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.

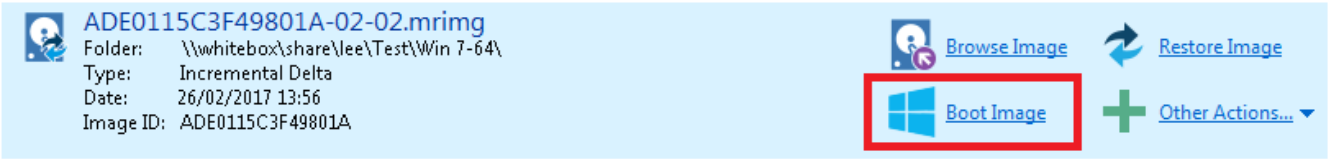
Note: viBoot only supports **Microsoft's Hyper-V** running on a **minimum** of **Windows 8.0 or Windows Server 2012.**

Booting an image directly from Macrium Reflect

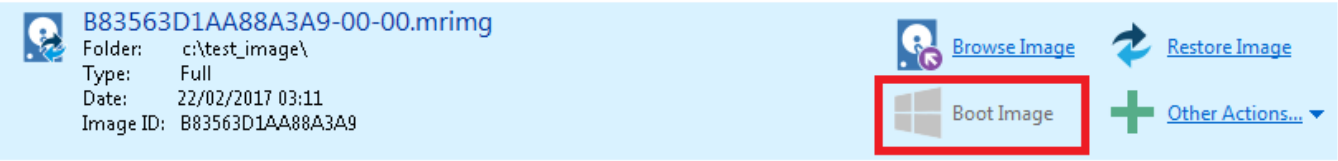
An image that contains the Windows System and Boot partition(s) can be directly booted from the 'Restore' view in Macrium Reflect.

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 Firmware Interface	UEFI System Partition: A small FAT32 formatted partition that doesn;'t have a drive letter. 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:



Otherwise the link will be disabled:

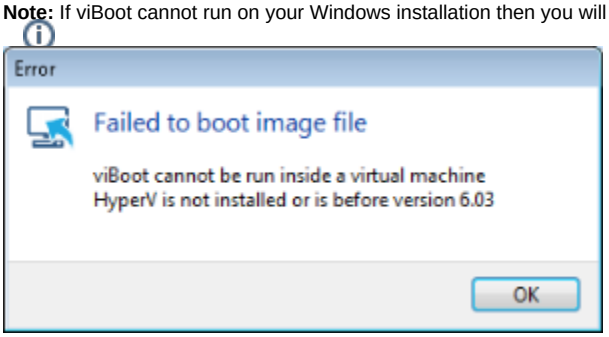


To boot an image directly with viBoot.

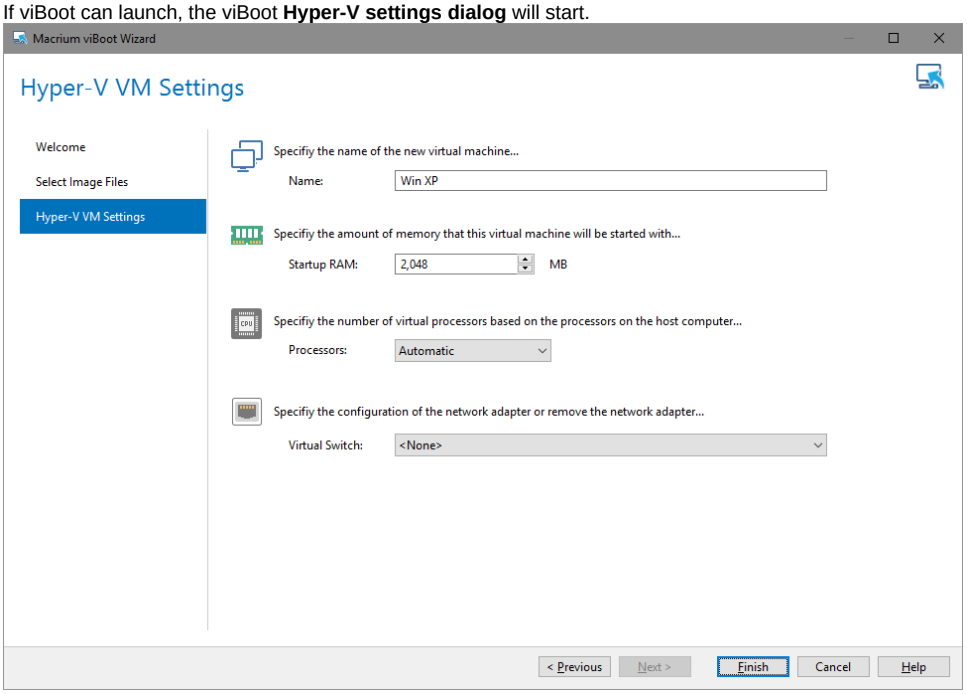
1. **Click the 'Restore tab.**
2. **Select** the bootable image.

