MULTI-DESTINATION BACKUP VIA TWO-TIERED STORAGE WITH PARAGON PROTECT & RESTORE

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Overview

Paragon Software's Protect & Restore offers a unified system and data protection solution for virtual and physical machines. The software delivers comprehensive agentless protection for virtual environments hosted by VMware vSphere or standalone ESX servers, 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.

This paper explains Paragon's approach to "multi-destination backups" for maximum business continuity and the highest restore options flexibility. We will highlight the benefits of storage replication/archiving over competitive parallel backup technologies, and offer recommendations on how to configure Paragon Protect & Restore to comply with internal data security policies.

Paragon's Two-tier Storage Infrastructure

Protect & Restore supports a two-tier storage infrastructure that optimizes the backup window and network traffic for backups performed simultaneously. In this type of infrastructure, the first-tier or primary storage can reside as close to the target machines as possible, ensuring the highest backup or replication performance. In roughly 90% of all restore cases the local site is operational and only an individual machine requires restoration, then the primary storage destination also provides the best restore performance.

The second-tier or secondary storage is located off-site (cloud, remote office location) and serves as the DR site to protect from site outage. Or to restore a single machine in case the local backup is not available.
Dual protection process means that all target machines are backed up or replicated to the primary, local storage, minimizing the impact on the production environment. These primary backups are being copied to the secondary storage with a minimum impact on the network.
Compared to competitive parallel backup technologies, Paragon's approach is more resource-efficient, flexible, easier to implement and maintain:

- It avoids extra snapshots of ESX guests or physical Windows machines, thus optimizes backup windows, and minimizes the overhead on CPU and network resources;
- Transfers backup data to potentially multiple secondary storages at any scheduled time;
- Converts backups to replicas and vice versa on the fly, depending on the type of the secondary storage device.

Paragon's Dual Protection Backup Schemes

PPR allows the user to quickly configure efficient and effective dual-protection backup policies in different types of environments.

Using One Second-tier Storage

The graphics below depict 2 common dual protection scenarios. Backup data located on the local storage are copied to the secondary storage, preferably at times when the impact on the production environment and the network can be minimized – weekend or after work hours. Any storage device supported by your environment can be used: local, ESX datastore, network share, FTP, SFTP.

[1] Agentless Hyper-V support is scheduled for December 2013.

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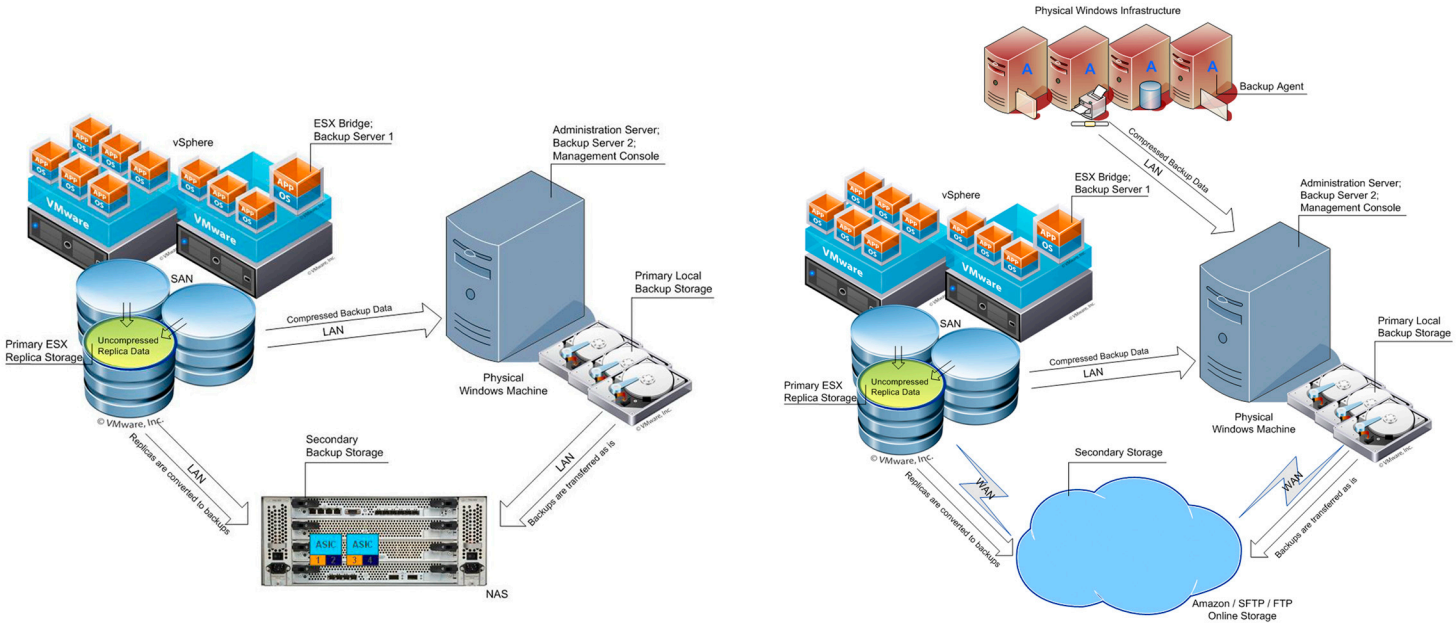
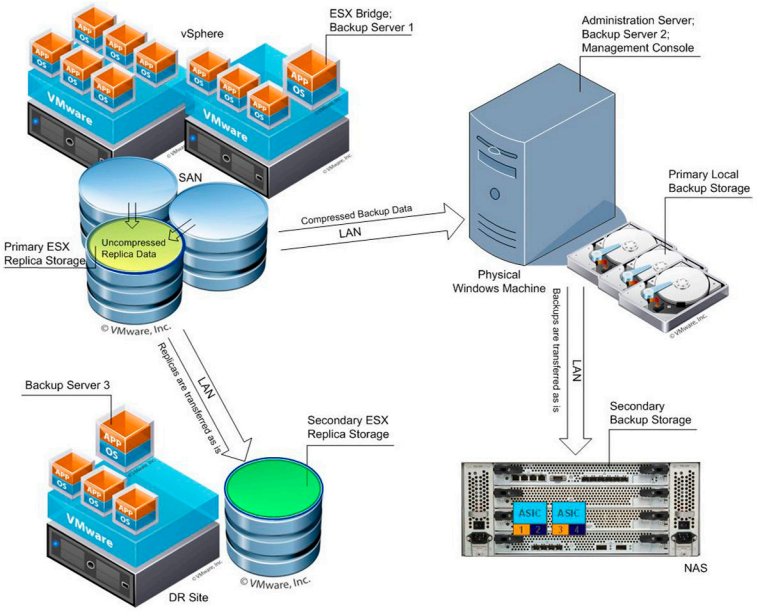


