions could result in volumes without drive letters assigned. This has been resolved.
- **Free edition installed on Windows XP**
  An installer error during the finalise phase could cause a Windows boot failure; resolvable by taking the "Last Known Good Configuration" option. This has been resolved.

Bug Fixes v7.1.2801 - 28th December 2017:

- **Symantec Encryption Desktop drives cloning and imaging**
  Cloning and imaging of locked drives encrypted with Symantec Encryption Desktop could fail. This has been resolved.

  Please note that we recommend using MS BitLocker encryption where possible. Other encryption products are not fully supported by Macrium Reflect.

- **RDC and RDR fall back to full copy**
  Rapid Delta Restore and Clone operations could unnecessarily fall back to performing a 'full copy'. This has been resolved.
  We recommend creating fresh Windows PE rescue media after updating to avoid this problem.
- **BitLocker Removal Restore outcome message**
  When editing a saved clone definition for a 'Live' BitLocker clone a BitLocker 'Removal' message box would incorrectly be shown. This has been resolved.

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Bug Fixes v7.1.2792 - 20th December 2017:

- **Windows 7 drive letter assignments for cloned/restored partitions**
  When cloning/restoring file systems in Windows 7, drive letter assignments may not honour the chosen options in the clone/restore wizard. This has been resolved.
- **Windows PE Fix Boot Problems**
  An issue was reported where Fix Boot Problems failed to resolve the target operating system. This has been resolved.
  We recommend creating fresh Windows PE rescue media after updating to avoid this problem.
- **Macrium CBT Tools**
  Macrium CBT Tools could sometimes fail to detect that the correct version of the mrcbt.sys driver was running and prompt the user to reboot unnecessarily. This has been resolved.

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What's New v7.1.2768 - 12th December 2017

- **Improved BitLocker restore processing**
  1. New warning message box displayed for images created with this release or later if the restore outcome results in a 'BitLocker removal' restore.
  2. The source BitLocker state is now included in Image file meta data. For images created with this release or later, this is now shown as an icon in the restore wizard source drive and restore tab.
  More information on BitLocker restore outcomes can be found https://knowledgebase.macrium.com/display/KNOW7/BitLocker+Restore+Outcomes
  If your system uses BitLocker encryption then we recommend creating fresh Windows PE rescue media after updating.

Bug Fixes

- **MIG and RoboCopy sync from a root folder**
  When using RoboCopy to synchronise or move backup files from a drive root folder the operation could be incorrectly blocked by MIG. This has been resolved.
- **Backup target share authentication**
  Authenticated network share backup targets could fail with 'Access Denied' if a user without write permissions has prior access. This has been resolved.
- **Restore problem to striped or mirrored Dynamic volumes**
  A restore or clone could corrupt the target dynamic disk configuration if the target volume was setup up as either 'striped' or 'mirrored'. This has been resolved.
  If this issue affects you then please create fresh Windows PE rescue media after updating.

- **Macrium viBoot**
  - viBoot could fail to boot encrypted images. This has been resolved.
  - viBoot could incorrectly detect MBR disks as GPT if the source disk has remnants of a GPT header leftover from a previous initialisation. This has been resolved.
  - viBoot would sometimes fail to start when launched from within Reflect. This has been resolved.
- **Exchange Databases On volume mount points**
  Exchange backup would not check the database path for volume mount points, resulting in backup failure, this has now been resolved.
- **Various**
  Various bug fixes and changes to improve Macrium Reflect.

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Bug Fixes v7.1.2722 - 21th November 2017:

- **MIG not disabled**
  For some customers, Macrium Image Guardian would still be active when disabled in the settings dialog. This has been resolved.

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Bug Fixes v7.1.2718 - 20th November 2017:

- **MIG not disabled when 'Restart service on reboot' selected**
  Macrium Image Guardian would still be active when 'Restart service on reboot' was selected in the settings dialog. This has been resolved.
- **Macrium viBoot incorrectly identifies some MBR disks as GPT**
  Macrium viBoot could incorrectly mount an MBR style disk, stored within an image file, as a GPT disk - if the disk had previously been initialized as a GPT disk. This has now been resolved.

