

Solution Brief – **Unified Backup and Recovery**



What is Unified Backup?

Definition: Unified Backup is the incorporation of many data protection functions into a single application solution, whereas an organization's data protection needs can be implemented to mimic normal business workflow.

A Unified Backup solution should include several functions in one application, such as:

- ▶ Live (Real Time) & Batch Backup
- ▶ Deduplication at both Target and Source
- ▶ Real-Time Replication for Critical Apps
- ▶ File Versioning for Compliance
- ▶ Bare Metal Recovery to VM or physical
- ▶ CDP for Point-In-Time Restore

Why a single application? Legacy and point products create complexity, redundancy and waste.

Remove Complexity and I/O Workloads

Unified Backup provides the same underlying single framework and structure for the different data protection tools. You get super-low systems and storage overhead, with vastly reduced complexity, from day 1.

- ▶ Single Data Mover (not several)
- ▶ Single Policy and Metadata framework
- ▶ Single Logging framework
- ▶ Single Data Classification framework
- ▶ Single Unified Repository for all data
- ▶ Self-Managing Nodes via Policies

Dedupe for Capacity

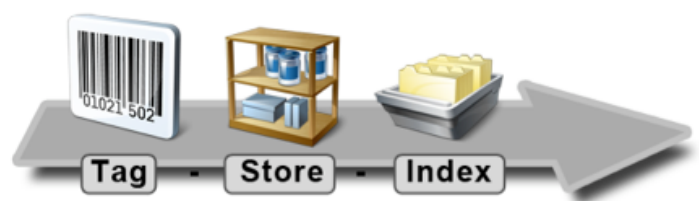
Look for source based deduplication in addition to target deduplication. Deduplication at target (data repository) has been the rage; a way of battling the problems of legacy backup. A major paradigm shift is Unified Backup never copies redundant data in the first place, so most of the waste is never created from the start. It will also natively deduplicate any duplicate instances within the repository. No separate product required.

Dedupe for Bandwidth

Source based deduplication saves valuable network bandwidth. While capacity savings via deduplication at target (across the network) has been the focus of backup upgrades for the past several years, bandwidth has continued to suffer. Legacy backup products are the network killers of today. They send over huge chunks of redundant data at regular intervals, murdering performance across the domain. Unified Backup will deduplicate data at the source level before it goes across the network.

Tag/Store/Index for Search/Restore

Legacy backups create backup sets, and resulting restores are painful. Unified Backup intelligently tags-stores-indexes data, making it both an archive and a restore/recovery repository; for all your users and their individual data.



Unified Workflow

Unified Backup is information aware because it automates data classification. This allows data to be managed through normal business workflows. The VP of Operations can unify his workflow procedures with data protection and compliance, together with actual data-flow. New levels of productivity of the result, as the tools now follow the normal business processes.

Unified + Distributed Repository

To properly implement Unified Backup, repository data must be unified, single instanced and deduplicated, no matter what data protection tool is used. Backup, CDP and Versioned data is combined and managed in real time by a powerful metadata store so it is searchable via various criteria.