3. **Click the 'Boot Image'** link.

Note: If viBoot cannot run on your Windows installation then you will receive an error message indicating the reason(s):



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

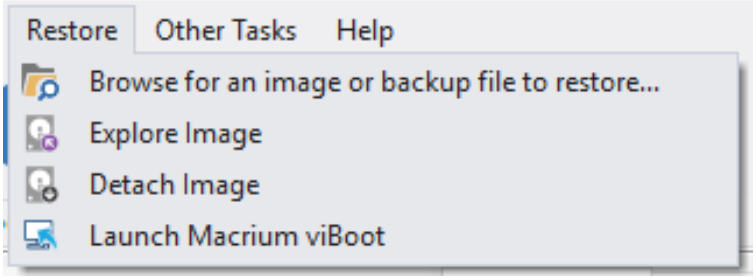


5. Make any changes to the VM properties and **click 'Finish'**

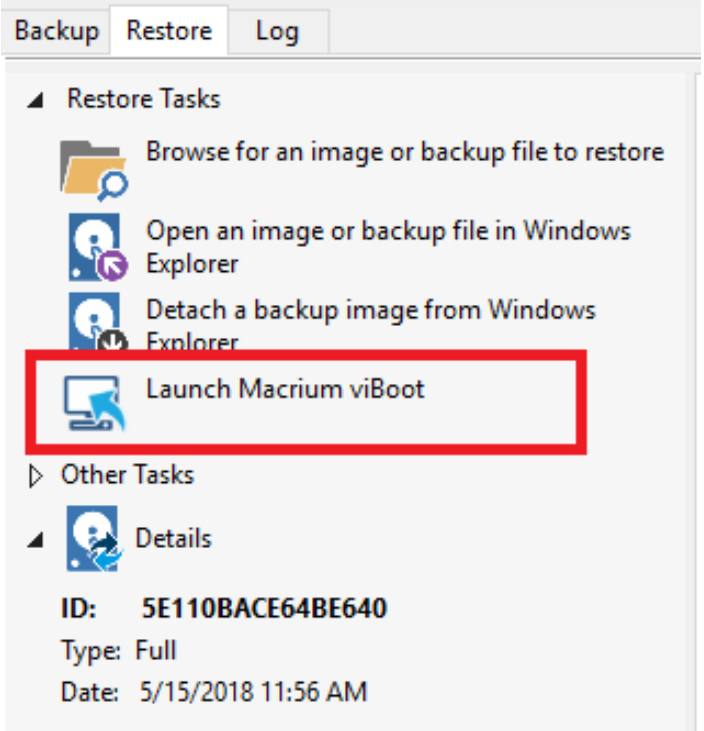
The VM will now start and boot directly into Windows.

Starting the viBoot create Virtual Machine Wizard from Macrium Reflect.