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Bug Fixes v7.1.2697 - 10th November 2017:

- **Crash When accessing the MIG settings dialog**
  German language customers could experience a program crash when accessing the Macrium Image Guardian settings dialog. This has been resolved.

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Bug Fixes v7.1.2695 - 10th November 2017:

- **Security Update for Scheduled Tasks using Windows Task Scheduler 1.0**
  This updates includes changes for the Anniversary Update and later installs of Windows 10
  when **manually** scheduling backups using the Windows Task Scheduler 1.0 outside of Macrium Reflect.
  To overcome a process elevation bug in MS Windows Task Scheduler 1.0, scheduled tasks calling 'Reflect.exe' would automatically bypass UAC for all user groups. This could lead to a potential security threat allowing a Standard user to create and execute backups of sensitive data.
  This functionality is now disabled. Macrium Reflect v7 uses Windows Task Scheduler 2.0 so there is no action to take regarding this change for normal scheduling of tasks in Macrium Reflect.

- **Security Update for Pre and Post VSS backup scripts**

  This update includes changes to the pre and post VSS snapshot script functionality described in the KB article: [Stopping the SQL Server service automatically when backing up](#)

  This functionality is now **Off** by default and must be enabled by creating the following registry entry:

Key:	HKEY_LOCAL_MACHINE\SOFTWARE\Macrium\Reflect\settings
Name:	EnablePrePostScripts
Type:	DWORD 32 bit
Value:	Off = 0, On = 1
Default:	0

- **Please also see this KB article [Best Practises for saving Macrium Reflect backup definition files](#)**
- **Server Plus - Mailbox Restore**
  In rare cases, Mailbox Restore would be fail to restore email recipients if the recipient data contained flagged property values. This has been resolved.
- **Workstation Edition - Backup Events**
  The Workstation Edition of Macrium Reflect would fail to post backup completion events in the Windows Event log. This has been resolved.
- **[BitLocker Restore failed - Write failed - 13 - Permission denied](#)**
  When restoring a BitLocker unlocked partition, if the target partition had been shrunk since the image was created then Reflect would incorrectly preform a 'Live' BitLocker restore. This has been resolved.
  Please see [here for more information on BitLocker restore outcomes.](#)
- **Various**
  Various bug fixes and changes to improve Macrium Reflect.

Bug Fixes v7.1.2646 - 13th October 2017:

- **CBT causing a lock on removable drives**
  The CBT driver could cause a permanent lock on external drives preventing safe ejection. This has been resolved.
- **Image Guardian settings dialog hang**
  When clicking 'OK', without changing any MIG settings, a progress bar would be displayed and the dialog would not closed. This has been resolved.

What's New v7.1.2638 - 10th October 2017

- **New Macrium Image Guardian disable option**
  A new option 'Restart on reboot' has been added to the MIG settings dialog.
- **Simplify script defaults**
  VBScript and Powershell default options have now been merged into one group of options.

Bug Fixes

- **Backup in PE not always honouring Partition selections**
  When imaging in Windows PE, if partitions were de-selected in the backup wizard then the selections were not always honoured in the backup. This has been resolved.
- **GUID destination paths not validated correctly**
  When using a GUID volume path as a backup destination the path syntax was not validated correctly. This has been resolved.
- **CBT Blue Screen failure**
  In very rare situations, the Changed Block Tracker driver could cause a Windows BSOD if another process incorrectly attempts to write past the end of volume boundary. This has been resolved.
- **Various**
  Various bug fixes and changes to improve Macrium Reflect.

Bug Fixes v7.1.2619 - 2nd October 2017:

- **MIG RoboCopy rules**
  MIG could incorrectly disallow RoboCopy with /MIR /PURGE parameters correctly set. This has been resolved.

