# Restoring Paragon Protect & Restore Infrastructure After a Disaster

## Best Practices

last updated: August 2013

#### **Overview**

registered trademarks of their respective owners.

Other company or product names may be trademarks or

Windows is a registered trademark of the Microsoft Corporation in the U.S. and other countries

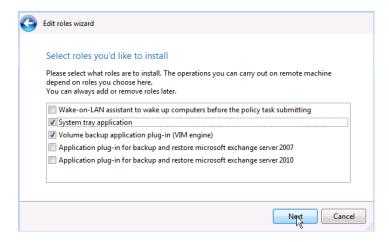
Paragon Software's Protect & Restore (PPR) offers a unified system and data protection solution for virtual and physical machines. PPR delivers comprehensive agentless protection for virtual environments hosted by VMware vSphere or standalone ESX servers<sup>1</sup>, and agent-based protection for physical and virtual Windows systems on any hypervisor. As its backbone, Paragon leverages a patent-pending distributed architecture allowing for efficient centralized and remote management of hundreds or even thousands of machines on the network.

In this document we will explain you how to correctly protect the PPR infrastructure deployed in a physical Windows domain environment (primary members of the infrastructure reside on physical machines) to get it back on track in case of a disaster.

### **Protecting PPR Infrastructure**

The distributed nature of PPR allows various members of its infrastructure to spread over several machines on the net. Obviously any of these machines may fail at any time, but it's not a problem till the moment a machine that hosts Administration Server fails. This will certainly lead to complete inoperability of the entire infrastructure. But don't worry, for PPR can well be used to protect itself.

PPR can back up any member of its infrastructure. To allow it, the target physical machine should have the 'Volume backup application plug-in', which can be added through the **Edit roles** wizard.



Well, we already know that Administration Server needs protection in the first place. What else? To answer this question, let's consider three possible emergency situations:

<sup>&</sup>lt;sup>1</sup> Agentless Hyper-V support is scheduled for December 2013.

Copyright© 1994-2013 Paragon Software Group. All rights reserved.

registered trademarks of their respective owners.

may be trademarks or

Windows is a registered trademark of the Microsoft Corporation in the U.S. and other countries.

Administration Server fails, while a Backup Server that administers the storage containing its backup images is healthy. This actually means the PPR infrastructure is completely down thus no actions can be done through one of its management consoles. The only option is to use the Bare Metal Restore Wizard from the WinPE recovery environment, which should be prepared beforehand on CD/DVD or flash. In this scenario the PPR administrator directly connects to the required Backup Server, selects the most recent backup image of Administration Server and initiates the restore. If restoring to dissimilar hardware, the administrator should additionally complete the P2P Adjust OS Wizard. This will make Windows OS bootable on the new hardware. Once Administration Server is online, it will initiate replication of all infrastructure databases to obtain the most up-to-date data. This is it – recovery of the PPR infrastructure has been completed. To get more information on the subject, please consult the product user manual.

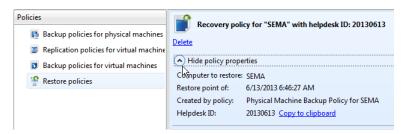
At first you should co Administration Serve	parameters  nnnect to the infrastructure. To do that, ple or or one of the registered Backup Servers, credentials if necessary.	ase type in a DNS name of IP address of the required port (60543 is used by default
Address:	argut	
Port:	leave this field blank for default port	
	₽.	
	-0	
Advanced stora	ge browsing (click to know more)	
Advanced storage	ge browsing ( <u>click to know more</u> )	
	ge browsing (click to know more) rchive of 'SEMA'	
Restoring a		Restore point
Restoring a		Restore point:
Restoring a  ackup objects:  Name  Disk 0	rchive of 'SEMA'	[No label] (C:) 19.9 GB
Restoring a  ackup objects:  Name  Disk 0	rchive of 'SEMA'	
Restoring a  ackup objects:  Name  Disk 0	rchive of 'SEMA'	[No label] (C:) 19.9 GB
Restoring a  ackup objects:  Name  Disk 0	rchive of 'SEMA'	[No label] (C:) 19.9 GB
Restoring a  ackup objects:  Name  Disk 0	rchive of 'SEMA'	[No label] (C:) 19.9 GB 6/13/2013 5:48:50 AM 6/13/2013 5:33:35 AM
Restoring a  ackup objects:  Name  Disk 0	rchive of 'SEMA'	[No label] (C:) 19.9 GB 6/13/2013 5:48:50 AM 6/13/2013 5:33:35 AM 6/13/2013 5:08:37 AM
Restoring a ackup objects:	rchive of 'SEMA'	[No label] (C:) 19.9 GB  6/13/2013 5:48:50 AM  6/13/2013 5:33:35 AM  6/13/2013 5:08:37 AM  6/13/2013 4:47:51 AM
Restoring a	rchive of 'SEMA'	[No label] (C:) 19,9 GB 6/13/2013 5:48:50 AM 6/13/2013 5:33:35 AM 6/13/2013 5:08:37 AM 6/13/2013 4:47:51 AM

