ABMR For Windows

Bare Machine Recovery for Dell EMC Avamar™

Product Release History

Version 9.4.1 released May 2022

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1   ABMR (Bare Machine Recovery for Dell EMC Avamar™) Readme

Welcome to the ABMR™ software. This file contains late breaking information. If it conflicts with any information in other printed documents supplied with the product, this should be deemed as more accurate.

It contains the following sections:

> What's new?
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What's new?

Select product version to see what's new:

Version	Release Date
9.4	31 May 2022
9.3.2	26 January 2022
9.3	31 August 2021
9.2	22 April 2021
9.1	21 December 2020
8.7	30 November 2019
8.6.2	28 June 2019
8.6	22 May 2019
8.5	8 April 2019
8.4	7 December 2018
8.3	31 October 2018
8.2.2	17 April 2018
8.1.2	17 October 2017
8.1	25 August 2017
7.3.1	15 June 2016
7.2.6	21 December 2015
7.2.4	26 October 2015
7.2.3	25 September 2015
7.2.2	12 June 2015
7.2.1	1 December 2014
7.1.2	4 June 2014
7.1	17 January 2014
6.5.2	26 July 2013
6.5	30 April 2013

Please note: Versions 7.2.5 and 8.2.1 were deliberately skipped. Version 8.3 was never

made GA. It was included with the Cristie VA version 2.5.1 only.

Overview

ABMR allows quick recovery of a machine running certain Microsoft Windows™ operating systems, in the unfortunate event of a system failure. **Note ABMR supports recovery from Dell EMC Avamar™ only.**

Current limitations

i) It is not possible to recover client systems tagged as 'retired' by the Avamar server.

ii) ABMR does not support Windows 'Core' systems.

Requirements

i) Please refer to this web page https://www.cristie.com/support/matrix/ to determine the latest OS and Dell EMC Avamar™ client/server support for ABMR Version 9.4.1. Only 64-bit versions are supported with this release. Note the OS must meet minimum Service Pack levels where applicable.

ii) Requires administrator privilege to install and run.

iii) A supported Dell EMC Avamar™ client must be installed prior to the installation of ABMR. This is mandatory.

iv) A minimum memory of 4 GB of RAM is required for booting the WinPE5 or WinPE10 recovery environments.

v) About 50 MB of free disk space is required to install. If installed, the CRISP package requires 15 MB plus a further 325 MB for each ABMR fileset (required to generate the WinPE5 or WinPE10 recovery environments).

Known Issues

i) After a recovery of a Windows Domain Controller it may BSOD on boot. If this occurs boot into Directory Services Restore Mode (DSRM). This can be manually fixed by booting into DSRM and using *Avamar Server Administrator* to restore Active Directory. The server will then boot normally into the OS.

1.1   9.4

New in 9.4

i) New ABMR WinPE5/WinPE10 9.4.1 DR ISO filesets available.

ii) The Automated DR Answer File Tool has been removed.

iii) Documentation updated for this release.

Bug Fixes

i) A Win2016 backup recovered to a vSphere target where the SCSI Controller has been set to VMWare Paravirtual fails to boot due to an 'INACCESIBLE_BOOT_DEVICE' error. This is now

fixed.

1.2 9.3.2

New in 9.3.2

i) Added support for Windows Server 2022.

ii) Added support for Windows Desktop 11.

iii)New ABMR WinPE5/WinPE10 9.3.2 DR ISO filesets available.

iv)Added VROC Raid drivers to the DR environment.

v)Updated installed ABMR executables Copyright information.

vi)Documentation updated for this release.

Bug Fixes

i) A large difference in disk space used on a C:\ drive between source and target machine in an ABMR DR test has been seen. This is now fixed.

ii) Restoring a registered source with no active protection job on the server throws you back to the ABMR DR settings page without explanation. This is now fixed.

1.3 9.3

New in 9.3

i) Now supports the recovery of Windows Storage Pools. Currently this is only supported with the WinPE5 DR environment.

ii) Updated CRISP to version 9.3.1. This requires the Microsoft WADK 10 April 2020 (2004) version and the new ABMR WinPE5/WinPE10 9.3 ISO filesets.

iii)Passwords (encrypted or otherwise) are no longer saved to the answer file as part of a restore. Also any passwords are removed from the answer file before copying the log files (in the case where the answer file comes from the VA).

iv)Point-in-Time recoveries are now displayed as restore points instead of a calendar view.

v)The 'Cristie Bmr Phone Home Service' has been renamed to 'Cristie VA Service'.

vi)Documentation updated for this release.

