

Radix Reload Overview



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Reload Overview

Analysts indicate that most computer failures are related to operating systems and applications. IT engineers are often required to undo accidental or other errors that cause a system to malfunction.

Even the most reliable computer system is subject to problems arising from user mistakes, lost files, virus attacks, sabotage and unwanted changes.

Ask yourself how quickly can you resume business in case of major failures?



Radix Reload is revolutionary software that now makes possible to "turn-back-time" and undo all software failures in 30 seconds – with the press of a button!

Reload prevents damage and loses, regardless of the cause of the failure and extent of the damages.



Reload enables users to store periodical system snapshots in good working condition. In the event of failure, even if Windows cannot be launched, user can load clean a snapshot and undo all failures instantly.

Alternately, IT engineers can load the password-protected 'master snapshot' of the fine-tuned original state (baseline image) and restore the computer to its original working condition instantly.

Radix Instant Recovery solutions are already safeguarding computers at thousands of corporate and institutions, throughout the world, minimizing computer downtime and service calls

Radix

Failures Reload instantly repairs

- System boot-up failures
- Crashed Windows operating system and registry errors (blue screens)
- Hard disk repartition or reformat
- Deleted or overwritten files
- Altered system or configuration settings
- Damage by viruses and other hostile elements that have penetrated security



Main benefits

- Raise level of computers' stability without limiting users' flexibility
- Save endless hours of system restoration and tune-up work
- Surf the web freely and open e-mail without fear of viruses or spywares
- Experience new software without worrying about the consequences
- Instantly optimize PC's configuration and settings for the current job
- Turn-back-time after deleting or overwriting critical files
- Maximize users' productivity and minimize wasted resources
- Prevent access to data even while away from the office security umbrella
- Minimize service calls and dependence on available technical support
- Update local or remote computers without disturbing users
- Free your IT staff for high priority tasks
- Return on investment (ROI) after first failure

Main Functions

Instant system and data recovery

Radix Reload turns any computer into a 'self-repairing machine', enabling instant recovery with a single command. With Radix Reload installed, users restore their failed computers and undo all unwanted changes in 20 seconds. Eliminate hours of system re-installation and re-configurations and prevent business interruptions even while away from IT support and the office security umbrella.

Radix Reload instantly restores your PC to any preset state!



Disk Image backup

Reload enables fast and easy image backup to external devices such as USB disk; network drive and optical media, and easily creates a bootable rescue CD. In the event of failure, user can load the image backup and quickly restore his computer system.

Data security

Reload adds an effective data security layer, locks the computer and prevents unauthorized access to data. A strong authentication system and optional data encryption algorithm guarantees that no one can access the protected data, even if the computer has been stolen and the disk installed in another computer.

Remote Control

An authorized IT engineer can perform vast maintenance tasks for multiple computers simultaneously, without disturbing the users or the active jobs - via a remote command.

Radix - Your First and Last Lines of Defence!



Reload Market Segments

Reload is primarily designed for IT administrators who are faced with the constant pressure of running complex systems, and for users whose computer failures have negative impact on productivity, and waiting hours for IT engineers to bring their computers back to working condition is not an option.

Everybody deserves a Radix Reload!

Rich features and versatile implementation make Radix Reload a product suitable for use in many market segments.

To help you choose the best product for your needs, we've highlighted the features for the following categories. To learn how your organization can benefit from Radix Reload please contact Radix.

Service Providers

Technical support for today's complex systems require a high level of technical expertise and considerable repair time in case of failure.

Radix Reload enables even novice service engineers to restore failed systems in a few seconds and eliminate major failures with local or remote command, regardless the number of failed systems and extent of the damage.

Installing the Reload without user privileges, enables service providers to reduce considerable burden and expenses related to -SLA systems - without losing dependency on provider's services.

System Builders

Computer manufacturers warrant new computers against hardware failures. Software failures in most cases are handled by reinstalling the master image, a process that restores factory settings, but also eliminates user's data and makes unhappy customers.

Radix Reload provides bullet-proof protection for the factory settings and continuous protection for user data (without requiring hidden partition or extra space). With Reload installed, authorized persons have the option to restore the system and data to pre-failure condition, or restore original factory settings and instantly eliminate all changes made by the user.



