

Features	Benefits
vSphere Protection	
Agentless backup of guests	Significantly enhances backup performance, while minimizing the load on target machines and the hypervisor during the process. PPR enables to back up entirely any online or offline virtual machine hosted by vSphere (Windows, Linux, etc.)
Agentless replication of guests	Replication provides the best RTO, as it utilizes clones (replicas) of target machines on a certain ESX datastore
Agent-based backup of fault-tolerant systems and non-commercial ESX	Since agentless protection through the VMware snapshot mechanism is unavailable for VMware fault-tolerant systems and guests hosted by a non-commercial ESX, PPR enables to protect them through on-site agents
Replica launch	The specified replica will be correctly detached from the replication process and then launched, which may take only a couple of seconds, allowing PPR Admin to get a failed system back on track with minimal downtime
Restore to original/new location	When restored to the original location, the original machine will be automatically deleted. When restored to a new location Administrator will be prompted to provide a new name for the machine, and a host and datastore to reside it. The VM configuration file will be modified accordingly
VMware CBT support	The use of VMware Changed Block Tracking ensures full or incremental backups or replicas are created with the minimum time and impact on ESX
Paragon ITE support	Paragon's Image Transfer Engine is an alternative way of tracking data changes. It's automatically used when VMware CBT fails
Hyper-V Protection	
Agentless backup of guests	PPR enables to back up entirely any online or offline virtual machine hosted by Windows Hyper-V Server 2012 (Windows, Linux, etc.)
Agent-based backup of Hyper-V host	Hyper-V host can be protected entirely or by separate volumes by embedding to it a physical agent
Restore to original/new location	When restored to the original location, the original machine will be automatically deleted. When restored to a new location Administrator will be prompted to provide a new name for the machine, and a host and datastore to reside it. The VM configuration file will be modified accordingly
Paragon ITE support	Paragon's Image Transfer Engine is used to track data changes, ensuring full or incremental backups are created with the minimum time and impact on the Hyper-V host
Physical Machines Protection	
Agent-based physical backup	A special agent embedded to every target Windows-based physical machine interacts with the infrastructure and accomplishes backup tasks
Entire machines backup	Protection of entire machines guarantees complete data safety
Granular backup	Protection of particular volumes allows minimization of backup windows and storage requirements
One-Stop-Wizard for immediate protection	One-Stop-Wizard helps to instantly configure and initiate protection of a single physical server or workstation
Out of domain backup	PPR enables to protect not only members of a domain where it is deployed, but any machine on the net
Remote restore	Administrator can initiate recovery of data (non-system) volumes remotely from one of the management consoles

PROTECT & RESTORE / FULL FEATURES LIST



Bare-metal recovery	The problem machine is started up from a special WinPE recovery media. After connection to the infrastructure, Administrator manually specifies the desired machine, volume, and restore point
Paragon Recovery-ID	Automatically and remotely perform a restore operation without local user-interaction
Restore to dissimilar hardware	Allows Administrator to restore a Windows-based machine directly to dissimilar hardware without having to reinstall OS, applications, and re-configure the system
MS Exchange Protection	
Application-level protection	PPR can treat MS Exchange 2007/2010/2013 at the application level, opening up the option to create consistent database backups without any impact on the production email server
Incremental chains and block-level data deduplication	Usage of incremental backups allows additional flexibility by having different time-stamps while block-level delta for full backups contributes to minimization of backup storage requirements
Single instant block backup	Even when creating a full backup, PPR analyzes and transfers only blocks of databases which have been changed since the last backup, thus providing for the server load optimization and backup storage minimization
Automated recovery from broken increments	When MS Exchange refuses to allow creating an incremental backup, PPR automatically initiates a full backup
Wide restore options at database level	PPR enables to restore separate data stores or storage groups or all groups at once either to the original or some alternative location with the option to create a dialtone database if necessary
Flexible restore at mailbox level	PPR also allows non-destructive restore of certain mailboxes. By default, their contents will be restored to the original location, provided none of the already existed email items are lost. If necessary, Administrator can specify any mailbox and a folder where you'd like the restored data to be placed to
Exchange replicas and cluster configurations support	PPR completely supports DAG (Database Availability Group), SCC (Single Copy Cluster), LCR (Local Continuous Replication), CCR (Cluster Continuous Replication), SCR (Standby Continuous Replication), SIOS (Single Instance Object Storage), and High Availability and Site Resilience
Close integration with PEGR	If using PPR together with PEGR, Administrator can easily connect a backup email database to MS Outlook to view and extract certain emails
General Imaging and Replication Options	
Supported storage ties	PPR enables to store backup data on ESX datastores, local disks, UNC (network shares), NAS, SAN, FTP/SFTP, cloud (Amazon S3)
Multi-tier storage infrastructure	PPR has a solid solution to the problem of dual protection. Dual backup or replication to managed (fully controlled by PPR infrastructure) storages or archiving of backup data from managed to unmanaged storages (like Tape or FTP/SFTP that PPR infrastructure cannot control) enables to double protect target systems with minimal impact on the production environment
Enhanced backup format	Paragon introduces a pVHD (Paragon Virtual Hard Drive) format – a special VHD, optimized for storing backups of virtual and physical machines. It's very efficient in handling incremental chains, data de-duplication and synchronization. pVHD does away with all limitations of a standard virtual drive format, such as a poor compression ratio, integrity control, and encryption capabilities. As a result it allows obtaining backups that are up to four times smaller than original backup objects
Backup data deduplication	Significantly reduces backup storage footprint. By linking existing local and network backup storages to a local deduplication storage, Administrator can make sure storages do not contain data duplicates, thus significantly cutting on storage requirements. Besides, deduplication enables to cut even more on network traffic, as again only unique blocks of data are transferred to storages, thus having a positive effect on backup timings, RTOs and RPOs of company's IT infrastructure
Flexible scheduling mechanism	Protection policies can be scheduled from every few minutes (nCDP - near Continuous Data