Bug Fixes

i) The ABMR CRISP fileset install dialogue installer showed spurious text. This is fixed.

1.4   9.2

New in 9.2

i) Now supports Dell EMC Avamar™ client/server version from 18.1.x to 19.4.100-116/19.4.0.116.

ii) Windows server 2008 R2 is no longer officially supported by Microsoft and therefore ABMR no longer supports this OS. Please use ABMR version 9.1 for legacy support.

iii)Updated CRISP to version 9.1.2. This requires the Microsoft WADK 10 April 2020 (2004) version and the new ABMR WinPE10 9.2 ISO filesets.

iv)The run times of the ABMRCfg configuration generator have been significantly improved.

v)Documentation updated for this release.

Bug Fixes

i) Estimated recovery duration shown during a DR sequence is incorrect if there is a timezone mismatch. This is now fixed.

i) A DR of a client based backup (i.e. a file system backup with no system state) was not detected. This is now fixed when later clients are used for the backup.

1.5   9.1

New in 9.1

i) Now supports Dell EMC Avamar™ client/server version up to 19.3.100-149/19.3.0.149 inclusive.

ii) Integrate the new "BMR Phone Home" executable with the installer. This service replaces the old CDS service which will be removed on upgrade to this version.

iii)Added PowerShell to the WinPE5 and WinPE10 recovery ISOs.

iv)Changed the WinPE5 and WinPE10 ISO boot screens to Legacy mode to show the boot details in text format.

v)Documentation updated for this release.

Bug Fixes

i) When recovering from Virtual to Physical, a reboot for dissimilar hardware prevented the post recovery IP settings to be applied on boot. This is now fixed.

1.6   8.7

New in 8.7

i) Now supports Dell EMC Avamar™ clients in the range version 7.2 to 19.1.1 inclusive.

ii) Installation of ABMR will be aborted if another Cristie product is already installed.

iii)Add new HP SmartArray P816i and 535FLR Ethernet drivers for WinPE10 use.

iv)Add new HP SmartArray B140i drivers for both WinPE5 or WinPE10 use.

v)Network sharing is now automatically enabled for recoveries made to Oracle Cloud platform (OCI).

vi)Documentation updated for this release.

Bug Fixes

i) Recovery fails with Windows 2012 containing a recovery partition resident on a GPT/ Dynamic disk. This is now fixed.

ii) The SystemState was not recovered correctly if it was split across more than one drive. This is now fixed.

iii)Recovery progress in the WinPE DR environment shows "server busy" even though the recovery had finished. This is now fixed.

iv)The Activity Report on an Avamar 19.1 Server contains an error created when recovering an ABMR 'config' relating to 'X:\Program Files\avs\var'. This is now fixed.

v)The DHW feature in the ABMR WinPE DR environments was not using a specified mapped path for driver search. This is now fixed.

vi)The Date and Time dialogue available in the ABMR WinPE 10 DR environment did not work. This is now fixed.

vii)In a multi-path restore, the duplicate disk detection algorithm was not functioning correctly. This is now fixed.

1.7   8.6.2

New in 8.6.2

i) The ABMR WinPE10 DR ISO is now built with and requires the May 2019 1903 version of the Microsoft WADK 10. The WADK 10 must be installed on a suitable host before using CRISP to build a WinPE10 ISO.

ii) Updated CRISP to version 8.7.1. This supports the new WADK 10 May 2019 1903 version above and the new ABMR WinPE10 ISO fileset.

iii)A new version of the Cristie Deployment Service (CDS) 4.8.3 is now provided for enhanced VA 2.7 or later feature support.

iv)Documentation updated for this release.

Bug Fixes

i) Copying SYSTEM files at the end of a recovery sequence was inconsistent between MBR and uEFI booted systems. This is now fixed.