["Radix proves simple ideas can often be the best" \(PC Pro UK\)](#)

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Corporate IT

Today's security and backup solutions, such as disk imaging, anti-virus and Firewall require complex settings, and consume considerable handling time. Nevertheless they do not prevent system down time and business losses in case of user errors; bad updates patches; new viruses and other threats penetrating security.

Radix Reload enables IT administrators to instantly store periodical snapshots for multiple protected systems. In case of failure, Radix Reload restores pre-failure conditions and instantly eliminates all unwanted changes for multiple computers simultaneously. It is the last line of defence that complements any backup and security plan.

Laptop Users

Laptop computers are subject to failures and business down time while operating away from technical support centres and the office security umbrella. They make an easy target for thieves and business data spies, especially when left unguarded at hotel rooms, at home or in a car.

Radix Reload instant recovery and Radix kSafe strong encryption algorithms add effective protection and security layers, prevent unauthorized access to data and provide instant recovery in case of failure. With Radix protection installed, data is fully secured and inaccessible, even if the computer falls into the wrong hands.

Small Business

Even small businesses rely on computers. With today's tight market schedules, dependence on technology and lack of in-house IT support, makes it tremendously critical to control, or better, prevent damages caused by computer failures.

Radix Reload enables users to restore failed computers in 30 seconds - with one click, and turn a potential catastrophe into an event that never happened. All this, without having to know anything about the cause of the failure or the ways to solve it, without having to wait for technical support, or suffer from business down time.



“...Radix puts the fun back into experimenting with new drivers or programs. You need no longer fear ruining your Windows. Simply select a restore point (snapshot) in the Radix menu and - voilà! - the system is as good as new...”

Toms Hardware Guide, USA

Education Computers

Analysts indicate that most computer downtime is related to operating system crashes and software application failures. Technicians are often required to repair failures accidentally caused by inexperienced users, or damaged intentionally by bored and frustrated students. In many cases, failure recurs just minutes after repair.

With Radix Reload installed, teachers can restore failed computers in 30 seconds with the press of a button and recover major damage during class time - without have to know anything about the cause of the problem or wait for available technical support.

Embedded Computers

Special-purpose computers control the system they are embedded in. Failure of computers embedded in systems such as industrial machines; Point-of-Sale machines; communication devices; information kiosks and even appliances - usually translate into service down time.

Radix Reload enables users and administrator to instantly restore failed computers embedded in systems and appliances – with local or remote command, even if the operating system won't start and even if the computer is embedded in an appliance or closed chassis, without keyboard, monitor or pointing device.

Home Computers

Even the most reliable computer system is subject to failure arising from user errors, lost data, viruses and configuration changes. PC users spend considerable time and resources on PC repair, software re-installation and system re-configurations.

Radix Reload turns any computer into a 'self-repairing machine', enabling instant recovery with one-click. With Radix Reload installed, even inexperienced computer users can restore their failed computers and undo major failures and all unwanted changes in 30 seconds without having to reinstall the software or carry their computers to service labs over and over again.



“...”While running some tests last month I broke my own rule and put my laptop on the public Internet to transfer some files via TFTP. Within three minutes I was hit with the Isass virus. Yea, yea - windows security updates. I restarted my machine, selected the restore point - pre virus - and crossed my fingers. Well, suffice to say that the Radix Protector product worked. And thank goodness. I sure would have hated having to rebuild my laptop yet again within the same month...

Sean Duff, Independent security specialist, LabRat Magazine.