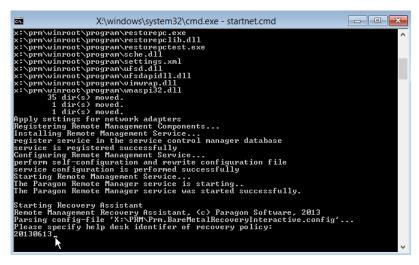
- 2. Administration Server is healthy, while one of the Backup Servers fails, provided storages it takes care of are ok. There are two options: either restore the failed Backup Server from a backup image (recommended), or import its storages to another Backup Server. Both recovery scenarios can be initiated through one of the management consoles:
  - a. The first one involves restore by Recovery ID (a corresponding restore policy is preconfigured in the console, but initiated from the WinPE recovery media on-site by providing its ID).

registered trademarks of their respective owners

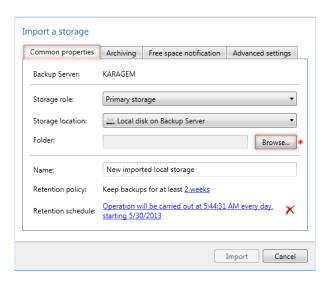
be trademarks or

Windows is a registered trademark of the Microsoft Corporation in the U.S. and other





b. The second one involves import of the target storages as network storages to another Backup Server (all actions are done in the console). Please note that this scenario also implies that the PPR administrator should properly modify all backup policies that use the target storages as backup destination. We do not recommend this option as it may involve too many actions from the user's side.



3. Both Administration Server and Backup Server are down. The only option is to use PPR Express, which is aimed exclusively at agent-based protection of a single physical system. Based on the same architecture as PPR, it employs the same technologies and expertise. Thus being fully compatible with the PPR infrastructure, it can help to recover it after a disaster. In this very scenario, PPR Express can help through the Import Storage feature, also available on its WinPEbased part. First, the PPR administrator imports the storage that contains backup images of Administration Server as network storage (in PPR Express Administration Server and Backup Server are automatically deployed during the startup), selects the most recent backup image of Administration Server and initiates the restore, additionally completing the P2P Adjust OS

registered trademarks of their respective owners

be trademarks or

Windows is a registered trademark of the Microsoft Corporation in the U.S.

**Wizard** if necessary, this way getting the infrastructure back on track. Then the administrator can either use PPR Express or PPR to restore Backup Server. To get more information on the subject, please consult the product user manual.



Taking the above information into account let's highlight the following key facts:

- 1. Administration Server should be regularly backed up by all means.
- 2. The PPR administrator should have a WinPE recovery media (CD/DVD or flash) at the disposal.
- 3. Backup Server that administers the storage containing backup images of Administration Server is highly recommended to back up to one of the storages of another Backup Server. Otherwise, the PPR administrator may face a situation when the only way to recover the PPR infrastructure is to use PPR Express.
- 4. Backup Servers (not storages they administer) are recommended to back up to storages of other Backup Servers to avoid rather time-consuming operations involving import of storages and reconfiguration of backup policies.
- 5. Additionally we recommend PPR administrators to update backup images of Administration Server and Backup Servers once upgrade of the PPR infrastructure has been accomplished. Otherwise, the upgrade procedure should be re-initiated after restore to yield correct operation of all members of the infrastructure.

#### **Conclusion**

Paragon Protect & Restore can well be used to protect any of its members, including Administration Server, which operation is crucial for the entire infrastructure. By following the given above recommendations, the PPR infrastructure can be successfully recovered after a disaster to continue doing what is designed to do – protecting ESX guest machines and physical Windows-based systems.

For additional information, please contact us at: www.paragon-software.com, www.protect-restore.com or +1 (888) 347-5462.