



FEEDING YOUR BUSINESS I.T. MACHINE WITH JETFUEL, NOT DIESEL

**Heavy data copies slowing
down your business I.T.
machine?**

In digital economies, I.T. is the engine driving business growth and managing enterprise data is key to giving this engine the right fuel to perform at its best.

The IT team however, is under tremendous pressure to do more tomorrow, with today's budget and the data explosion is not helping.

Sophisticated and complex processes in a company are programmed to record, protect and preserve data which can then be mined for a variety business intelligence purposes. This data is critical, hence protected, backed up and copied, resulting in an exponential growth in storage requirements.

These mountains of data, and the requirement to back it up, coupled with a lack of a data governance plan adds to the woes of the CIO. Companies are soon overwhelmed with multiple, physical copies of business data - for Development, Testing, UAT, Staging and DR.

Companies staying on this course will increasingly find it difficult, if not impossible to serve the objectives of doing more with less resources and increasing agility for the business.

There has to be a simpler way to manage enterprise data growth, reduce time for data provisioning and ensure data resiliency. And get more value out of existing systems.

Too much to ask?

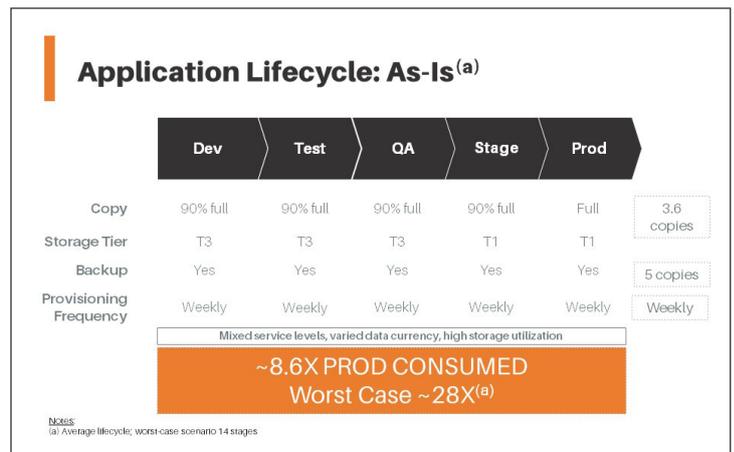
Heavy data copies weighing down the strategy racecar?

IDC reports the amount of data we create is doubling every year, on course to 44 trillion gigabytes by 2020 and a fivefold increase in the amount of data managed per IT professional 1 .

Businesses that are functioning in the 24x7 paradigm and want to stay ahead of the competition, have an expensive proposition to deal with - legacy IT infrastructure, disparate data processing and recovery regimes, complex software systems and expensive data backup and pricey hardware and software requirements. Add to it, the personnel cost to manage this complexity. As mentioned earlier, one of the main causes of multiple data copies is the need for protection and most organisations do it in multiple ways, including creating backup copies, point-in-time copies (for RPO) and data archiving.



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Copy Data Virtualization reduces the number of physical copies required for different

Most backup applications in use today were created for a different era – a time when the data being managed was tiny relative to today’s and magnetic tapes were used to record and archive (some organisations still do).

In an ‘as-is’ scenario, each separate copy of the data, while serving a clear and beneficial business purpose, is adding to the mass and complexity of data that an organisation has to manage. There is little to no utilisation of modern data management tools and strategies to reduce the wasteful usage of physical storage space and RTO + RPO assurances that barely meet SLAs. In this world, companies are paying exorbitant sums out of limited budgets for licenses, disparate products, maintenance, man-hours, facilities and management.

This, when the mandate is to squeeze more value out of existing IT investment, and doing better tomorrow than we did yesterday.

Wrong fuel in the engine - and no one to fix it

In addition to the above mentioned issues arising from the increasing number and size of business data copies, there are even more serious business issues caused because of it. Such as expanded development schedules and increased time to market caused by provisioning bottlenecks, which themselves are the result of the data copy sprawl.