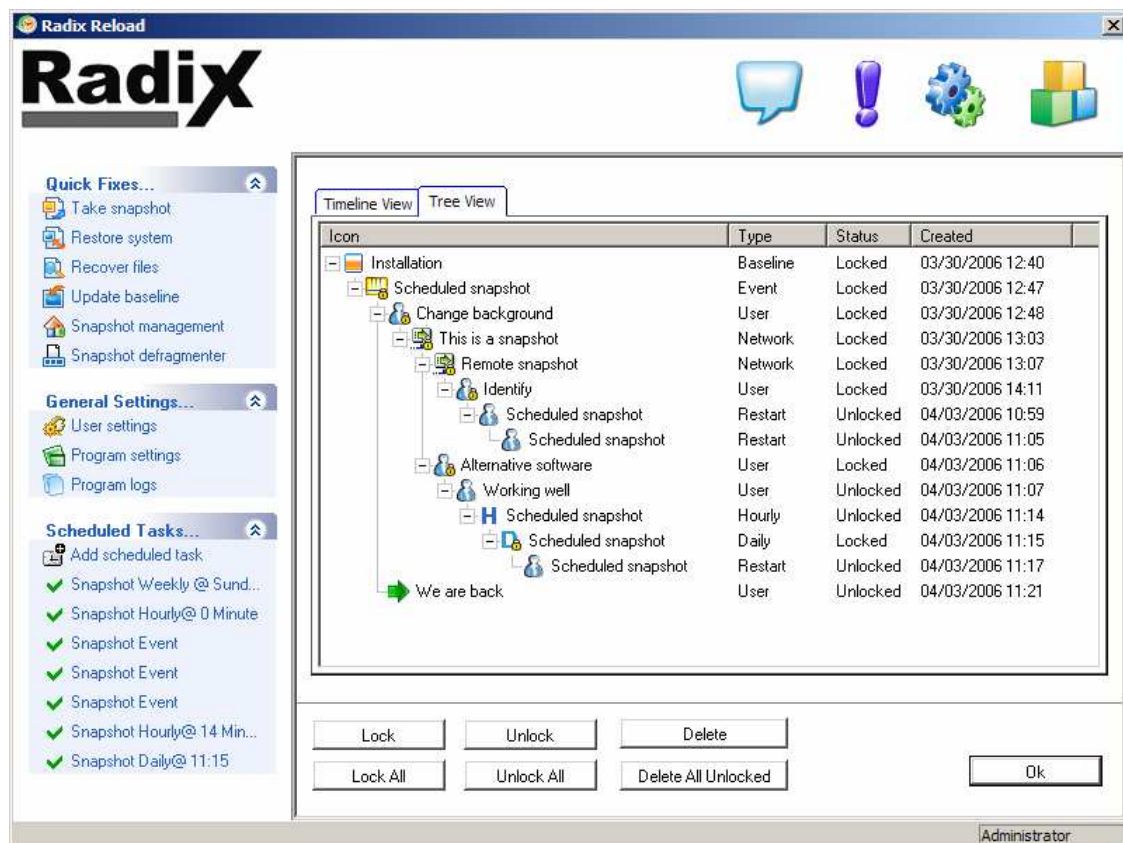
Reload Models

Reload Pro / Reload Premium

Reload Pro has been primarily designed to protect business desktop and laptop computers.

Unique multiple-snapshot_mechanism turns any PC into a **'time-travel machine'**, enabling safe and instant storage of unlimited snapshots and infinite snapshot manipulations.

'Travel into the past and back' between different system configurations takes only a few mouse clicks and a few seconds!



In the event of failure, user can instantly eliminate all unwanted changes by simply selecting the desired snapshot and activating the instant restore command.

The Reload Pro enables file/folder recovery and instant configuration reloading by changing the active snapshot.



Reload Duo (dual snapshots)

Reload Duo has been primarily designed for bundling with new computers and easy technical support for computers under SLA (service level agreement)

Reload Duo enables saving and updating dual snapshots:

Baseline snapshot

Baseline snapshot protects the factory settings without requiring extra space for the full HDD image. By reloading the baseline snapshots IT Administrator can instantly restores original factory default settings.

Updating or modifying the password protected baseline snapshot is only allowed by an authorized person, guarantees user's dependency on the provider's technical support.

User snapshot

User snapshot stored periodically on preset task plan (i.e. every day) automatically.

New snapshot overwrites old snapshot.

User can protect his personal data and personal settings, add new applications and fine-tune the system as he wishes and then protect it by updating the snapshot.

In the event of failure, by reloading the user snapshot, the user can instantly eliminate all unwanted changes without having to wait for technical service or suffering from business downtime.

Reload Standard / Reload Lite (single snapshot)

Reload Lite is primarily designed for public-accessed computers such as school computers lab, Internet café, public libraries, information kiosks, point of sale and computers whose settings and updates are only permitted to an authorized person with administration privileges.