1.8   8.6

New in 8.6

i) ABMR no longer supports Dell EMC Avamar™ clients/server versions earlier than 7.2.

ii) Clone settings step of the DR process now shows the MAC address of each network adapter.

iii)Before rebooting a recovered system a prompt is now shown to remind Users to remove the ABMR DR boot image if detected. This prevents the boot process booting back into the DR environment.

iv)Add a 'preserve original disk signature' option to DR Tools advanced options.

v)Add the ability to set "no default gateway" on the DR Clone Settings dialog. Set to 0.0.0.0.

vi)It is now possible to run an ABMR DR sequence from a full system backup. The separate System State recovery step is no longer required. This halves the recovery time. Note this does depend on the backup being complete - i.e. not having any excluded OS components.

vii)Added drivers for the HPE Ethernet 1Gb 4-port 331i network adapter to the WinPE10 DR environment.

viii)Documentation updated for this release.

Bug Fixes

i) If an Avamar backup is recovered with Avamar's own WinPE DR environment and the option 'Backup BMR log files' was enabled it was not then possible to use ABMR to recover the same backup. This is now fixed.

ii) During a DR sequence the clone settings dialogue was not retaining a new hostname when changing between multiple NICs. This is now fixed.

1.9   8.5

New in 8.5

i) Now supports Windows Server 2019. Note there is no official Server 2019 support from Dell EMC for Dell EMC Avamar™ backups at the time of release, but DR appears to work in our tests with version 18.2 client/server for systems with legacy BIOS only.

ii) Now supports Dell EMC Avamar™ client/server version up to 18.2.100-134/18.2.0.134 respectively

iii)WinPE10 DR environments now require the use of the Microsoft WADK 10 version 1809 (the so-called October 2018 update).

iv)ABMR suite installer now includes new CRISP version 8.4.1 with updated documentation.

v)Dissimilar Hardware (DHW) errors are now reported by the Cristie VA during Simulations or Recoveries.

vi)Documentation updated for this release.

Bug Fixes

i) Driver Validation Tool WinPE5 driver database incorrectly contained WinPE10 native drivers instead of the correct WinPE5 versions. This is now fixed.

1.10 8.4

New in 8.4

Includes all the features in the non-GA 8.3 release plus:

i) Add the following WinPE5 or WinPE10 drivers for HP Smart Array P220i for HP BL460c Gen8 systems, HPE Smart Array P408i-a SR Gen10 for HP DL380 Gen10 systems and Emulex LPe1205-HP and Emulex LPe 16002B-M6 PCIe 2-port 16GB for HP DL380 Gen10 and HP BL460c Gen7 mezzanine extension cards.

ii) Requires the use of 'legacy' and 'non-legacy' DR environments. Please refer to the User Guide for more information.

iii)Documentation updated for this release.

Bug Fixes

i) Recovery failure (SystemState) when recovering multiple volumes with drive letter(s) other than C: or D:. This is now fixed.

ii) Recovery of Windows 2008R2 installed on a non-C: driver (e.g. T:) hangs during the configuration retrieval step. This is now fixed.

1.11 8.3

New in 8.3

i) Now supports Dell EMC Avamar™ client/server version up to 18.1.100-33/18.1.0-33 respectively.

ii) Added support for the Windows partition type "EFI Cluster Metadata Partition".

iii) New version of CRISP 8.3 added to suite installer.

iv) Suite installer now allows WinPE5 or WinPE10 fileset installation to proceed regardless of installed WADK version. CRISP errors if an incompatible WADK version is detected at DR creation time.

v) Documentation updated for this release.

Bug Fixes

i) Fixed an issue with SystemState restore when split over multiple drives.

ii) The HW wizard crashed in the WinPE10 DR environment if "Manually Install Drivers" -> "Browse" options was selected. This is now fixed.

iii)The HW wizard in the WinPE5 or WinPE10 DR environments now supports Microsoft VMBUS devices for recoveries to Hyper-V.

