

BackupAssist v7

Recover tab & RecoverAssist Whitepaper

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1. Introduction



Recover

When a hardware or software failure has occurred, it is critical to recover your system quickly. RecoverAssist achieves this by creating a bootable media that can start your system, access hardware and recover your server or workstation using an image backup.

BackupAssist's Recovery tab uses RecoverAssist, a built-in feature that creates a customized, bootable RecoverAssist media, such as a disk or external drive. This media will start your computer and access a backup image to perform a bare-metal recovery, and recover your system. The backup image can be a BackupAssist System Protection backup, created using the bare-metal option. This image will include the operating system, configurations, and any data and applications selected for the backup.

Documentation

This whitepaper covers all aspects of the Recover tab and RecoverAssist, and can be used in conjunction with other BackupAssist guides, which provide a comprehensive documentation set.

- For information on the BackupAssist Backup tab, see the [BackupAssist Backup Tab Whitepaper](#).
- For information on the BackupAssist Restore tab, see the [BackupAssist Restore Tab Whitepaper](#).
- For information on creating an image backup, see the [BackupAssist System Protection Whitepaper](#)

Licensing

RecoverAssist is a standard feature included with the BackupAssist license, and requires a BackupAssist license once the initial trial period has expired. Please contact your local BackupAssist reseller or distributor for pricing information, or visit www.BackupAssist.com.

Not sure which licenses you need? See the [BackupAssist Licensing Guidelines](#) for help.

! **Important:** If a RecoverAssist media is created during the trial period, it will expire. The RecoverAssist media will need to be re-created once a BackupAssist license has been purchased. This must be done after you purchase a license, if you want to have a permanent, bootable recovery media.

Overview

RecoverAssist Builder

This feature creates a RecoverAssist Recovery Environment (bootable media), which can be customized to include files and drivers that may be needed during the recovery process.

RecoverAssist Recovery Environment

The Recovery Environment will load from the bootable media to access and recover your computer. This customized RecoverAssist environment is a superior to the Windows Recovery Environment and includes the following enhancements:

- Supports many types of backup devices
- Automatically adjusts the appropriate Windows settings when recovering to dissimilar hardware
- Avoids many of the Windows Recovery Environment's *Blue Screen of Death* issues.

2. Creating a RecoverAssist recovery environment



The RecoverAssist Builder allows you to create bootable recovery environments on optical disks and removable drives, such as DVDs, Blu-ray disks, USB thumb drives, external hard drives and SD cards.

Considerations

The bootable media's operating system must match the operating system of the image file that will be used to recover the machine.

Windows Vista, Windows Server 2008R1, Server 2012 and SBS Server 2008 recovery environments must be created from their own installation disks. They cannot be built from the currently installed operating system, using the *Bootable media based on the installed version of windows* option.

Recovery environments can be built from 32-bit and 64-bit versions of these operating systems:

- Windows Vista, Windows 7 and Windows 8
- Windows Small Business Server 2008 and 2011
- Windows Server 2008R1/R2 and Windows Server 2012

The Recovery process

Launch BackupAssist and follow these steps to create a bootable RecoverAssist media:

1. Select the **Recover** tab, and you will be presented with two options:
 - **Bootable media based on the installed version of Windows** – RecoverAssist will use the computer you are on, and its operating system, to create a bootable Recovery disk. If the operating system requires an install disk, this option will be grayed out and not selectable.
 - **Bootable media based on a Windows Installation Disk** – RecoverAssist will use a Windows operating system installation disk, to create a bootable Recovery Environment

