Macrium viBoot

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Macrium viBoot enables you, to instantly create, start and manage Microsoft Hyper-V virtual machines using one or more Macrium Reflect image files as the basis of the virtual machine storage sub-system.

At a minimum, viBoot enables you to boot into the images you have made using Macrium Reflect, for validation purposes, or to retrieve data from old applications stored on a bootable image. At an enterprise level, you could recover an entire network environment in minutes.

Macrium viBoot is now built upon new technology that allows it to instantly present a Macrium Reflect image file as a Microsoft Virtual Disk (.VHDX) file.

When creating a new virtual machine Macrium viBoot will create two Microsoft Virtual Hard Disk (.VHDX) files for each of the disks described within the selected Macrium Image file. The first VHDX file is incomplete and only contains enough information to describe the disk layout and a signature to mark it as a Macrium viBoot VHDX. The data for the disk is retrieved from the Macrium Image File by the Macrium Virtual Disk Provider filter driver as required. Because the data is not stored with the VHDX, it size will never exceed a few megabytes. The second VHDX file is a standard differencing disk that will receive any modifications made to during the lifetime of the virtual machine.

As with any differencing VHDX, this file can grow dramatically in size, depending on the usage of the virtual machine.

These VHDX files are stored in the designated Macrium viBoot repository and remain open until the Macrium viBoot virtual machine is deleted from within viBoot.

Note: The default location for the viBoot VHDX files is C:\ProgramData\Macrium\viBoot. This is configurable from within the Macrium viBoot UI.

Note: viBoot only supports Microsoft's Hyper-V running on a minimum of Windows 8.0 or Windows Server 2012.

Booting an image directly from Macrium Reflect

An image that contains the Windows System and Boot partition(s) can be directly booted from the 'Restore' view in Macrium Reflect.

Boot architecture	Partitions
MBR - Master Boot Record	Boot partition: This may be the same partition as drive 'C:' but is likely to be a separate small (100 to 300 MB) partition named the Microsoft System Reserved partition or MSR.
	Windows partition: This is the partition that contains the Windows OS and will be drive C:
UEFI - Unified Extensible	UEFI System Partition: A small FAT32 formatted partition that doesn;'t have a drive letter.
rimware mienace	Windows partition: This is the partition that contains the Windows OS and will be drive C:

If an image contains the partitions required for booting then the image will show an active 'Boot Image' Link:



To boot an image directly with viBoot.

- 1. Click the 'Restore tab.
- 2. Select the bootable image.

3. Click the 'Boot Image' link.



4. If viBoot can launch, the viBoot Hyper-V settings dialog will start.

Welcome	Specifiy the name of the new virtual machine
Select Image Files	Name: Win XP
Hyper-V VM Settings	Specify the amount of memory that this virtual machine will be started with Startup RAM: 2,048 MB
	Specify the number of virtual processors based on the processors on the host computer Processors: Automatic
	Specify the configuration of the network adapter or remove the network adapter
	Virtual Switch: <none></none>

The VM will now start and boot directly into Windows.

Starting the viBoot create Virtual Machine Wizard from Macrium Reflect.

Take the 'Restore' > 'Launch Macrium viBoot' menu option



Or, click the 'Launch Macrium viBoot' task link on the Restore tab.



This will start the the viBoot Virtual Machine User Interface.

Launching viBoot as a standalone application

viBoot is installed by default during the standard Macrium Reflect installation and can be started using the installed shortcut:

	Best match	
	Macrium viBoot Desktop app	
3	Documents	>
,	₽ viBoot	

Main Window

The Macrium viBoot main window allows you to see at a glance, which Macrium Reflect image files you have mounted (2), and which virtual machines are connected to those drives (1).