1.12 8.2.2

New in 8.2.2

i) In the DR restore wizard the Volume and File system layout screens now use larger icons. These are designed to be more distinct to those with poor vision or colour-blindness.

ii) There is a new option in the DR target disk layout screen called "Disk Information". This gives more detail regarding the detected disks.

iii) The suite installer now includes the WinPE10 based CRISP fileset for creating Recovery Environments specifically for Windows 10 and 2016. Note the fileset will only be installed if the correct version of the Microsoft WADK 10 version 1703 'Creator's Update' is installed on the host.

iv) Improved the robustness of the product upgrade process from earlier versions.

v) The ability to create a WinPE2 32-bit based DR environment is no longer available. Please use either WinPE5 or WinPE10 based DR environment for recoveries.

vi) 32-bit versions of Windows OS's are no longer supported by ABMR.

vii) Now supports the Cristie Virtual Appliance (VA) version 2.2 or later.

viii) Documentation updated for this release.

Bug Fixes

None.

1.13 8.1.2

New in 8.1.2

i) Added support for Avamar 7.5 clients and servers.

ii) Added dissimilar hardware support for Windows 2016 server recoveries in conjunction with a new WinPE10 based DR environment. Note you will need to download this CRISP fileset separately to build the ISO/USB flash drive.

iii) Product upgrades are now summarised in the suite installer prior to the start of the component installation. The upgrade warning prompt is no longer displayed and upgrades now proceed uninterrupted (unless errors are detected).

iv) Added new **Network Route Configurator** tool to the DR recovery environment. Note: changes apply to the booted WinPE5 or WinPE10 based DR session only and are not persistent.

v) The product is supplied with new versions of CRISP 8.2.2 and CDS 4.7.5.

vi) Documentation updated for this release.

Bug Fixes

None.

1.14   8.1

New in 8.1

i) Added support for Avamar 7.3 and 7.4 clients and servers.

ii) Added support for Windows 2016 server in conjunction with a new WinPE10 based DR environment. Note you will need to download this CRISP fileset separately.

iii) A significant improvement has been made to the performance of retrieving the configuration from the backup during DR. This improvement is particularly noticeable during point-in-time recoveries..

iv) The suite installer now ensures no other conflicting Cristie BMR products are installed. If any are found the installer aborts the installation process.

v) The Microsoft VC++ 2015 redistributable has been changed to the update 3 version.

vi) The Microsoft Universal C Run Time (UCRT) KB2999226 update has now been removed. It is no longer required.

vii) Updated the Intel Pro range of NIC drivers in the WinPE5 DR environment.

viii) Added the Cisco UCS VIC NIC driver as used in the Cisco B200-M4 blade.

ix) The product is supplied with new versions of CRISP 8.2.1 and CDS 4.7.4.

x) Documentation updated for this release.

1.15   7.2.6

New in 7.2.6

i) For the 7.2.6 suite release the Windows Agent remains at version 7.2.2.

ii) CDS updated to version for 4.5.4 for compatibility with RS 4.2.1.

iii) WinPE5 or WinPE10 filesets updated (used for creating the DR ISOs) for compatibility with RS 4.2.1.

iv) Documentation updated for this release.

Bug Fixes

None.

1.16   7.2.4

New in 7.2.4

i) For the 7.2.4 suite release the Windows Agent remains at version 7.2.2.

ii)CDS updated to version for 4.5.3 for compatibility with RS 4.1.2.

iii) WinPE5 or WinPE10 filesets updated (used for creating the DR ISOs) for compatibility with RS 4.1.2.

iv) Added pending reboot detection to the suite installer. If a pending reboot is detected (because of recent system updates for example) a warning dialogue is displayed offering the user the opportunity to abort the install or continue.

v) The Microsoft C++ 2008 SP1 pre-requisites are now installed by the suite installer instead of the stand-alone ABMR installer. This allows the pre-requisite to prompt the user for a reboot if required. In earlier versions the pre-requisite was installed silently sometimes causing a reboot without prompting the user first.

vi) Documentation updated for this release.

Bug Fixes

None.

1.17   7.2.3

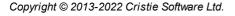This version was a fileset (i.e. DR ISO) only release only for compatibility with RS 4.1.1.

1.18   7.2.2

New in 7.2.2

i) Microsoft Security Update KB2918614 (issued August 2014) no longer prevents ABMR and CDS upgrading (observed mostly on Windows 2003).

ii) Enhanced the installer to show a meaningful warning message during installation on a system that already contains an expired trial license. As a result the initial run of ABMRCfg fails. It showed an error number only before.

iii) If no Avamar client at all is installed on the host system, the setup program will disable the ABMR agent install. A warning is no longer displayed if unrecognised client versions are detected.

iv) Enhanced the Crisp command line program to be able to add an answerfile directly into the DR ISO.

v) Documentation updated for this release.