PROTECT & RESTORE / FULL FEATURES LIST



	Protection) to hourly, daily, weekly, or monthly
Enhanced data retention mechanism	Enables to effectively control backup lifespan and occupied space on storages
Backup data exclude/include filters	Allow speeding up backup process, while minimizing storage requirements File-level recoveryPPR allows browsing contents of virtual or physical backup images as well as VM
Instant restore	Instant restore (launch out of backup image) is available through NFS (Network File System) or UIM (Paragon's Universal Image Mounter)
Storage Browser	For easier administration all storages are open for browsing. Having a list of all created backups and replicas at hand, Administrator can easily find and initiate an integrity checkup for those he considers critical, or delete those he doesn't need any more, or initiate restore
Microsoft VSS support	The use of Microsoft's Volume Shadow Copy Service allows 100% data consistency when taking snapshots of Windows machines
Paragon UFSD support	Paragon's Universal File System Driver provides fast and reliable access to major file systems
Migration Options	
Migration between ESX datastores	Enables to migrate a virtual machine hosted by ESX to another datastore
P2P (Physical-to-Physical) migration	No hardware dependency with Paragon Adaptive Restore™; our technology guarantees that any Windows since 2000 will boot on dissimilar hardware by automatically injecting required drivers and performing other operations crucial for this type of migration
V2P (Virtual-to-Physical) migration	Combination of the agent-based backup and Paragon's Adaptive Restore allows easily converting virtual machines to physical
V2V (Virtual-to-Virtual) migration	PPR provides the option to migrate virtual servers and workstations from VMware ESX to Hyper-V and vice versa with minimal effort
Management and Administration	
Distributed architecture	Offers scalability for growing environments and medium to large departmentalized enterprises
PPR management console	Centralized, easy-to-use interface to manage all virtual and physical machines from the same console
Realtime statistics, notifications, and reporting	PPR includes smart tools of monitoring. PPR Console can help to get real-time statistics on any activity executed at the moment, filter error, warning or information infrastructure events, set up email notifications and reports by a particular type of events or several types (errors, warnings, information, etc.) for an infrastructure component or activity you're interested in (backup or replica policies, etc.)
Effective troubleshooting	Every user or service activity is journalized, which enables to pin-point roots of any encountered problem. For more efficient communication with Paragon's support team, there's Log Saver that allows easily collecting all or particular infrastructure logs
Easy update / upgrade	All infrastructure components can be upgraded remotely from PPR Console, guaranteeing complete consistency of the infrastructure database
Intelligent load balancing	Unlike other tools that use simple round-robin algorithms to balance load across the backup infrastructure, our solution considers Backup Server's availability, access to source data, current backup repository load by other concurrent tasks, and other factors
Traffic throttling	Allows managing network bandwidth among clients to ensure QoS (Quality of Service)
Paragon ProTran	Paragon's ProTran is a unique data transport protocol, specially optimized to run jobs over highly latent connections by automatically establishing multiple TCP/IP connections per job, which enables to significantly (up to 300%) boost performance of VM data transferring over WAN links