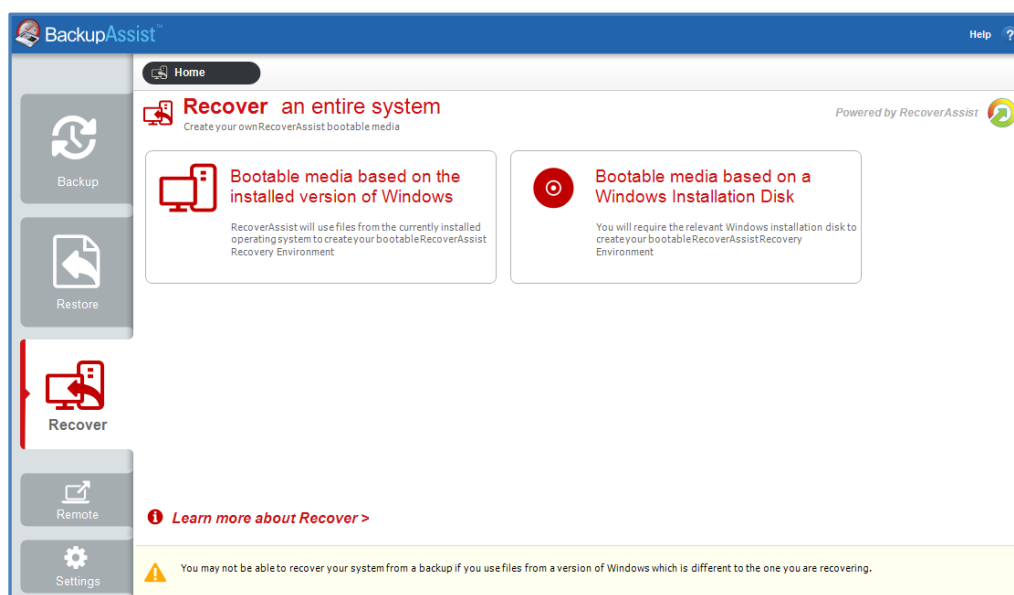


Figure 1: BackupAssist Recover tab – Bootable media selection screen

2. Operating system installation files selection

When you make your selection in step 1, RecoverAssist will start with one of the following screens:

- *If you selected, **Bootable media based on the installed version of Windows***, RecoverAssist will confirm the operating system details of the computer you are on.
Select **Next**
- *If you selected, **Bootable media based on a Windows Installation Disk***, RecoverAssist will ask for the location of the Windows Installation Disk (for the computer that the recovery media is being created for). Insert the Windows installation disk into the computer you are on, and select the drive letter for drop the drop down list.
Select **Next**

3. Add device drivers

The next RecoverAssist Builder screen allows you to add your own drivers to the recovery environment (bootable media). This is useful to ensure that the recovery environment has the ability to support the hardware where your backup is stored (for example when additional drivers are needed to recover a RAID environment). RecoverAssist will automatically select the appropriate driver to be used during the boot process.

There are 3 selections that can be used to add drivers:

- **Add drivers folder** allows you to browse to the location of the drivers that you want to add to the recovery media. Drivers should be added in an unpacked state.
- **Add compressed drivers** will unpack any compressed drivers you select and add them to the recovery media.
- **Download Driver packs** will download a recommended driver pack. The drivers will be automatically downloaded and added to the media during the media creation stage.

Make you selection/s, and click **Next**.

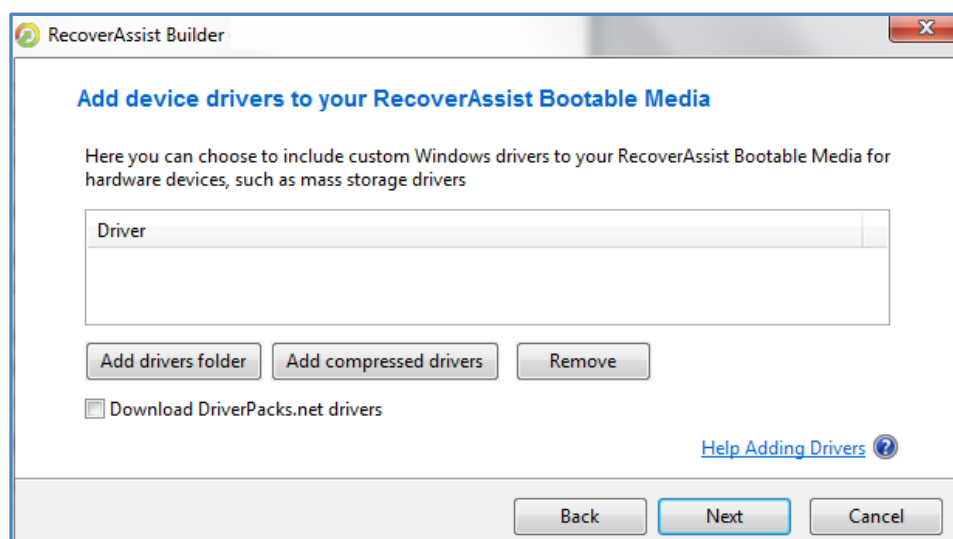


Figure 2: RecoverAssist media creation – driver selection

4. Add files/folders

The next step allows you to add files and folders to the bootable recovery media. The files and folders will be added to the UserFiles folder in the root of your recovery image. (Z:\UserFiles). You can also add drivers that you do not want to be loaded when the system boots.