Using Two Second-tier Storages

The two scenarios below allow for advanced dual protection, utilizing two second-tier storages. Backup data located on the primary storages is archived to two different secondary storages, at times when the impact on the production environment and the network can be minimized.
Depending on the type of the secondary storage, VM replicas can be automatically converted to pVHD images and vice versa.

Without backup – replica conversion:



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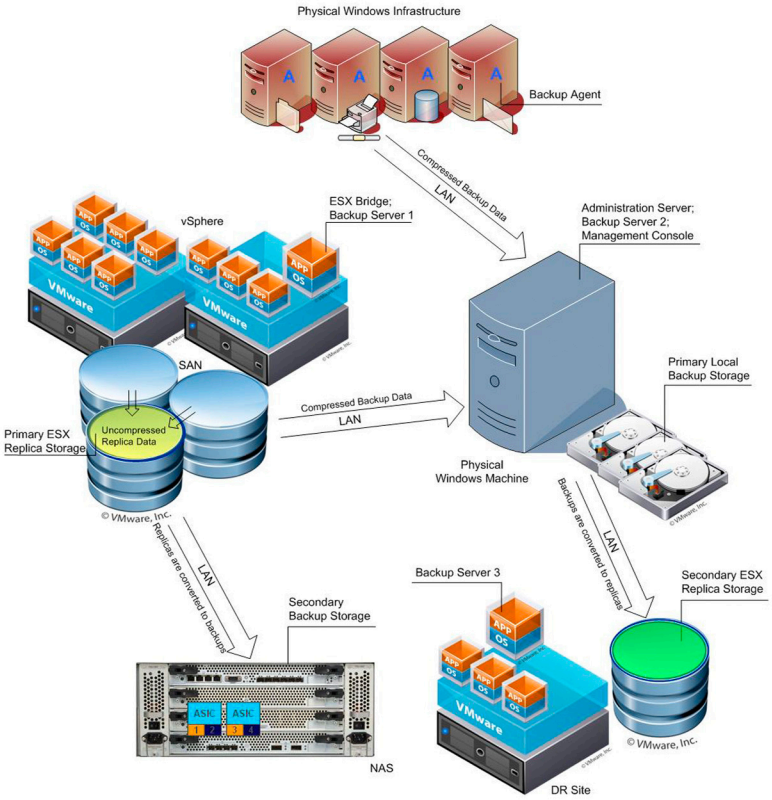
With backup – replica conversion:



Conclusion

Protect & Restore utilizes a two-tier storage infrastructure that optimizes the backup window and network traffic for backups performed simultaneously. By using the primary backup and copying it to secondary storage locations, Paragon Protect & Restore allows the user to configure backup strategies that meet the requirements of the most demanding corporate data protection policies.

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

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