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



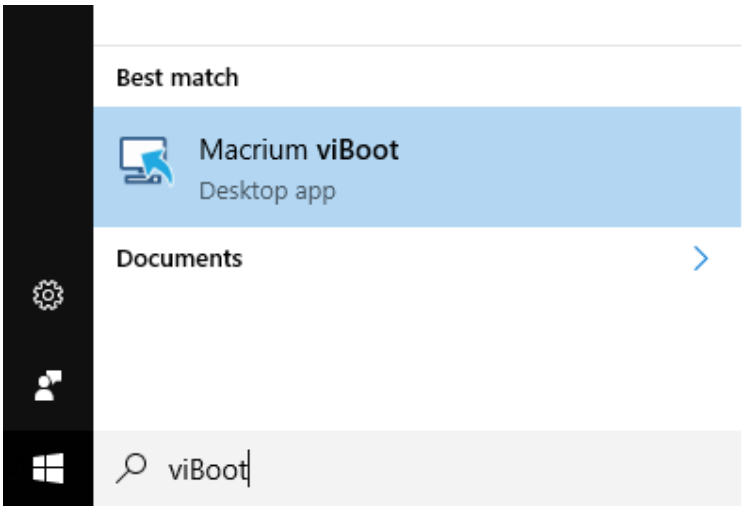
Or, click the **'Launch Macrium viBoot'** task link on the Restore tab.



This will start the the viBoot Virtual Machine User Interface.

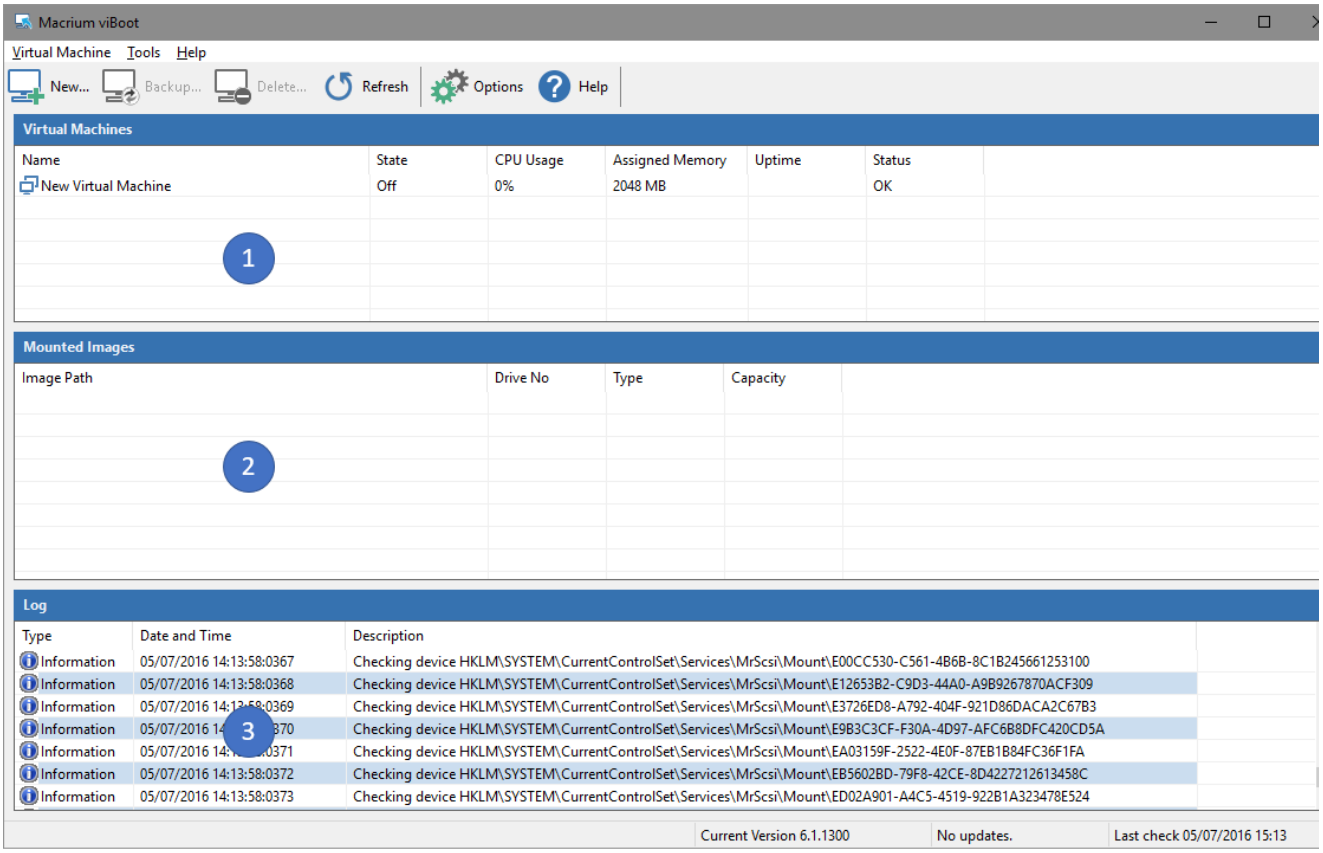
Launching viBoot as a standalone application