Reload instantly restores the protected partition to its original condition and eliminates all changes and modifications made on protected partitions, automatically at every boot or manually on demand and planned schedule.

Radix

Remote Control

Reload Enterprise Server console enables IT administrators to perform vast maintenance and restoration task for multiple remote computers simultaneously from remote location on the network.

These include:

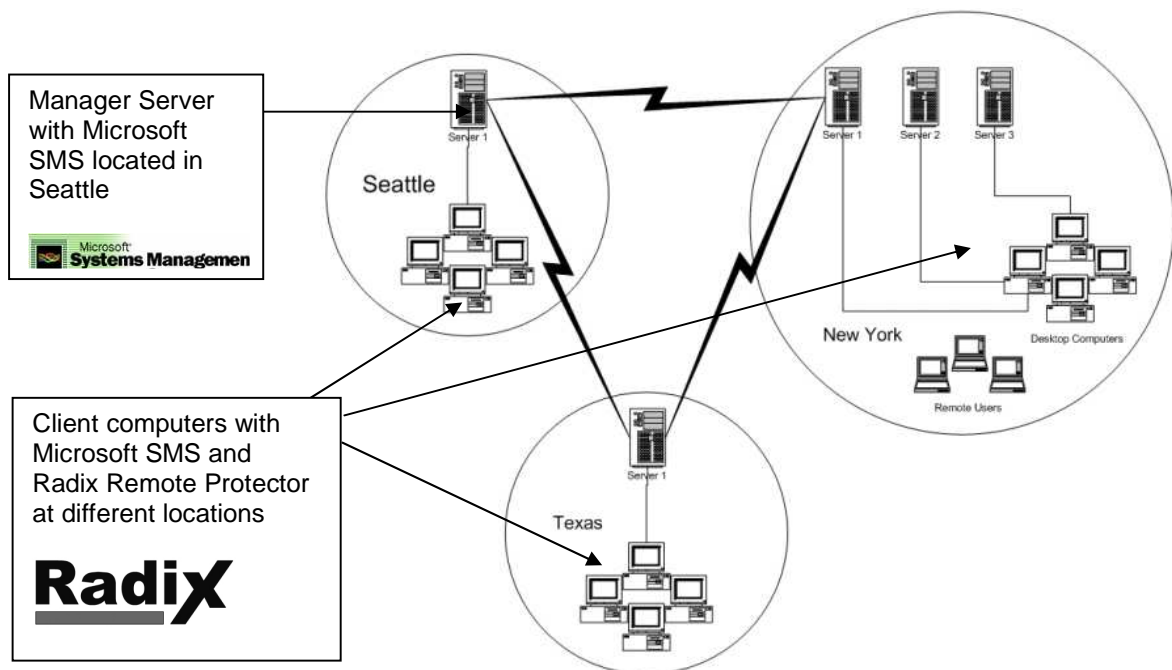
- Power On/Restart/Shutdown of remote computers
- Changing Administrator's password
- Taking instant snapshot 'on-the-fly' without disturbing the users
- Restoring a single or group of computers simultaneously
- Monitoring client's protection status, available volume space and much more!

Reload Enterprise Server remote control capacities enable IT administrators to maintain their systems without working overnights or disturbing the users during working hours

Control with other software

Reload can be controlled, through a command line, by corporate management software such as SMS, Tivoli, Zenworks, OpenView and LanDesk enabling smooth implementation in any existing system.

Radix provides a command-line generator tool that enables easy creation of Reload command lines for implementation in management software scripts.