Bug Fixes v7.1.2614 - 29th September 2017:

- **Rescue Media run error**
  Windows PE rescue media could fail to load with a missing DLL message. This has been resolved.

Bug Fixes v7.1.2611 - 29th September 2017:

- **Windows XP VSS problem**
  Some systems running Windows XP could fail to read the VSS snapshot. This has been resolved.
- **User overridden file names not honoured**
  This has been resolved.

Bug Fixes v7.1.2607 - 29th September 2017:

- **MIG settings dialog resource issue**

Systems with non UK English Windows locale would incorrectly see the MIG dialog in German. This has been resolved.

What's New v7.1.2602 - 28th September 2017

- **See here for more information on this and additional features in 7.1**

Bug Fixes

- **DPI Scaling Issue In ReflectMonitor**
  Some aspects of the ReflectMonitor UI would not scale correctly. This has been resolved.
- **viBoot Install HyperV Check**
  Install of viBoot was not checking for presence of Microsoft HyperV. This has been resolved.
- **Image Restore Causing Unnecessary pre-boot chkdsk**
  On some motherboards, a pre-boot chkdsk of the EFI system partition could be triggered after a system restore. This has been resolved.
- **Slow Backup Definition view load**
  Backup definition load performance has been improved.
- **Server Plus - Exchange Backup**
  o The file entries in the cache of Exchange backups could be duplicated. This has been resolved.
  o Exchange backup was not correctly checking for circular logging. This has been resolved.
- **Server Plus - Mailbox Restore**
  o When exporting mailbox items, the Location dialog would occasionally be unable to select valid folders. This has been resolved.
  o In rare cases, Mailbox Restore on Exchange 2016 would fail to restore emails sent by no-longer-valid user accounts. This has been resolved.
- **Various**
  Various bug fixes and changes to improve Macrium Reflect.

Bug Fixes v7.0.2199 - 15th June 2017:

- **Empty folders missing from File and Folder incremental and Differential backups**
  When creating an Incremental or Differential File and Folder backup, folders without files were not being included in the backup. This has been resolved.
- **ReflectMonitor notification icon not created**
  The notification icon for running backups could fail to be created at logon. This has been resolved.
- **Various**
  Various bug fixes and changes to improve Macrium Reflect.

Bug Fixes v7.0.2187 - 28th May 2017:

- **Program crash when retention rules deletes several hundred split files**
  A program error could occur when several hundred split image files are deleted during retention rule deletion. This has been resolved.
- **Split file size**
  Split backup files could exceed the specified maximum size by a few bytes. This has been resolved.
- **Program crash during auto verification**
  Some customers with systems running Intel Xeon processors could experience a program crash during auto verification. This has been resolved.
- **Various**
  Various bug fixes and changes to improve Macrium Reflect.

Bug Fixes v7.0.2173 - 15th May 2017:

- **Pause when automatically verifying images**
  A 5 to 10 second pause could be experienced at the end of automatic image verification. This has been resolved.
- **Server Plus Exchange 2016**
  Mailbox Restore for Exchange 2016 was not following redirects when connecting to the Autodiscover service. This has been resolved.
- **Exchange mailbox restore from Incremental backup**
  On some Exchange systems the Incremental log files were not played into the database correctly leading to restore failure. This has been resolved
- **Error: "The system cannot find the file specified." when saving the index for split image files**
  Split images could fail if the image index and meta data exceeded the specified maximum file size when written to the final file split. This has been resolved.
- **Stale volume name meta data**

The volume name displayed in the Reflect restore and mount user interface would not reflect changes made after the Full image. Note: this did not affect the volume name of a restored or mounted file system. This has been resolved for newly created Incremental and Differential images.

- **Various**
  Various bug fixes and changes to improve Macrium Reflect.

Bug Fixes v7.0.2161 - 28th April 2017:

- **Program error when displaying BitLocker encrypted drives**
  An rare program exception could occur when displaying encrypted BitLockered drives. This has been resolved.
- **Various**
  Various bug fixes and changes to improve Macrium Reflect.