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



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).



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
Virtual Machine	Connect	Connect to a virtual machine.
	New...	Displays the viBoot Wizard which allows you to create a new virtual machine.
	Backup...	Backup a powered off virtual machine.
	Delete...	Deletes the currently selected virtual machine and allows you to backup any changes to the data that have been made.
	Start	Starts the currently selected virtual machine.
	Shut down	Shuts down the currently selected virtual machine.
	Turn off	Turns off the currently selected virtual machine.
	Pause	Pauses the currently selected virtual machine.
	Reset	Resets the currently selected virtual machine.
	Exit	Exit the Macrium viBoot application.
Tools	Log	Toggles the display of the Log window.
	Options...	Configure the virtual machine repository folder, and logging options.
	Refresh	Instructs viBoot to refresh it's view of the virtual machines and mounted images.
Help	Contents...	Displays this help content.
	About Macrium viBoot...	Displays the viBoot version and copyright notice.

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

Macrium viBoot toolbar:

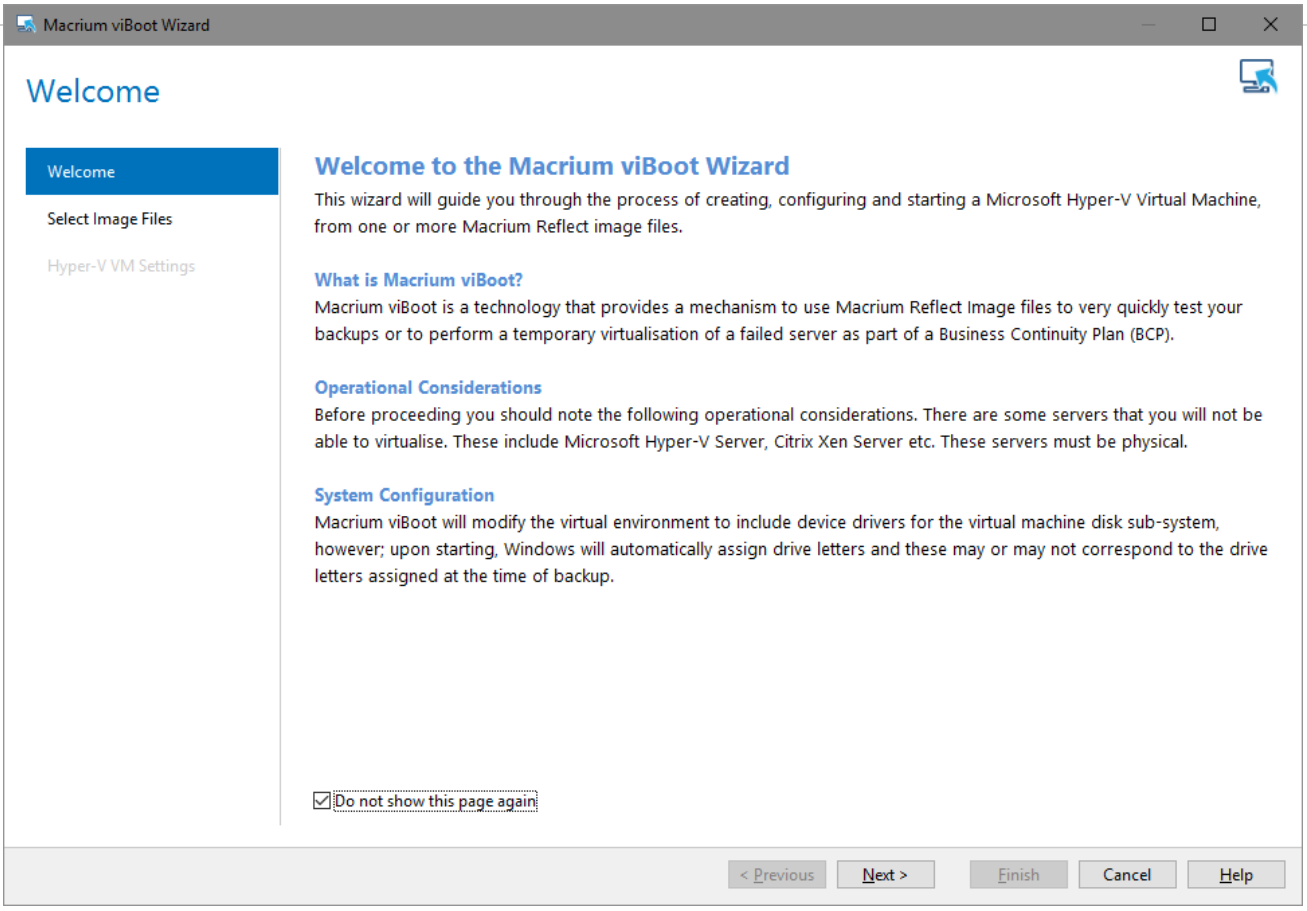
	New - Displays the viBoot Wizard which allows you to create a new virtual machine.
	Backup a powered off virtual machine.
	Deletes the currently selected virtual machine and allows you to backup any changes to the data that have been made.
	Refresh the list virtual machines and states.

