

# Conquering the Top 5 Enterprise Data Protection Challenges

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## Introduction

Today's CIOs, IT Directors, and Managers are faced with a gauntlet of datacenter challenges. Enterprise datacenters are complex and are made up of a mixture of virtual servers, physical servers, multi-tiered applications with multiple dependencies. End users expect 24x7 "always available" applications and the IT group has their hands tied with strict service level agreements (SLA). To meet these types of demands, IT must push for 100% virtualization, simplified disaster recovery systems, and efficient data protection solutions to achieve greater administrative efficiencies and meet these demands.

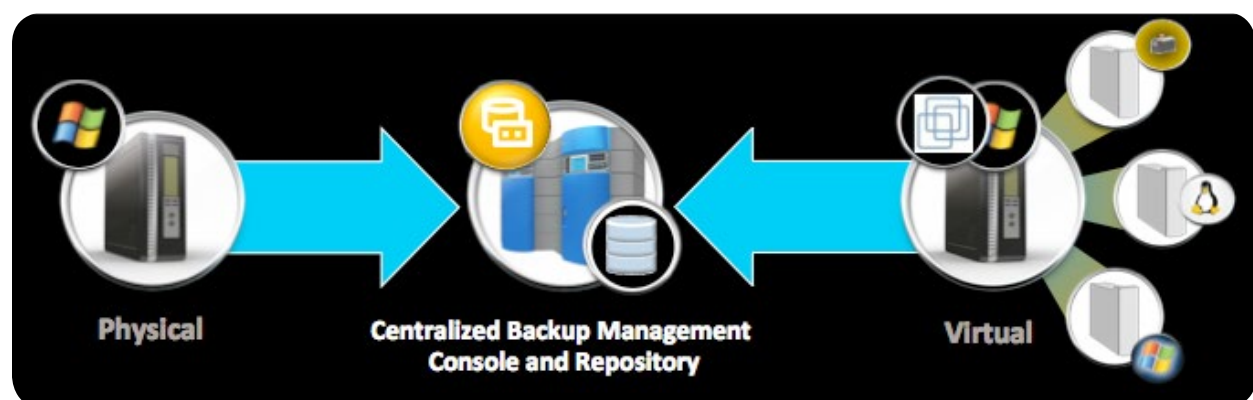
Savvy CIOs are overcoming today's datacenter challenges. Here's how -

## Challenge #1 - Protecting data from both physical and virtual infrastructures

Few businesses have virtualized 100% of their datacenter servers. While it would be ideal if they had achieved 100% virtualization, at many companies, it's going to be a long-term project. In fact, [statistics](#) say that, on average, just 51% of all x86 servers have been virtualized.

Some companies, when initially moving to virtualization, shopped for, and adopted, a specialized virtualization backup product. One of the greatest downsides to those specialized virtualization backup products is that they don't back up physical servers. Additionally, many virtualization specific backup products don't offer complete, or even any, support for sending backup data offsite using tapes. This results in most companies that are using a separate virtualization-specific backup product using an additional backup product to get tapes offsite, and for protection of their physical servers.

This has left too many companies with an inefficient backup posture; with multiple backup applications to contend with, and inefficiencies that extend



from network bandwidth to exploding storage requirements to complexity in managing multiple products.

Instead, what should be demanded from data protection tools is a centralized backup management console and repository, regardless of the server being protected. Additionally, data protection tools should provide enterprises a variety of offsite storage options including tape storage, cloud storage, disk storage, or replication to another datacenter site.

## Challenge #2 - Providing Fast Recovery when Outages Occur

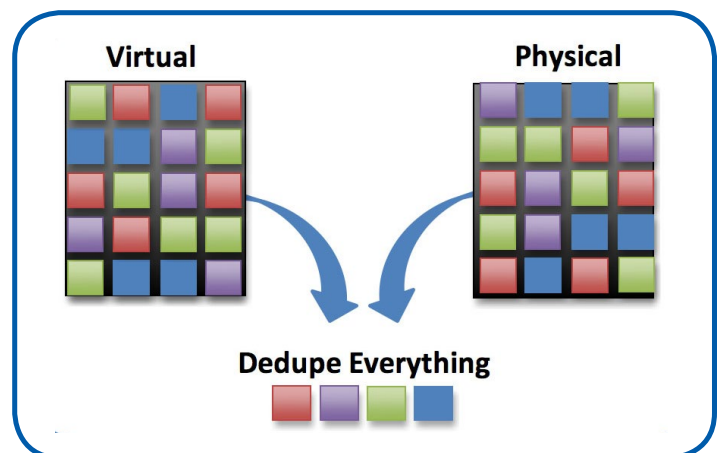
Eventually a disk (or an array) will fail, files will be accidentally deleted, or a file from the archive will be needed and application owners will need their data recovered, fast. When that happens, the process should be quick and painless. IT Admins should be able to recover files in minutes and most servers in less than an hour (depending on the amount of data that they contained).

While many companies perform periodic testing of data recovery, all too often the tests are too simplistic and they result in a false sense of security. In the real world, when a major disaster occurs and all servers have to be restored, IT must be prepared. Admins must perform complex recovery tests. For example, they should have tested and documented results showing how many servers can be restored at once. They should already know how long would it take to restore the company's data when a massive outage occurs. Only by performing data protection recovery tests with greater complexity, will enterprises be prepared.

What IT must demand from their data protection tool is the ability to restore exactly what is needed, when needed, and to any server.