Compare Reload V8.x Models

	Features	PRM	PRO	DUO	STD	LTE
General	Designed for Windows 2000/Xp/2003/Vista	✓	✓	✓	✓	✓
	Multiple OS and Multiple partitions protection (primary HDD only)	✓	✓	✓	✓	✓
	Log events in real-time	✓	✓	✓	✓	
	Protection at pre-Windows stage (sub system)	✓	✓	✓	✓	✓
	Optional PCI card version					✓
Instant Recovery	Instant auto/manual restore, every boot and on schedule	✓	✓	✓	✓	✓
	Pre-Windows instant restore, even if Windows is not functioning	✓	✓	✓	✓	✓
	Restore system from Rescue CD; external drive or network drive	✓				
	Switch system configuration by reload snapshots (back & forth)	✓	✓			
	Snapshot current state before executing system restore	✓	✓			
Data Security	Set authorization levels for multiple-users	✓	✓	✓	✓	
	Prevent unauthorized PC-boot and unauthorized access to data	✓	✓	✓	✓	
	Hide user interface and system messages (stealth mode)	✓	✓	✓	✓	✓
	Virtual Safe encryption with AES 256 algorithm (optional)	✓	✓	✓	✓	
	Authentication key for user and/or administrator (optional)	✓	✓	✓	✓	
System Snapshots	Password-protected administrator snapshot (baseline)	✓	✓	✓	✓	✓
	User updated snapshots	✓	✓	✓		
	Take user snapshots 'on-the-fly' in 5 seconds (without a reboot)	✓	✓			
	Backup snapshots to external disk; network disk or optical media	✓				
	Create bootable Rescue CD	✓				
Snapshots Management	Save snapshot automatically on PC restarts and shutdowns	✓	✓	✓	✓	
	Save snapshots automatically on task plan and planned events	✓	✓	✓	✓	
	Delete old snapshots manually and automatically on task plan	✓	✓			
	Delete snapshots without losing successive snapshots	✓	✓			
	Lock snapshots and prevent snapshots accidental deletion	✓	✓	✓	✓	
System Updates	Prevent unauthorized system updates	✓	✓	✓	✓	✓
	Update on-the-fly without interrupting the user or active jobs	✓	✓	✓	✓	✓
	Safe installations and updates without removing the protection	✓	✓	✓	✓	✓
	Updates without requiring PC restarts	✓	✓	✓	✓	✓
	Eliminate unwanted new installations, settings and changes	✓	✓	✓	✓	✓
Files and Folders Recovery	Recover files and folders selectively	✓	✓			
	Exclude selected files and folders from the restore mechanism	✓	✓			
	Mount snapshot and work with it as virtual drive	✓	✓			
	Compare current files with files/folders stored in old snapshots	✓	✓			
	Synchronize current files/folders with old snapshots	✓	✓			
Central Control (Optional)	Easy installation and deployment over network	✓	✓	✓	✓	✓
	Central management and control over IP (LAN ; WAN ;Internet)	✓	✓	✓	✓	✓
	Maintain multiple groups of remote computers simultaneously	✓	✓	✓	✓	✓
	Control by third party's applications such as SMS, Tivoli, etc.	✓	✓	✓	✓	✓
	Optional USB key for remote control only by authorized person	✓	✓			



Cost Performance Analysis

Traditional software solutions involve computer down time, technician time and other hidden costs. Instant recovery with the Radix Reload translates into considerable direct saving of business losses resulting from computer malfunctions.

Research indicates that computer-related failures cause an average downtime of 5-10 hours and repair costs of \$300 per computer per year. Radix Reload prevents over 70% of the downtime caused by software failures, with an average cost of over \$50 per computer per year.

The table below (an active Excel file spread sheet) suggests a breakdown of direct recovery cost calculated for an enterprise that operates 500 computers (the cost of backup software and the value of lost business excluded). You can play with any number in the **orange** cells bellow table (i.e. number of PC's, average repair time, the % of calls you believe Radix can save, etc.) and apply it to your organization

The following Excel spreadsheet suggests a generically simple and quick way to calculate and analyze costs. Modify any data you wish to fit your organization's statistics.

Click on the table bellow and activate the dynamic Excel spreadsheet

DATA		Complexity of failures		Total failures (per year)	Average repair time (Hours)	Repair costs
Number of PCs in use	500	Low	50%	500	1	\$25,000
Repair cost per hour	\$50	Average	30%	300	2	\$30,000
Reload cost per PC	\$75	High	20%	200	3	\$30,000
Failures per PC/year	2				Repair costs (Per PC)	\$85,000
Calls saved by Radix	50%					\$170

Modify data in orange cells to suits your organization's statistics

Repair cost with Radix	\$42,500
Total saving (first year)	\$5,000
Saving per PC (first year)	\$10
Total saving in following years	\$42,500
Save per PC in following years	\$85



Software Licensing

Radix provides flexible licensing models, best suite your needs.