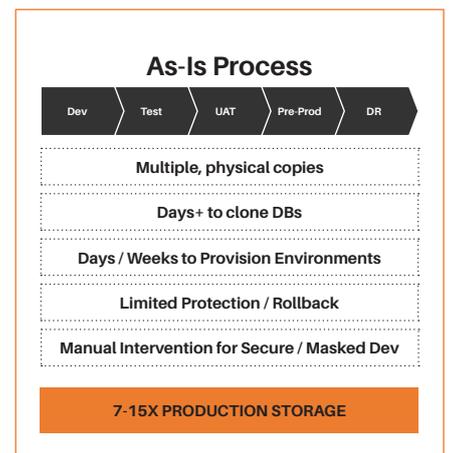
A recent survey by the CIO magazine revealed that 85% of projects were delayed because of data and environment provisioning delays and 60% of the projects are over budget and/or behind schedule.

Usually, provisioning an instance of the production database for the development team relies on the size of the database, the process overhead and the availability of storage. Given these factors, provisioning for one instance of the production database can take days to weeks. By the time the development team gets its hands on the data, it is already decaying and is going to affect the result of their work, lead to project holdups and business acceptance delays.

This is assuming the development data is being refreshed every month, while the reality at most businesses is that dev data is more often refreshed once a year. The result is that production data is complemented with dummy data and the consequences of this practice are well documented.

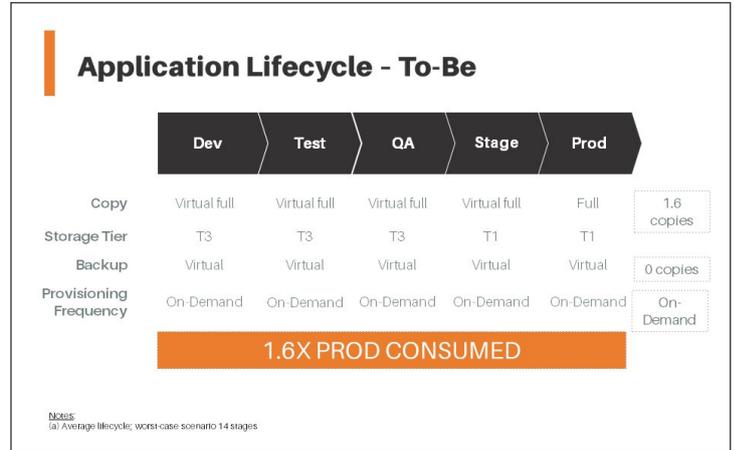
In an ideal world, fresh copies of production data should be available using role-based access controls that enable self-serve data provisioning. Developers and DBAs would be more efficient, turning around applications much faster with a much reduced cost imperative for the organisation.

Only one copy – a single physical ‘golden’ copy is needed that can then spawn multiple virtual copies. And these virtual copies can be deployed for many uses.



Notwithstanding the complexity caused by multiple data copies, there are issues that are vital to every business that have to be addressed - first and foremost among which is protection and preservation of data, followed by ensuring availability of the data on demand to every stakeholder in the organisation. Then consider how to perform this in the most cost-efficient manner, simplify this management process and transform data into more value for the company.

With the growth in complexity of systems, grows the need for specialist skills to help manage it, which are not always available with the in-house IT team. So how can you approach this challenge of enterprise data management?