## Challenge #3 - Reducing Backup Time and Storage Requirements

As the number of servers in the enterprise grows and the amount of data in the datacenter grows, so does the importance of reducing the backup window. While some enterprises have the luxury of having an "overnight" backup window, many environments have more data than bandwidth and time to complete the backups.



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If, because of backup reasons, applications aren't available or aren't performing as they should, then they likely aren't meeting the service level agreement (SLA).

The length of the backup process is tied to the amount of data that has to be protected. Thus, if the amount of data being protected can be reduced, then the backup length is reduced. However, it's not realistic to simply "not protect" certain data. Instead, what must be implemented are better compression and deduplication solutions that reduce the storage requirements.

Instead, what should be demanded from data protection applications is global deduplication (physical and virtual) that will reduce backup windows and storage requirements, not deduplication that is only per backup job, or only for the virtual side of the IT.

## **Challenge #4 - Consolidating Servers**

The entire IT department can be more efficient once 100% virtualization is achieved but enterprises shouldn't be forced to purchase yet another tool to facilitate that consolidation.

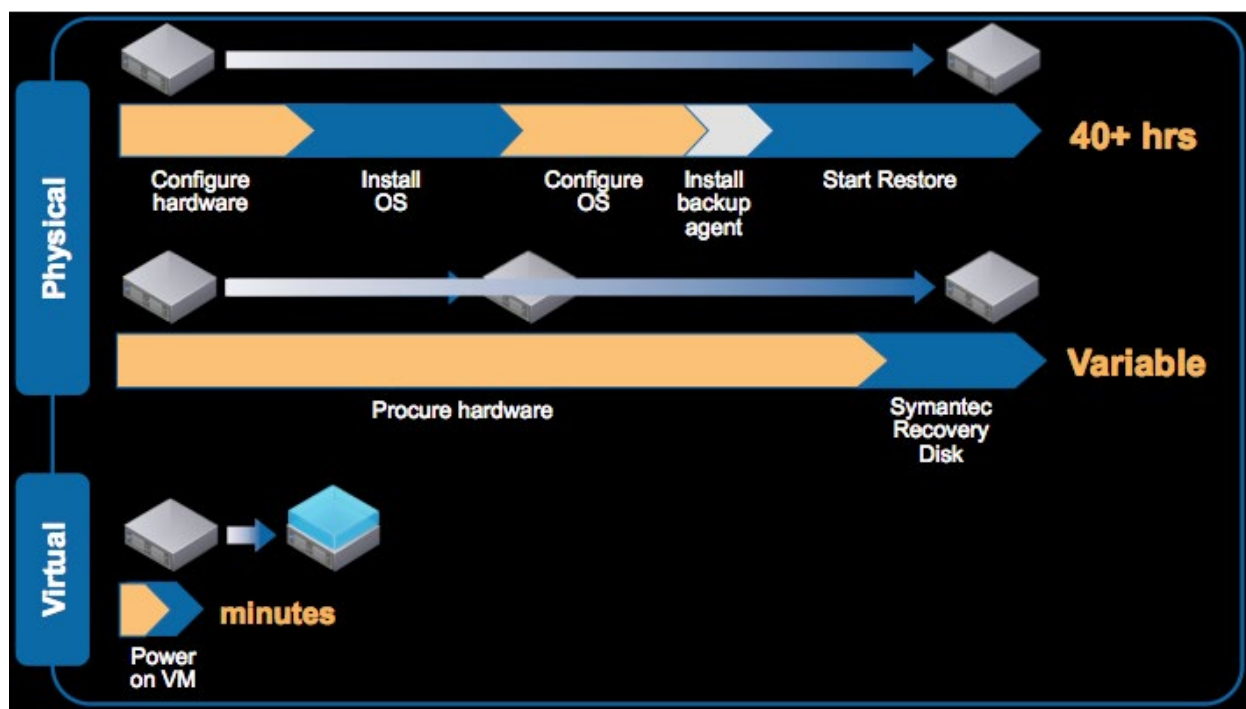
With applications already protecting data on enterprise servers, those servers [DD13] should be able to be restored onto different hardware as well as into the virtual infrastructure. These conversions are termed P2P (physical to physical), P2V (physical to virtual), V2V (virtual to virtual), or even P2C (physical to cloud) and V2C (virtual to cloud).

What the enterprise datacenter needs is flexibility in their data protection application if they are going to continue to consolidate servers using virtual and, one day, cloud infrastructures.

## **Challenge #5 - Simplifying disaster recovery**

Planning, testing, and maintaining a disaster recovery system is a major challenge with the constant rate of change happening in today's data centers. Most companies have a mix of physical and virtual so the greatest data protection challenge is protecting physical servers and preparing for the hardware requirements and extensive restore times required.





Data protection tools must make disaster recovery easier by providing the option to restore physical servers to virtual, as quickly and efficiently as possible.

## Summary

Data protection, server consolidation, and disaster recovery are a never-ending challenge; especially with the rate of change that is happening in most datacenters today. IT organizations are being asked daily to “do more with less yet still increase productivity”. Only by having the right data protection solution and tested procedures in place will enterprises be prepared to overcome these challenges.

## About the Author

David Davis is a well-known virtualization and cloud computing expert, author, speaker, and analyst. He holds several certifications including VCP5, VCAP-DCA, CCIE #9369, and has been awarded the VMware vExpert award 5 years running. Additionally, David has spoken at major conferences like VMworld and authored hundreds of articles for websites and print publications. David's library of popular video training courses can be found at [Pluralsight.com](http://Pluralsight.com). For more information on how to contact David, his speaking schedule, and his latest project, visit his personal website - [VirtualizationSoftware.com](http://VirtualizationSoftware.com).