Whether you buy Radix' software for use by your organization; resell it under your brand name, or integrate it into your other Radix solutions - Radix will offer the best license model:

- OEM License
- Local Registration Server (LRS)
- Site License
- Subscription License
- Free Trial License
- Special License

Customized Products

Radix unique products can be modified; customized and localized to best suit your needs.

These include:

- Customized user interface (GUI)
- Language localization and translation to most languages
- Private labels (re-branded models)
- Special features
- Customized licensing
- Customized packaging
- Integration with third party's a applications
- Embed Radix software in third party's hardware or software solutions
- Special product development
- Developers kits (SDK)

and much more



Theory of Operation

During installation, Reload stores the current sectors index' data (HDD sectors map) as the "**Baseline snapshot**" and loads it into the **Radix Pointer** – an alternative index module. The Radix Pointer buffers between the OS and the HDD and controls the HDD sectors at block level. The OS now "sees" the Radix Pointer (Radix' HDD map) instead of the HDD sectors index (the real sectors map).

During operation, Reload constantly monitors the data flow and records all data entries. New data is written in free sectors. Unprotected data is erased normally. Reload take periodical **snapshots** the Radix Pointer's content. Related sectors are locked and protected.

When protected data is being deleted, related sectors only become invisible (by the OS), but remain protected at the block level. The data remains secure and ready for instant recovery.

When Reload snapshots are deleted, all related sectors are unlocked, except protected sectors and by other valid snapshots. All related data is permanently erased.

When the **Reload restore** command is being executed, for example in case of system failure the snapshot selected for restore is instantly reloaded and the OS now "sees" a new sectors map – the pre-failure clean state.

The actual size of Reload snapshot

A snapshot is a map of the HDD sectors, reflecting the HDD's state at the time snapshot was save. While the actual size of a snapshot is less than 0.1% of the original size of the space occupied by the protected HDD sectors - protected sectors are often linked to files that are protected by several different snapshots at the same time. For example, a file named pricelist.xcl created on January 1, 2007 and protected by snapshot #1 taken on 1/1/07 and again by snapshot #2 taken on 15/1/07. When deleting the pricelist.xcl file and snapshot #1, Windows will no longer see the pricelist.xcl. Nevertheless, the space taken by the file is not cleared until snapshot #2 is deleted.

Sectors occupying protected files will be freed only after all related "guardian" snapshots are deleted and the Reload Defrag is being executed, automatically at every PC restart or manually on-demand.



Reload Advantages

Reload V.S System Restore

1. Reload operates in the sub-system level (before OS launch), enabling Instant restore of a crashed system even if Windows is not functioning at all.
2. Reload handling is an easy and intuitive procedure even for inexperienced users.
3. Reload enables automatic, scheduled backup and recovery process.
4. Reload enables unattended, service-free PC operation.
5. Reload consumes negligible handling time, HDD space, RAM, CPU time and network bandwidths.
6. Reload protects administrator's settings by preventing unauthorised modifications.
7. Reload offers optional remote control system, enabling maintenance for a group of remote computers simultaneously.
8. Reload enables remote instant backup 'on-the-fly' without disturbing the users
9. Reload enables instant restore of hundreds of failed computers, regardless of the extent of damage, the number of failed computers or available IT personnel.

Reload V.S Image Cloning (Ghost)

Complicated handling, considerable backup time and heavy load on the network infrastructure make image cloning a solution for periodical maintenance rather than a handy tool for daily backups.

In case of failure, apart from considerable recovery time - extra settings and personal tweaking are usually required to bring back failed PC's to its pre-failure state.

Backup with Radix is a quick and easy procedure that consumes negligible resources and can be performed daily, hourly or as an event-driven precaution procedure.

In the event of failure, restoring to a pre-failure condition is a matter of a few seconds and a few mouse clicks, without requiring complex settings or tune-up work.

Note! Some of Reload models include Image Cloning feature, enabling in addition to instant recovery capabilities, as well as image backup/restore to/from external disk, network disk and Rescue CD creation.



Frequently Asked Questions

1. What is the Radix Reload?

Radix Reload is a unique solution that enables PC users to instantly repair major software problems without having to wait for technical support or suffering from business downtime.