Make your selection/s and click **Next**.

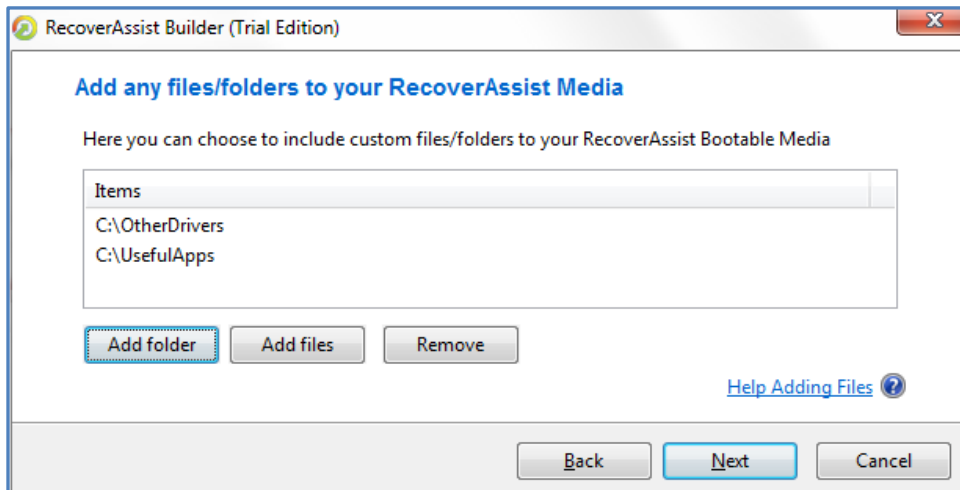


Figure 3: RecoverAssist media creation – file selection

5. Select boot media

This step selects the type of bootable media to be used. You can select:

- **An optical disk** (CD/DVD/Blu-ray)

This option will detect the optical drive on your computer and ask you to select the drive containing the media to be written to.

- **A removable drive**

This option will create the recovery image on a bootable, removable drive. A warning will advise that the removable drive will be formatted before it is written to. This means everything currently on the drive will be deleted.

- **An ISO image file**

This option will create the recovery environment as an ISO image. Although the saved ISO image is not on a bootable media, it has two uses:

- To create a recovery image that can be saved to a bootable device at a later date
- To create a recovery image that can be used to recover a Hyper-V virtual environment
This is possible if the hardware is virtualized and the host server is still functioning.

6. **Bootable media creation.** RecoverAssist will create the bootable recovery environment using the selected media. A progress bar will be displayed. Once it has completed, click **finish**.

► **The RecoverAssist Bootable media has now been created.**

Note: When the Builder job has completed, you will be asked if you wish to make an additional RecoverAssist Bootable media with the same settings.

3. Using the RecoverAssist recovery environment



The recovery process is designed to recover a server or workstation to a previous operating state, in the event of a hardware or system failure.

Recovery requirements

The recovery process will begin by starting your computer using the bootable RecoverAssist media. It will access hardware, load drivers and then ask for the location of the image backup to be used to recover your system. Ensure you have both of the following:

- **The RecoverAssist bootable media**

Refer to the previous section on page 3, for instructions on how to create this. The media must be created with the same operating system as the one on the image backup.

- **The image backup**

This is created using BackupAssist Server Protection. The bare-metal option must have been selected during the creation of the backup for the image to work. Your computer will be recovered to the environment that existed when the image was made. The RecoverAssist environment will use the data contained in the image to recover the computer's operating system, configurations, and any applications and data that were selected when the backup was made.

Recovery process

The following steps explain how to use RecoverAssist's bootable recovery media:

1. **Connect the bootable media to the computer to be recovered.**

Insert the optical media or attach the removable drive.