Get rid of dead weight and plug in a turbocharger

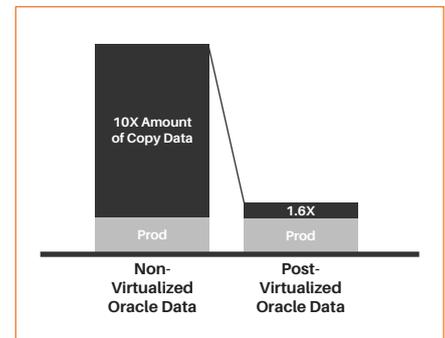
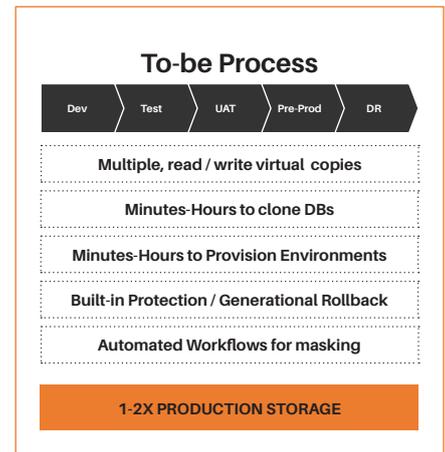
At the beginning of this century, senior IT and Finance leaders faced a similar challenge in the shape of underutilisation of servers. Before clever software allowed us to virtualize physical servers, most of them were running at less than 10% utilization. To keep up with requirements, more servers were being bought, more power and more cooling was needed and capital expenditure swelled. In direct correlation, operating expenses went up in the shape of managing this server sprawl.

Virtualisation software made it possible for an underutilized server to be logically separated into multiple, virtual servers – unlocking massive computing capacity that already existed.

We can now apply the same approach to physical storage which currently sits underutilized. Even the storage that is utilized is occupied mostly with excess copies of data. Now enterprises can virtualise data storage just as they virtualised servers and networks enabling the instant availability of data that significantly reduces the requirement for physical storage. With copy data decoupled from infrastructure, capital intensive hardware, associated software licences and resource are largely eradicated delivering up to an 80% reduction in storage costs and up to a 70% reduction in network bandwidth costs.

Using copy data virtualization, production data is kept intact, captured non-destructively in its native form. Only one copy – a single physical ‘golden’ copy is needed that can then spawn multiple virtual copies. And these virtual copies can be deployed for many uses.

After an initial capture of production data, only incremental changes need be moved over the network and stored in the constantly changing golden copy at the core of the copy data virtualization platform. Management of



Virtualized Data radically reduces the amount of copy data stored

this copy data store is conducted in the language of the business: the SLA. Users are able to define a generic SLA including frequency of capture, location of captured data, and duration of time to retain captured data, schedule, and resources.

Once an application's data is being captured and managed under an applied SLA, it may be used instantly, in any number of ways.

Currently we're making copies of production data for backup, DR, testing, analytics, BCP and many more applications. Each of these applications continue to make more copies of copies and come with their distinct technologies, operational methods, licence costs and overheads.

With copy data virtualization however, an organisation can gain greater control of its data for internal governance, compliance and for greater business resiliency and agility. It allows nearly unlimited use of copy data – virtual and physical – all enabled through a common, unified platform.

We can now have more rapid and agile use of data for application development, testing, business intelligence and reporting. Automated data provisioning is now a reality and so is workflow optimisation.

Bring a leaner, faster and agile machine to the race

With improved technology, businesses now have within their grasp, the ability to transform a complex data environment into a more integrated, simple to manage space.

We can now change the way we approach data management, looking at replicated versions and virtual copies of data, instead of storage farms clogged with rapidly decaying physical copies.

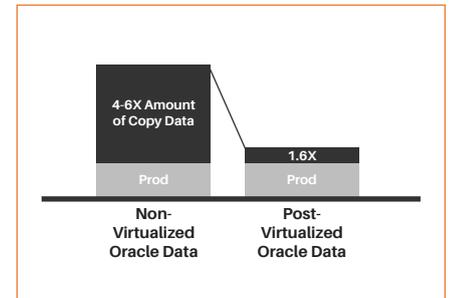
Using copy data virtualization is enabling dramatic infrastructure consolidation, improving recovery and provisioning times and allows for more agile use of data.