2. Why do I need the Radix Reload?

Even the most reliable computer system is subject to failures arising from user errors, virus attacks and configuration changes. With Radix Reload installed, restoring is only a matter of a few seconds. Even inexperienced users can quickly and easily repair major software problems, without having to know anything about the cause or the step required to solve the problem - by a press of a button.

3. How does the Radix work?

During installation (or snapshot modification by an authorised person), Radix shields all sectors occupying data and protects them with an Administrator's password. During operation Radix constantly monitors the data flow and maps the new sectors. During recovery, Radix deletes all new sectors instantly from the HDD "map" and the system restores to original condition.

4. What is the actual size of a snapshot?

A snapshot is a stored map of the HDD sectors reflecting the HDD's state when stored.

The actual size of a snapshot is less than 0.1% of the HDD capacity.

Protected sectors are often linked to several snapshots in parallel and remain protected even if the corresponding data is "deleted". Sectors linked to snapshot/s are freed only after the "parent" snapshots are deleted.

5. How many snapshots can my system store?

Radix Standard (basic) enables a single snapshot. Multiple snapshots are available with the professional models.

6. Can I update my protected HDD?

Yes. Administrator or a user with administrator's privileges can update a password-protected snapshot at any time. User without privileges can only update a user's snapshots.



7. Is my PC really secured?

Yes. Except in cases of physical damage to the HDD. The Radix software version protects against most threats generated within the system and network (preventing damage by pre-boot destructive tools, requiring additional protection measures). Nevertheless, Radix is not an alternative to other security measures like Firewall, antivirus software and periodical data backup.

8. Does Radix protect all installed hard disks?

Radix Reload protects all selected volumes in the first physical hard disk.

9. Does the Radix limit my computer operation in any way?

No. Radix Reload can be invisible to the user during operation.

10. Does Radix store data in the PCI/USB hardware device?

No. Radix Reload stores data only inside the protected HDD. The hardware device is used for extra data security when applicable.

11 Can Reload be remotely controlled?

Yes. Reload enables powerful, versatile remote control capabilities. The network administrator can manage and control hundreds remote computers simultaneously.

19. Does Radix Reload integrate with network management software?

Yes. Radix Reload can be smoothly integrated in any network environment, and any common third party's management or control software like ZenWorks, SMS, Tivoli, OpenView, GhostServer, LanDesk, PC-Anywhere, etc.

12. What kind of failures does Radix Reload repair?

Radix Reload instantly repairs most known software related problems. This includes program disruption, boot failures, Operating System crashes, Windows-Registry errors, changed configuration and more.

13. Can Radix repair damage caused by viruses?

Yes. Radix Reload repairs damage caused by viruses, eliminates traces of worms, Trojans horses, and spywares and cleans the protected volume from other unwanted elements or parasites such as cookies and temp files.



14. Can I stop using my anti-virus software?

Radix effectively cleans the protected volume from viruses and repairs damage caused by viruses after restoring to a clear point. Nevertheless, the virus resides in the system memory (RAM) and can reproduce itself to another PC on the network. Therefore, we recommend using the Radix Reload as your last line of defence and not as an alternative to other security, backup tool or recovery plans.

15. Can I stop doing regular system backups?

No. Although Radix Reload instantly recovers software failures, periodical backup is required for cases of hardware failures.

16. What if I lose the Radix USB eToken, or forget my password?

Radix's help desk (after authorization verification) recovers lost passwords and enables one-time access in cases of lost or defective hardware, enabling user to uninstall the Radix software and work normally (without Radix protection), until receiving a replacement Token.

17. What if the Radix hardware becomes defective or has been removed?

In the event that Radix Reload hardware (when applicable) or the wrong password entered (when applicable) is not detected during PC-boot sequence, the boot process halts and a warning message pops up. The data is secured and unprotected operation is disabled. The PC resumes normal operation right after the Radix device has been repaired or replaced or the right password (when applicable) is entered.

18. Does Radix support Linux OS?

No. Radix current models only support MS-Windows OS.

19. Does Radix protect server computers?

Although the Radix Reload supports MS Server OS, it is primarily designed to protect desktop and laptop computers.

20. Does Radix protect RAID5 disks array?

Unfortunately Radix cannot protect RAID 5 disk array.