2. **Start the computer and boot from the removable media.**

Your computer should detect the recovery media and begin the boot process. Understanding the boot process can assist if a problem is encountered. The process is described below:

BIOS stage – The computer will access its BIOS (a chip containing basic hardware settings) and detect the hardware needed to start the computer. It will display some of the steps onscreen and beep to confirm it has run successfully. Additional beeps can indicate a problem detecting necessary hardware.

O/S stage – Once the computer has completed the BIOS stage, it will look for the location of the operating system boot files. The BIOS will be configured with a device order, to search for these files. Most computers will have a default order of optical drive, C:\drive, USB device.

The attached bootable media must be configured in this BIOS setting, and should be listed before the C drive. To check or change your boot media order, you need to access the configurations by pressing a key during the BIOS stage. The key stroke required may be displayed in screen during the BIOS post process, or noted in your hardware / server documentation.

3. RecoverAssist Environment menu

Once your computer has booted from your RecoverAssist media, the recovery environment will load and present you with the following menu.

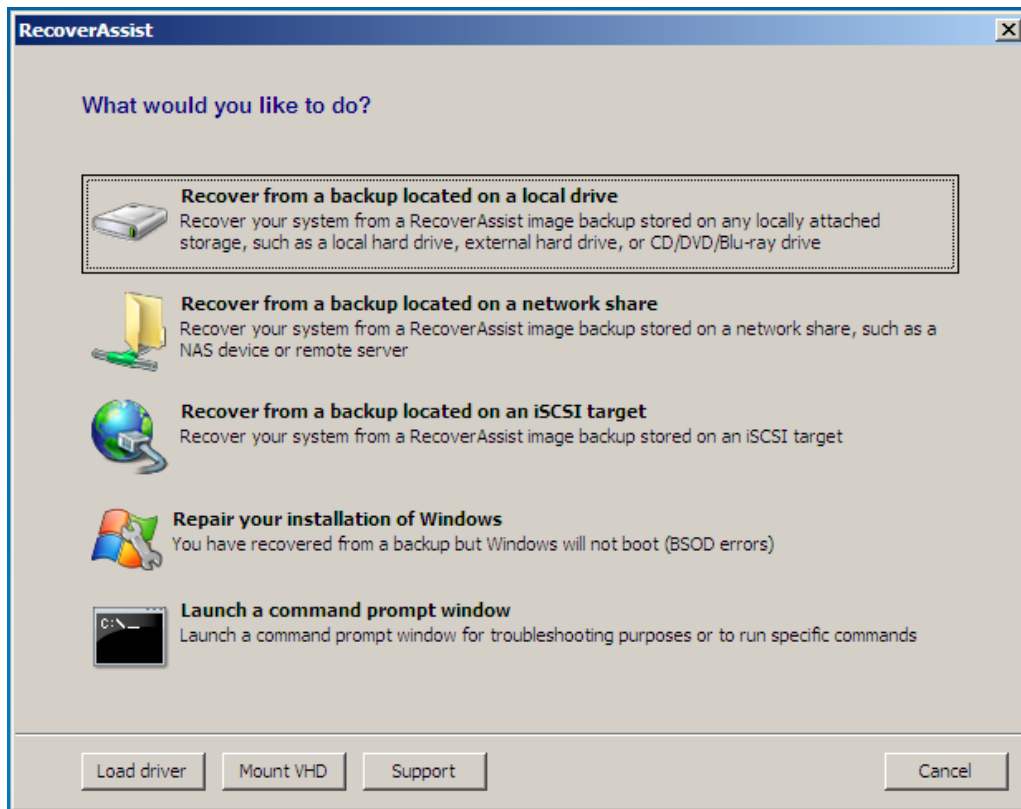


Figure 4: RecoverAssist boot menu

The RecoverAssist menu – backup location selections

Once RecoverAssist has started your computer and accessed its hardware, it will need the image backup to recover your computer's operating system and data. The first three options in the RecoverAssist menu are used to select the locations of the image file using different types of media. Each option is described below:

- **Recover from a backup located on a local drive**

If a local backup is selected, then the Recovery Environment will scan all local drives for backup images.