Bug Fixes v7.0.2158 - 25th April 2017:

- **Program exception during image verification**
  Some customers experienced a program error during image auto verification. This has been resolved.
- **Backup performance to local disks**
  When backing up to local disks the transfer rate could sometimes be erratic and slow down during the image process. This has been resolved.
- **Reflect Monitor icon visible when no backup was running**
  On some systems the tray notification icon could be unnecessarily visible when no backup was running. This has been resolved.
- **False backup running notifications at Windows logon**
  A backup start notification from a previous backup could incorrectly be shown at logon. This has been resolved.
- **Windows XP Scheduled backups**
  Scheduled backup could to fail to populate the 'Scheduled Backups' tab view on Windows XP. This has been resolved.
- **Various**
  Various bug fixes and changes to improve Macrium Reflect.

Bug Fixes v7.0.2134 - 12th April 2017:

- **Scheduled task hang**
  Scheduled tasks could hang if the target drive for the backup was unavailable. This has been resolved.
- **Very slow backups**
  Some customers have experienced reported transfer rates of low mb/s or kb/s during disk Image backups. This has been resolved.
- **ReflectMonitor Hot-Key**
  The keyboard letter used to launch ReflectMonitor would fail to change from the default 'M' when changed in the registry. This has been resolved.

What's New v7.0.2128 - 7th April 2017

- **Improved auto verification speed**
  Automatic verification speed has been improved for disk images. This reduces the time taken to automatically verify at the end of a backup.

Bug Fixes

- **Index verification error**
  When auto verifying split image incrementals with delta indexes the verification could fail with an Index Verification or Load errors. This has been resolved.
- **Various**
  Various bug fixes and changes to improve Macrium Reflect.

Bug Fixes v7.0.2124 - 5th April 2017:

- **Failure to start on Windows XP**
  Reflect would fail to start on Windows XP/Server 2003. This has been resolved.
- **Various**
  Various bug fixes and changes to improve Macrium Reflect.

What's New v7.0.2117 - 3rd April 2017

- **Automatic detection of disk write performance**
  When creating a disk image Macrium Reflect will now perform a simulation of the image writing process to determine the best method for the fastest image creation time.
- **Additional Scheduled task conditions**
  You can now select additional schedule conditions for each schedule.
- **Run scheduled tasks as any user in the Windows Administrators group**
  Scheduled tasks can now be set to run using any user in the Administrators group. Take 'Other Tasks' > 'Edit defaults' > 'Schedule' to set the account.

  Please see this KB article for more information on this release: http://knowledgebase.macrium.com/display/KNOW7/Macrium+Reflect+-+Update+3+April+2017

Bug Fixes

- **Changed Block Tracker driver update**
  An issue is resolved with Microsoft Volume Shadow copy Service (VSS) hanging. This was experienced by a few customers using previous versions of Macrium Reflect v7.
- **Various**
  Various bug fixes and changes to improve Macrium Reflect.

What's New v7.0.2089 - 21st March 2017

- **Server Plus SQL Server 2016**
  Server Plus now supports SQL Server 2016 instances.

Bug Fixes

- **Windows 7 - Reflect hang on startup**
  Some customers have experienced a hang when Reflect starts on Windows 7. This has been resolved.
- **Shut-down warning dialog not displayed**
  When scheduling backups with an automatic Windows shutdown at the end, the warning dialog wasn't being displayed. This has been resolved.
- **Network Error: Multiple connections**
  The error 'Multiple connections to a server or shared resource by the same user, using more than a user name, are not allowed' could be shown when scheduled backups write to a network share. This has been resolved.
- **Backup progress not displayed**
  General improvements and fixes to the ReflectMonitor utility to display the progress of scheduled backups.
- **HKLM Registry permissions issue**
  Some customers have had problems saving default settings. This release will correct registry permissions and allow application defaults and settings to persist.