Applications may be developed more quickly, tested more efficiently and deployed with improved resilience and agility, aligned with business objectives. Copy data virtualisation enables a radically simple, application centric approach that lets enterprises capture data from production applications, manage it more economically and use it where and when they need to.

A number of organisations partnering with Spectrum have witnessed cash-positive impact within the first month of implementing a data transformation project using copy data virtualization. More have observed a five-year payback within 13 months and a 330% IRR.

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In terms of reclaiming total storage, IT teams have unlocked 90% in total storage for every 100TB production database. The reduction in storage array utilization is from 3:1 (Copies : Data) to 1.6:1. In large organisations such as banks, with higher data requirements the reduction can be as dramatic as 15:1 to 1.6:1.

Development teams are also appreciating a 94% reduction in DB provisioning time. Having removed the shards of data that were being used in development and testing, while freeing up capacity and delivering next-generation self service provisioning and automation. BI team SQL DB refreshes have gone from a 24 hour time frame to approximately 5 minutes per environment.

VMware backup and recovery times go from days to minutes and performance impact is completely eliminated. Improved data recovery capabilities better the RTO for critical environments and reduce cost of downtime by 35%.

Backup costs are eradicated and IT teams achieve a much simpler approach to managing data holistically. Overall, the costs of ownership are reduced as backup software and servers, specialised de-duplication systems and archive repositories can be eliminated.

Primary storage footprints can be reclaimed as physical copies on expensive storage are replaced by virtual ones.

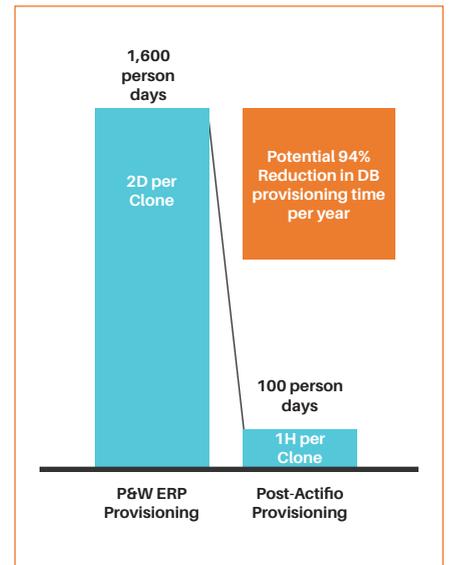
In addition to the outlined benefits, transforming business data this way gives teams a much higher speed to market and moves the mind-set from backups and recovery to managing data in a holistic and simplified environment. Application development, testing cycles and provisioning times are accelerated without storage tax and capacity constraints.

Next steps & choosing a partner in a data transformation project.

Transforming enterprise data goes beyond protection and backups, to essential business resilience and the capacity to increase agility and insight. The CIO observes results in enhanced management, higher productivity and faster analytics, while the Finance Chief sees a higher return on existing investments and lower energy and other operating costs related to storage.

Implementing a data transformation project requires expertise that may not always be available in-house, for organisations with complex IT setups with multiple pieces of technology. However, partnering with a specialist in key design work to complement the work the in house IT team performs can

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Provisioning time at a medium to large organisation can potentially be reduced by 94%

pay dividends in rapid design and implementation of data virtualization strategies that start paying for themselves within the first few months of execution.

Copy data management subject matter experts bring with them skills and an objective view of an organisation's technology environment. They can highlight blind spots and reveal how best this strategy can help the organisation leverage existing IT investment while focusing on continuous improvement.

It's time to bring in the specialist crew to help tune up and turbocharge the performance of your Business IT racecar.

About Spectrum

Spectrum are a team of experienced consultants with deep technical expertise and strong industry partnerships who help corporate IT teams find and extract more value from their IT investment.

Our team understand complex enterprise computing environments and can help manage enterprise data in innovative ways to reduce the storage overhead while improving data safety. Clients work with us to ensure they have access to high-level specialist expertise not available in-house, gain insights into best practice in our areas of strength, and help make the smartest investment decisions around IT.

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