- **Recover from a backup located on a network share or an iSCSI target**

If a network based backup is selected, the Recovery Environment will open a screen that allows the user to configure their network card. Network drivers, including custom drivers added to the RecoverAssist Builder, are loaded automatically as part of the boot process. The user is able to modify any TCP/IP network settings, or review the automatically assigned settings, before advancing to select the location of their backup on the iSCSI device or network share. RecoverAssist will search the specified location for backup images and display any images found.

Other options in the RecoverAssist menu:

- **Repair your installation of windows**

You can attempt to repair an existing system that was recovered, using the Windows Recovery Environment but will not boot due to blue screen errors. Using the repair function is not necessary for systems that are recovered within the RecoverAssist Recovery Environment.

- **Launch a command prompt window**

This option allows the user to launch a command prompt in order to run the various command line tools included with RecoverAssist, such as diskpart.exe, bootsect.exe, regedit.exe, etc.

- **Load driver**

From this screen you can load any additional device drivers that were not included when creating the recovery environment.

- **Mount VHD**

You can mount any VHD such as a Hyper-V Virtual Hard Drive or Windows Backup images. After mounting the VHD, you will be able to access the files using a local drive letter.

4. Recover the image backup

If multiple backups are found, you will be given a chance to choose which backup to use for the recovery.

Once the image backup has been located, select **Next** to **recover** your system.

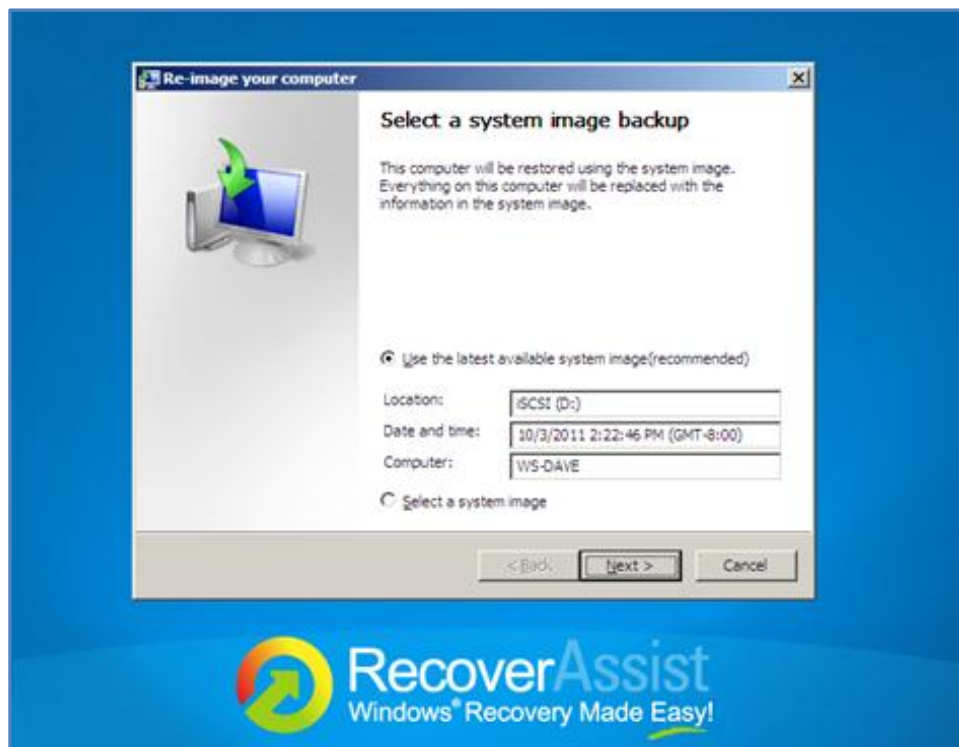


Figure 5: RecoverAssist - Backup image location selection

4. Support and Resources

Contacting Technical Support

Should you have any questions regarding either BackupAssist or the Recover tab, please email support@backupassist.com and we will respond to you as soon as possible.

Similarly, if you have any suggestions for additional functionality in BackupAssist, or new products or add-ons, please also forward your feedback to support@backupassist.com

Learn more – The Welcome Screen

Each tab in BackupAssist includes a “Learn More” link on the tab’s **Home** page.

Selecting the **Learn more about Recover** link will open the **Welcome Screen** with the Recover introduction selected. This screen provides an overview of the tab’s functions and features, and links to documentation and resources.



Figure 6: Recover tab - Welcome Screen