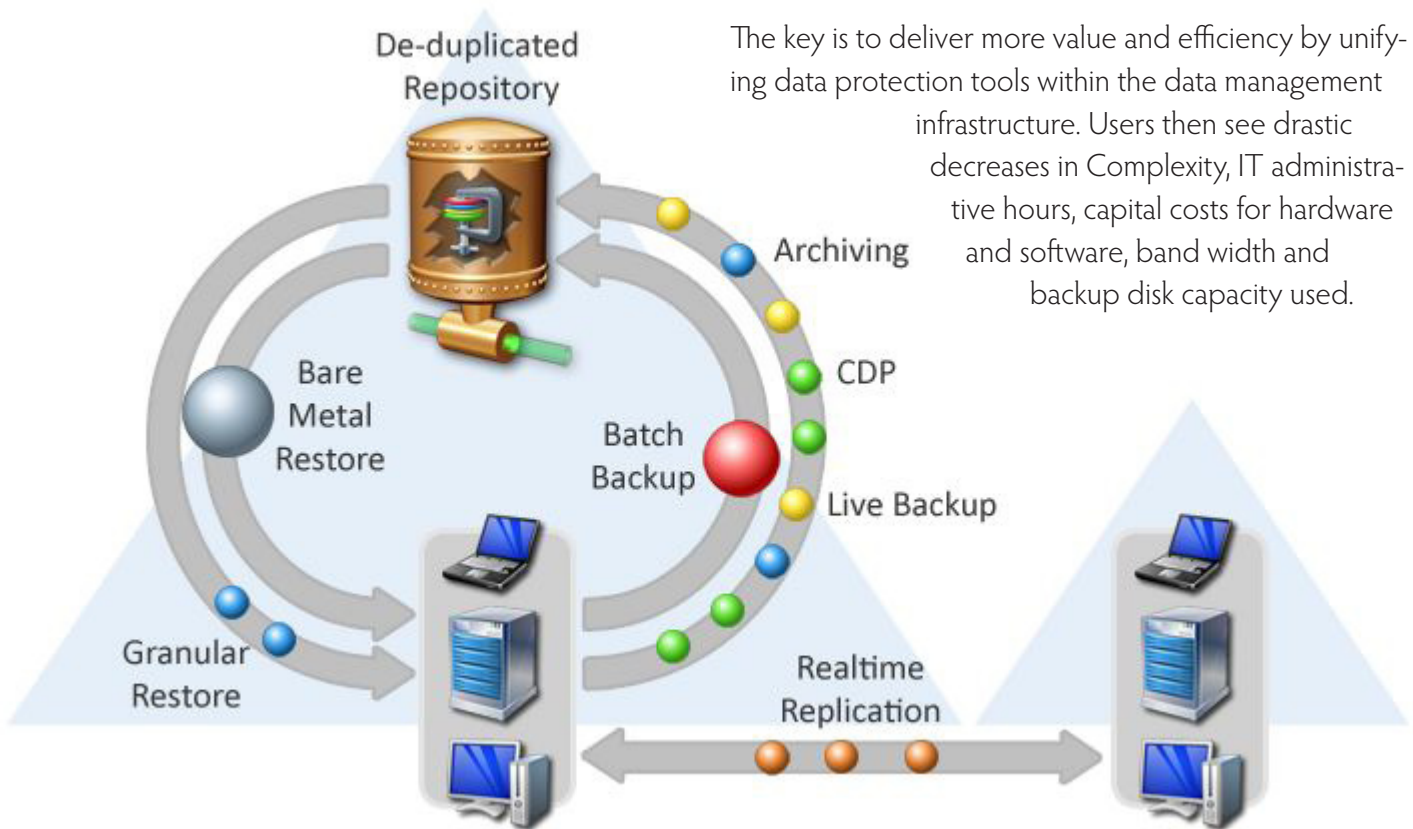
Snapshot or file-system view search is also important as user experience best decides how/what to restore.

Move It . . . Once . . . Anywhere

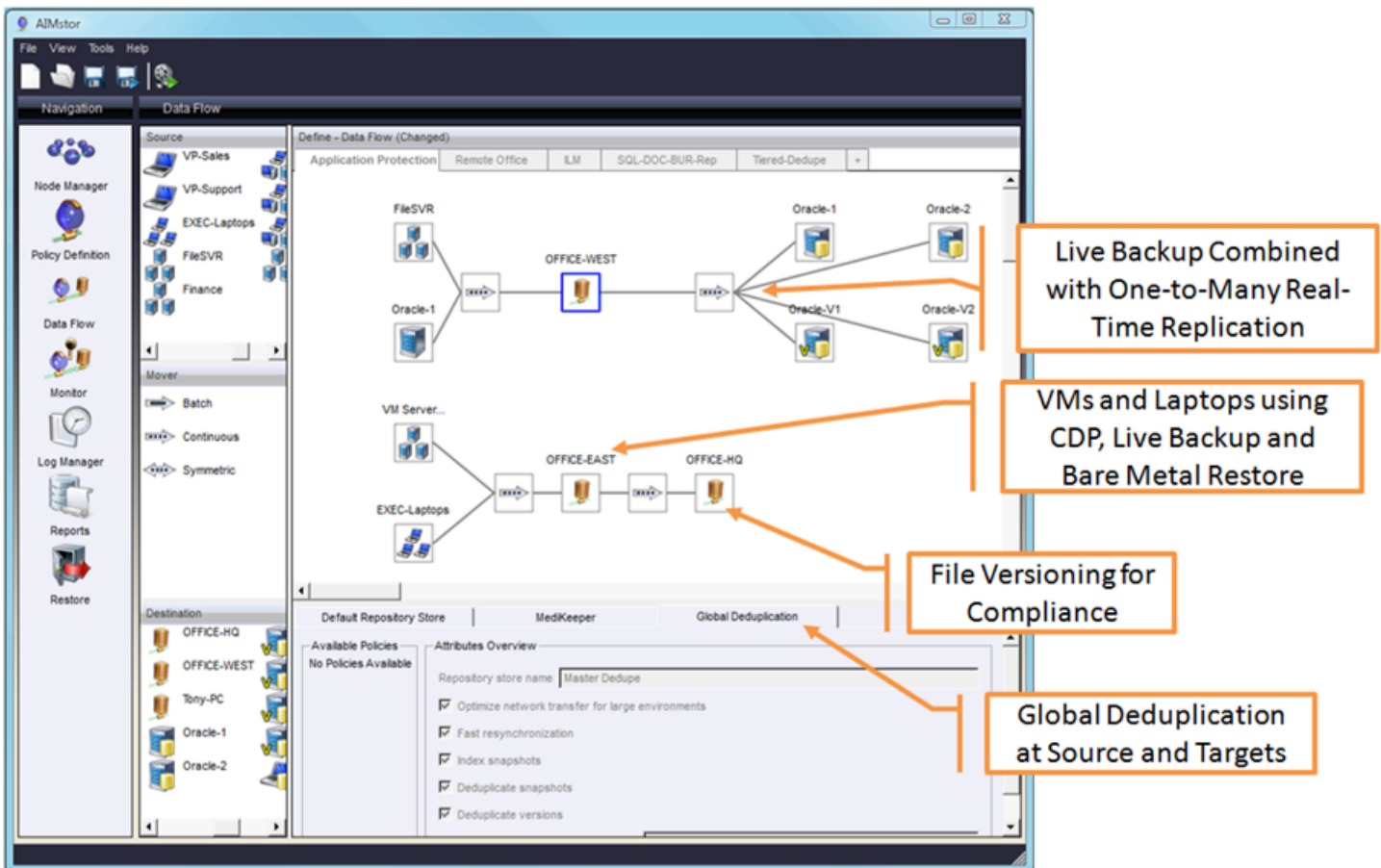
Taking data from a source machine, be it a laptop or a critical Oracle server, comes at a cost. If you are running several products with individual footprints and data movers, the cost is increased many times over. The drag ratio on CPU and memory I/O becomes heavy very quickly when multiple data movers are at work. In VM environments where one physical machine is serving several virtual servers, the impact of legacy approach is even more pronounced. Unified Backup has a single data mover and moves data once to the destination or multiple destinations. Efficiency and overhead are reduced by orders of magnitude.