	Options - Configure the virtual machine repository folder, and logging options.
	Help - Displays this help content.

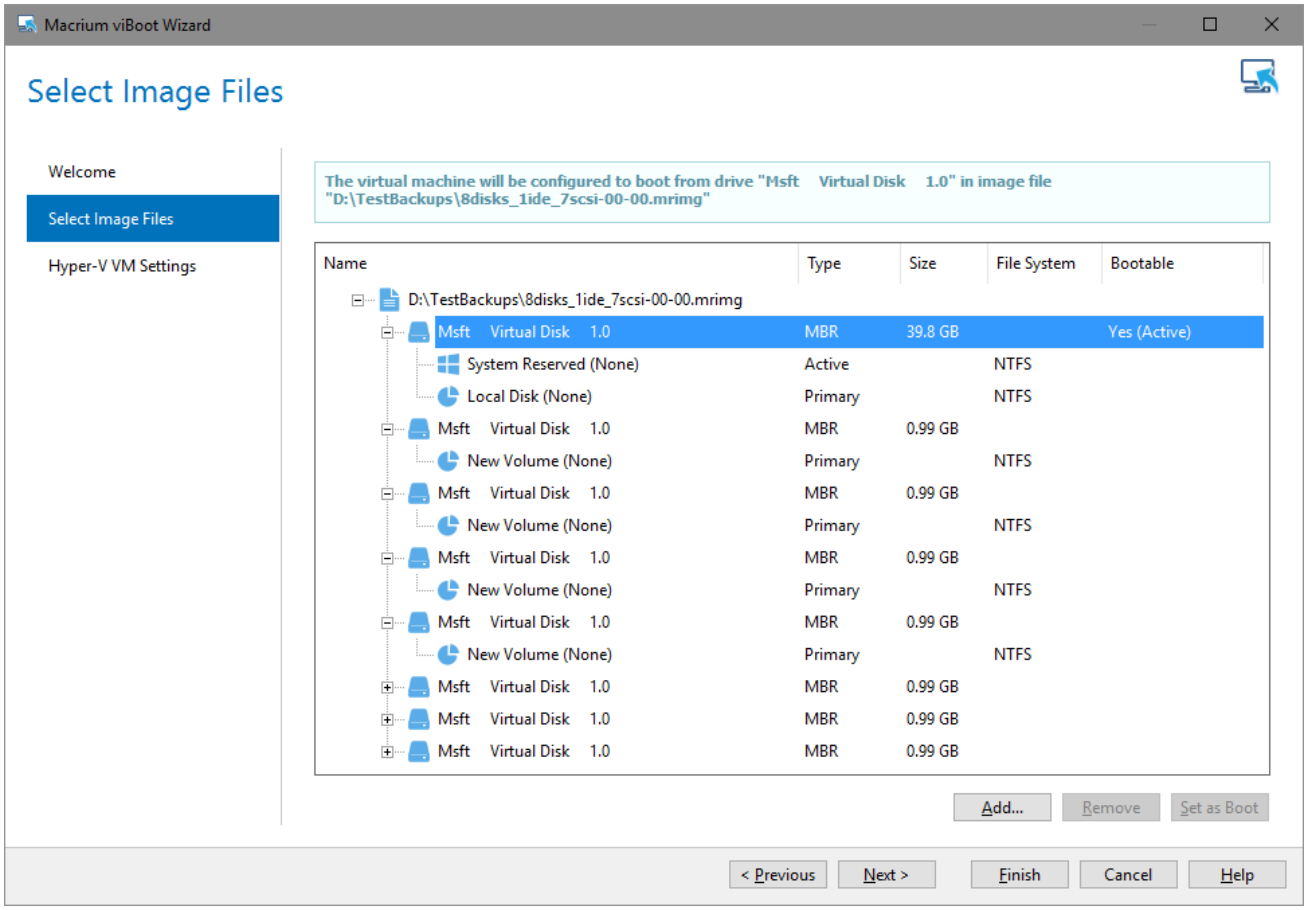
Macrium viBoot Wizard

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.