Bug Fixes

i) A recovery of a mounted folder in Windows caused an application crash. This is now fixed.

ii) When you set a network to use DHCP inside a DR Answer file and then run the recovery, it was ignored and the original static IP was used on the original machine instead. This is now fixed and DHCP will be used correctly.

iii) An extended disk partition marked as "OEM" caused the disk partitioning phase to fail during DR. This occurred when disk scaling was required. This is now fixed.

iv) Scaling disks before allowing a user to select whether to partition a disk was causing an issue. This is now fixed.

v) The error "CNM::IsDhcpEnabled (IPv6) failed" was sometimes reported when configuring an IPv6 network in the DR environment. This is now fixed.

vi) During an upgrade from earlier versions the Licensing Help eBook was not updated. This is

now fixed.

vii) A Windows Core system was not indicated correctly in the DR configuration. This is now fixed.

1.19 7.2.1

New in 7.2.1

i) Now supports Windows 2012 R2 with using WinPE5 based DR.

ii) Now supports Dell EMC Avamar™ clients and servers version 7.1.x.x.

iii) Now supports Windows 2012R2 natively using the new WinPE 5 based DR environment.

iv) The result of the ABMRCfg configuration creation (success or failure) is now recorded in the Windows Application Event Log.

v) Now supports the Cristie License Activation Manager 1.1.

vi) Added support for Cristie Recovery Console 3.2.

vii) Added the ability to run post recovery scripts (for Cristie Recovery Console support).

viii) Added a feature to disable the automatic dissimilar hardware step during an unattended DR sequence.

ix) Documentation updated for this release.

Bug Fixes

No bugs fixed in this release.

1.20 7.1.2

New in 7.1.2

i) Add compatibility with Cristie Recovery Simulator (RS) version 2.2.

ii) Added support for Dell EMC Avamar™ client 7.0.100-427.

iii) Documentation updated for this release.

Bug Fixes

No bugs fixed in this release.

1.21 7.1

New in 7.1

i) Now supports Dell EMC Avamar™ version 7.0 clients and servers.

ii) The disaster recovery (DR) environment is now available in both WinPE2 (32-bit) and WinPE4 (64-bit) versions.

iii) CRISP is now available in both 32-bit and 64-bit versions. These are used to create the

WinPE2 and WinPE4 DR environments respectively.

iv) The product licensing method has changed in this release. Rather than use a license file as in version 6.x.x and earlier new contract and activation codes are used instead. A new License Manager tool is now provided to enable the new codes to be entered, viewed and activated. Upgrades from existing installations of ABMR 6.x.x or earlier will also need to be re-licensed.

v) The Driver Validation tool now checks hardware compatibility for both WinPE2 and WinPE4 versions.

vi) During the dissimilar hardware phase of the recovery sequence any missing mass storage or network drivers for the new hardware are first looked for in the recovered system driver-set and loaded from there if matching drivers are found.

vii) The WinPE2 and WinPE4 DR environments now boot up into the locale that the ISO's were created in with CRISP. For example if CRISP was installed on a host system set to English UK locale then the generated ISOs will boot with English UK keyboard and time display format.

viii) Documentation updated for this release.

Bug Fixes

i) None.

1.22   6.5.2

New in 6.5.2

i) None.

Bug Fixes

i) A mix of full and partial backups recovered during a Point-in-Time (PIT) disaster recovery (DR) sequence was not giving expected results. This is now fixed.

ii) The general support of partial file backups recovered in the context of DR has been improved.

iii) It was not possible to recover a system defined in the Dell EMC Avamar™ server with a fully qualified domain name. This is now fixed.

iv) Now supports fully qualified domain names of up to 256 chars in length.

v) It was not possible to recover a server backed up to an Dell EMC Avamar™ server *Group*. This is now fixed.

vi) Fixed a minor issue when selecting PIT recovery where no data existed showed no volume data retrieved. This is now reported as "'No backups were found for the specified EMC Avamar credentials and Point-in-time".

1.23   6.5

New in 6.5

i) First release.

<u>Bug Fixes</u>

i) First release.