Driving Value

The key is to deliver more value and efficiency by unifying data protection tools within the data management infrastructure. Users then see drastic decreases in Complexity, IT administrative hours, capital costs for hardware and software, band width and backup disk capacity used.



Cofio's AIMstor software combining many data management functions into a single policy – Unified!



Notice how many data management functions are in use in this single policy?

- ▶ Live Backup
- ▶ One-to-Many Replication
- ▶ VM – Live Backup with CDP
- ▶ Bare Metal Restore – VM, Physical, Dissimilar
- ▶ File Versioning for Compliance
- ▶ Deduplication at Source and Target

Unified Versus Integrated

Storage vendors will often claim “unification” with their offering, but what they mean is “integration”. In short, “integrated solutions” promise end-to-end capabilities, cross application conformity, ROI based on closely coupled solutions.

It is a familiar story but really it means this:

- ▶ The products were never intended to work together, but the vendor found ways for the solutions to co-exist somehow.
- ▶ Expensive professional services are required, due to inherent complexity of the integration effort, and on-going integration issues.
- ▶ Most components will be redundant; repositories, metadata, GUI's, policies, I/O processes, product footprints, etc.

At the end of the day, when it comes to integrated solutions, the user is the final point of integration.

What does “Legacy” look like?

Legacy backup may look a lot like what you are using, that's why you have read this far.

Legacy backup uses the old full-incremental-differential dataset approach, pushing huge datasets over the network and into disk and tape repositories. The legacy approach drives the entire de-duplication product market. Deduplication, applied to legacy backup, is a band-aid. It is fixing some of the symptoms but not the root cause. Legacy products are batch and scan intensive and create multiple duplicates of backup data with each new backup job run.

There are some real-time backup, CDP and replication point products out there too. But be careful, as many of them are volume based and must grab everything providing no selection of what to keep and what to throw away. You take it all, like it or not. Also, they remain separate point products and can never be unified.

“Quick Fix” Means “Pay Later”

Vendors are acquiring multiple point products in an attempt to repair the shortcomings of their legacy flagship products. They may claim to “unify” these separate point products together, but in all cases, they are simply “integrated”. A shared user interface is not even the start of true unification, and is usually the total extent of most integration efforts.

While vendors can increase sales this way, they frustrate users, and burden them with increased complexity, support needs and costs.

Summary

Unified Solutions are on the rise, but most will simply be “integration imposters”. Unified designs require a dedicated ground-up effort. The ROI is fast and easy to justify, because unified solutions cut out the waste, are easy to implement, and can meet your evolving needs.

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