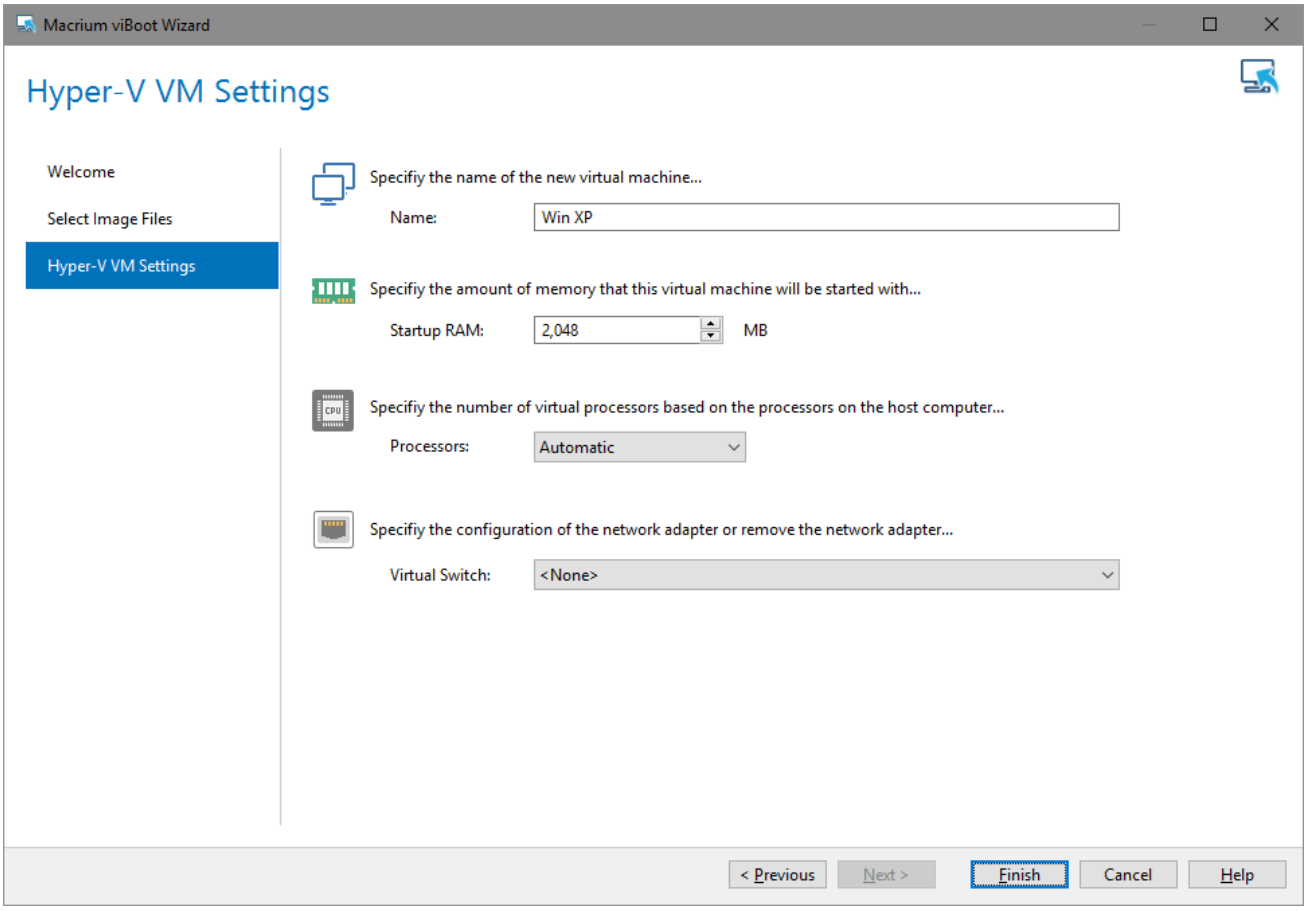


Select Image Files allows you to add one or more Macrium Reflect image files to be used for the virtual machine.