🔜 Macrium viBoo	ot							:
Virtual Machine	<u>T</u> ools <u>H</u> elp							
New	Backup 📮 Delete 🕻	Refresh	Options 🕜 He	lp				
Virtual Machines	5							
Name		State	CPU Usage	Assigned Memory	Uptime	Status		
New Virtual M	achine	Off	0%	2048 MB		ок		
-								
	1							
	<u> </u>							
Mounted Image	5							
Image Path			Drive No	Type	Capacity			
				.,,,,,,				
	2							
Log								
Type	Date and Time	Description						
() Jufarmation	05/07/2016 14:12:59:0267	Charling device UK	A AN SYSTEMA Course	nt Control Cat\ Convious	M-Seei) Mexanti E000	C620 C661 4060 0	0010345661353100	
Conformation	05/07/2010 14:15:36:050/	Checking device H		ntControlSet\SerVices	MrScsi\Mount\E000		0002670700 (200	
() Information	05/07/2010 14:15:36:0506	Checking device Hi		ntControiset/services	MrSesi\Meunt\E27	0502-C905-44AU-P	1D96DACA2C67D2	
Information	05/07/2010 14:15 3:0309	Checking device Hi		ntControiset\services	Macaril Mayarth COD	0ED6-A/92-404F-9	A CONDACAZOU/B3	
Information	05/07/2010 14 3 8/0	Checking device H		ntControiSet/Services	Macaril Maximit E98:	DUDUE-F3UA-409/-/		
Information	05/07/2010 14:1 3:50:0371	Checking device H		ntControiSet\Services	IVITSCSI\IVIOUNT\EAU	5139F-2322-4EUF-8/	D4007010610450C	
Information	05/07/2010 14:13:58:0372	Checking device H		ntControiSet/Services	Macaril Maximit (EBS)	0200-79F8-42CE-8	04227212013438C	
Information	05/07/2010 14:13:58:0373	Checking device H	LIVI\SYSTEM\Curre	ntControiSet\Services	IVITSCSI\IVIOUNT\ED0	2A901-A4C5-4519-9	A2201A3234/8E524	
				Curre	nt Version 6.1.1300	No up	dates.	Last check 05/07/2016 15:13

The "Virtual Machines" view (1), displays the name of the viBoot created virtual machine, the current state of the virtual machine (Off, Running, etc) and the current CPU usage of the virtual machine. Selecting a Hyper-V virtual machine in the "Virtual Machines" view (1) will update the "Mounted Images" view (2) to list the Macrium Reflect images that are being referenced by the virtual machine.

The "Mounted Images" view (2), displays the path of the image file(s) used to create the virtual drive(s), the physical drive number assigned to the drive by Windows, the partition type of the drive (MBR or GPT) and the drive capacity.

The "Log" view (3), shows a record of the actions taken by viBoot.

Macrium viBoot can only monitor the state of virtual machines and drives while it is running. Clicking the Windows close button will minimize viBoot.

Main Window Commands

Macrium viBoot menu:

Menu Item	Sub Menu Item	Description
<u>∨</u> irtual Machine	<u>C</u> onnect	Connect to a virtual machine.
	<u>N</u> ew	Displays the viBoot Wizard which allows you to create a new virtual machine.
	<u>B</u> ackup	Backup a powered off virtual machine.
	<u>D</u> elete	Deletes the currently selected virtual machine and allows you to backup any changes to the data that have been made.
	<u>S</u> tart	Starts the currently selected virtual machine.
	Sh <u>u</u> t down	Shuts down the currently selected virtual machine.
	<u>T</u> urn off	Turns off the currently selected virtual machine.
	Paus <u>e</u>	Pauses the currently selected virtual machine.
	<u>R</u> eset	Resets the currently selected virtual machine.
	E <u>x</u> it	Exit the Macrium viBoot application.
Tools	<u>L</u> og	Toggles the display of the Log window.
	Options	Configure the virtual machine repository folder, and logging options.
	<u>R</u> efresh	Instructs viBoot to refresh it's view of the virtual machines and mounted images.
Help	Contents	Displays this help content.
	<u>A</u> bout Macrium viBoot	Displays the viBoot version and copyright notice.

Тір

You can right-click on the virtual machine pane to display the "Virtual Machine" menu as a context menu.

Macrium viBoot toolbar:

	New - Displays the viBoot Wizard which allows you to create a new virtual machine.
	Backup a powered off virtual machine.
	Deletes the currently selected virtual machine and allows you to backup any changes to the data that have been made.
U	Refresh the list virtual machines and states.



Options - Configure the virtual machine repository folder, and logging options.

Help - Displays this help content.

Macrium viBoot Wizard

The Macrium viBoot Wizard will configure and start a Microsoft Hyper-V virtual machine from one or more Macrium Reflect image files.

The "Welcome" page provides a brief introduction and explains some of the limitations of virtualization.

Welcome	Welcome to the Macrium viBoot Wizard
Select Image Files	This wizard will guide you through the process of creating, configuring and starting a Microsoft Hyper-V Virtual Mac from one or more Macrium Reflect image files.
Hyper-V VM Settings	 What is Macrium viBoot? Macrium viBoot is a technology that provides a mechanism to use Macrium Reflect Image files to very quickly test yet backups or to perform a temporary virtualisation of a failed server as part of a Business Continuity Plan (BCP). Operational Considerations Before proceeding you should note the following operational considerations. There are some servers that you will n able to virtualise. These include Microsoft Hyper-V Server, Citrix Xen Server etc. These servers must be physical. System Configuration Macrium viBoot will modify the virtual environment to include device drivers for the virtual machine disk sub-system, however; upon starting, Windows will automatically assign drive letters and these may or may not correspond to the letters assigned at the time of backup.