  Note: If the 'Changed Block Tracker' icon in the disk view has been remaining grey on your system then this release should correct the problem after the next image is created.

Bug Fixes v7.0.2079 - 16th March 2017:

- **Performance issue when backing up to local drives**
  Changes have been made to improve backup performance in Reflect 7. Please see the linked release article below
- **Network share authentication issues**
  Network authentication has been improved to prevent scheduled tasks from failing due to inability to write to the backup target share.
- **Changed Block Tracker Windows event messages**
  Fixed case where CBT Event Viewer messages were not displayed correctly. Please note that the previous release did not fix this issue.

  For a detailed explanation of the changes in this release please see this KB article: http://knowledgebase.macrium.com/display/KNOW7/Macrum+Reflect+v7.0+Update+16th+Mar+2017

Bug Fixes v7.0.2055 - 10th March 2017:

- **Task bar icon hidden when running scheduled tasks**
  On some Windows systems, when running using the Windows 'built-in' Administrator account, the 'Reflect Monitor' icon in the notification area of the Windows task bar could be hidden during a scheduled task. This has been resolved

  Please note: You can also show the status of a running backup, and the last run backup in the current

Windows session, by pressing **'Ctrl'+'Alt'+'M'** at any time.

- **Network share authentication issues**
  Network share authentication has been made more robust by automatically checking for access using both 'user name' and 'server\user name'. In addition, multiple connections to the same share no-longer result in an 'ERROR_SESSION_CREDENTIAL_CONFLICT' caused by multiple simultaneous connections.
- **Changed Block Tracker Windows event messages**
  Fixed case where CBT Event Viewer messages were not displayed correctly..

  Please note: Changed Block Tracker will be enabled after installing this update. If you have manually disabled CBT then please disable again after updating.

- **viBoot driver signing**
  Fixed a driver signing issue that affected some users of viBoot on Windows 10.

Bug Fixes v7.0.2035 - 7th March 2017:

- **Hang when splitting backup files**
  An application hang could occur if the max file size is set in the backup definition or when backing up to a FAT32 destination. This has been resolved
- **Scheduled backups network authentication**
  Scheduled backups could fail to authenticate against password protected network shares. This has been resolved and network share connection attempts are now included in the backup log
- **Failure email not sent if the backup definition xml contained errors**
  If a backup definition reported 'XML Invalid' due to a disk ID mismatch then a failure email was not sent. This has been resolved

Bug Fixes v7.0.2023 - 3rd March 2017:

- **Scheduled Tasks Upgrading Error**
  This release includes a startup dialog to resolve scheduled backup problems associated with converting v6 to v7 and with task saving issues in earlier versions of v7.

For more information on this please
see **http://knowledgebase.macrium.com/display/KNOW7/Scheduled+Tasks+Upgrade+from+v6+to+v7**

Bug Fixes v7.0.2001 - 28th February 2017:

- **Scheduled Tasks Run Time Error**
  Some customers have experienced scheduled tasks saved with an incorrect run time after upgrading from v6 or creating/editing new tasks in v7. This releases resolves this problem.
- **Program hang at startup**
  After upgrading from v6 Reflect could at startup. This releases resolves this problem.
  After installing this update, please check your scheduled tasks and correct the run time if necessary.

For more information on these problems please
see **http://knowledgebase.macrium.com/display/KNOW7/Macrium+Reflect+v7.0.1994+Problems**

Macrium Reflect v7.0.1994 - 27th February 2017 - Initial Release

- **New backup engine**
  Improved incremental backup times using a new Kernel mode changed block tracker driver to track live file system changes.
- **Virtual Image Boot**
  Instant virtualization of Macrium Images using Hyper-V virtual machines and Macrium viBoot.
- **Windows Task Scheduler 2**
  Macrium Reflect now uses the Windows Task Scheduler v2 API to save scheduled tasks on Windows Vista and later operating systems.
- **More Information...**
  See here for more information on Macrium Reflect v7.