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.



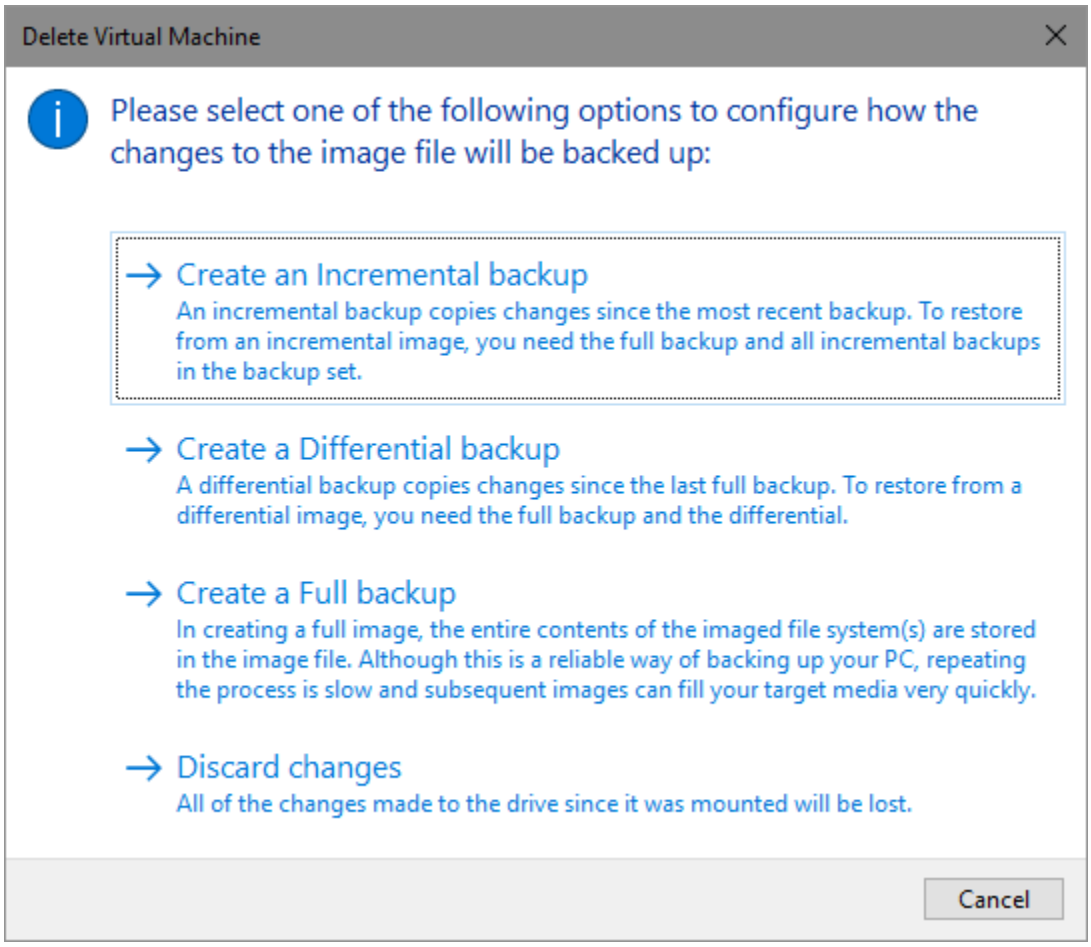
Please note that no changes whatsoever, are made to the original image files**.**