Select Image Files allows you to add one or more Macrium Reflect image files to be used for the virtual machine.

🔜 Macrium viBoot Wizard					— [) ×
Select Image Files						5
Welcome Select Image Files	The virtual machine will be configured to boot from a "D:\TestBackups\8disks_1ide_7scsi-00-00.mrimg"	lrive "Msft Virtual Dis	k 1.0" in	image file		
Hyper-V VM Settings	Name	Туре	Size	File System	Bootable	
	Msft Virtual Disk 1.0 Msft Virtual Disk (None) Construction of the served (None) Msft Virtual Disk (None) Msft Virtual Disk 1.0 Msft Virtual Disk 1.0	MBR Active Primary MBR Primary MBR Primary MBR Primary MBR Primary MBR MBR MBR MBR	39.8 GB 0.99 GB 0.99 GB 0.99 GB 0.99 GB 0.99 GB 0.99 GB 0.99 GB	NTFS NTFS NTFS NTFS NTFS	Yes (Active)	
				<u>A</u> dd <u>R</u>	emove <u>S</u> et a	as Boot
		< <u>P</u> revious <u>N</u> ext	>	<u>F</u> inish	Cancel	<u>H</u> elp

The first boot-able disk will be marked as the boot disk. If there are multiple disks that are boot-able, these can be set to be the boot disk by selecting the disk and clicking the "Set as Boot" button.

Hyper-V VM Settings allows you to configure the virtual machine. The RAM and CPU are limited to match the host computer. If the number of processors is set to "Automatic", viBoot will interrogate the Windows settings from the image files to set the correct number of processors. A Virtual Switch of "<None>" ensures that the new virtual machine is not connected to the network.

🔜 Macrium viBoot Wizard			×
Hyper-V VM Setti	ngs	_	2
Welcome Select Image Files Hyper-V VM Settings	Specify the name of the new virtual machine Name: Win XP Specify the amount of memory that this virtual machine will be started with Startup RAM: 2,048 Specify the number of virtual processors based on the processors on the host computer Processors: Automatic Virtual Switch:		
	< <u>P</u> revious <u>N</u> ext > <u>Finish</u> Car	icel <u>H</u> elp	

Please note that no changes whatsoever, are made to the original image files.

Delete Virtual Machine

Virtual machines can be deleted from viBoot when the virtual machine is turned off. When the virtual machine is deleted from viBoot the virtual drives will be dismounted and the virtual machine removed from Hyper-V. Prior to deletion viBoot allows the virtual machine to be backed up.

If a viBoot virtual machine is deleted from Hyper-V, the virtual drives will still be mounted. viBoot will list a virtual machine called "Deleted VM" that can be deleted/backed up, to dismount the virtual drives.

Note: When you delete a virtual machine the Macrium Reflect images used to create the virtual machine are not deleted.



Options

The "Options" button on the Macrium viBoot main toolbar, will display the "Options" dialog box. From here you can modify some of the behavior of Macrium viBoot.

The "Virtual Machine Repository" specifies the folder that Macrium viBoot will use to store Virtual Machine configurations and the virtual machine drive cache.

Options ×
Virtual Machine Repository
Defines the base folder that Macrium viBoot will use to store Virtual Machine configurations and the virtual drive cache. The performance of the drive(s) where this folder resides, will directly affect the performance of the Virtual Machines.
C:\ProgramData\Macrium\viBoot
NOTE: Some Virtual Machines may require large amounts of storage. It is recommended that you have enough free space to accomodate the total capacity of the drives you intend to mount.
The log file is written to "C:\Users\mappleby\AppData\Local\Temp\Macrium\".
Log level: Critical V Days to keep: 16
Maximum number of files: 100 🔺 Maximum log file size (MB): 100 👻
OK Cancel <u>H</u> elp

Macrium viBoot writes a log of actions taken by the application. This file is saved to "%LOCALAPPDATA%\Temp\Macrium". The log file is configured by the following options:

Log level - Controls type of information written to the log file:

- Critical
- Error
- Warning
- Information
- Debug

Maximum number of files - Number of log files to keep before purging. A value of zero will disable this check.

Days to keep - Log files older than the specified number will be purged. A value of zero will disable this check.

Maximum log file size(MB) - Maximum file size for the log file, before a new log file is created. A value of zero will disable this check.

Macrium viBoot demonstration video