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.

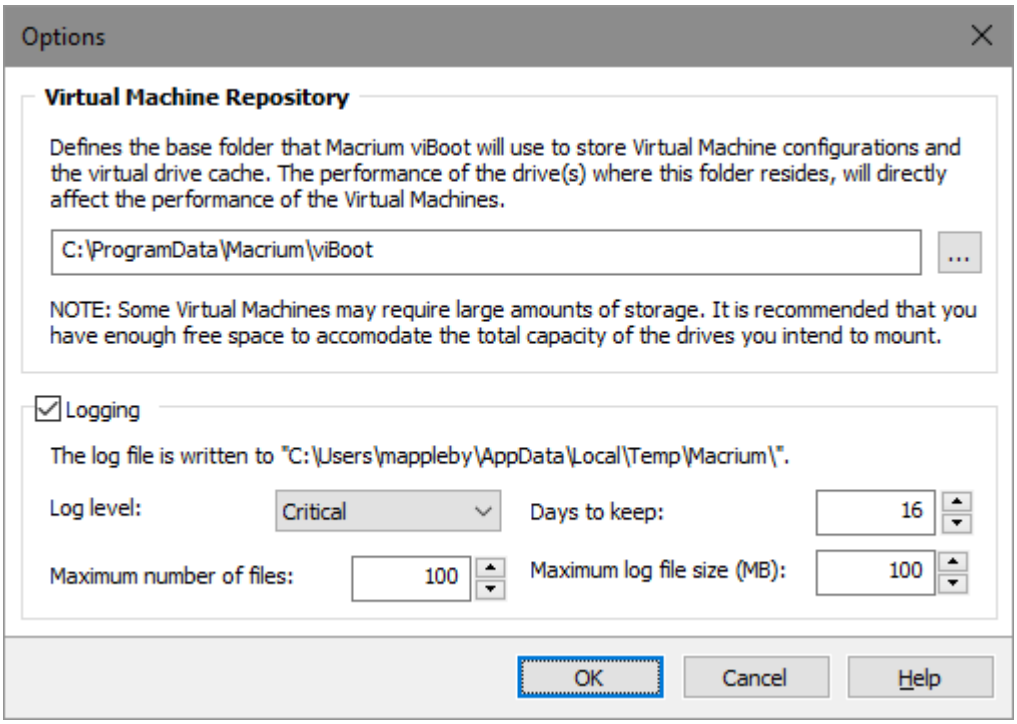
Note: *When you delete a virtual machine the Macrium Reflect images used to create the virtual machine are not deleted.*



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.



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