

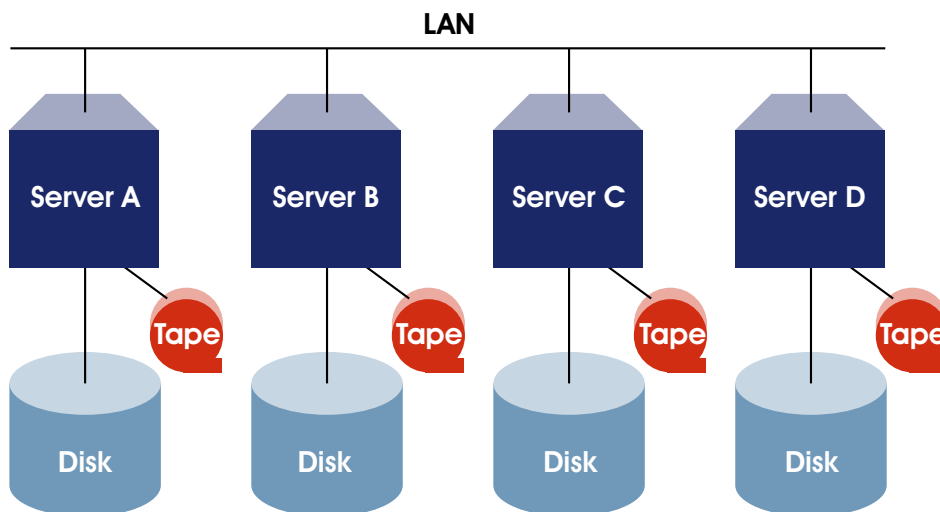


enlightenment

in a complex IT world

Storage Consolidation

The diagram below shows a typical storage environment present within most company's IT infrastructure. Storage is inflexible, has poor availability and is poorly utilised. Management is difficult as many consoles are required to manage disparate storage systems creating inefficiencies.



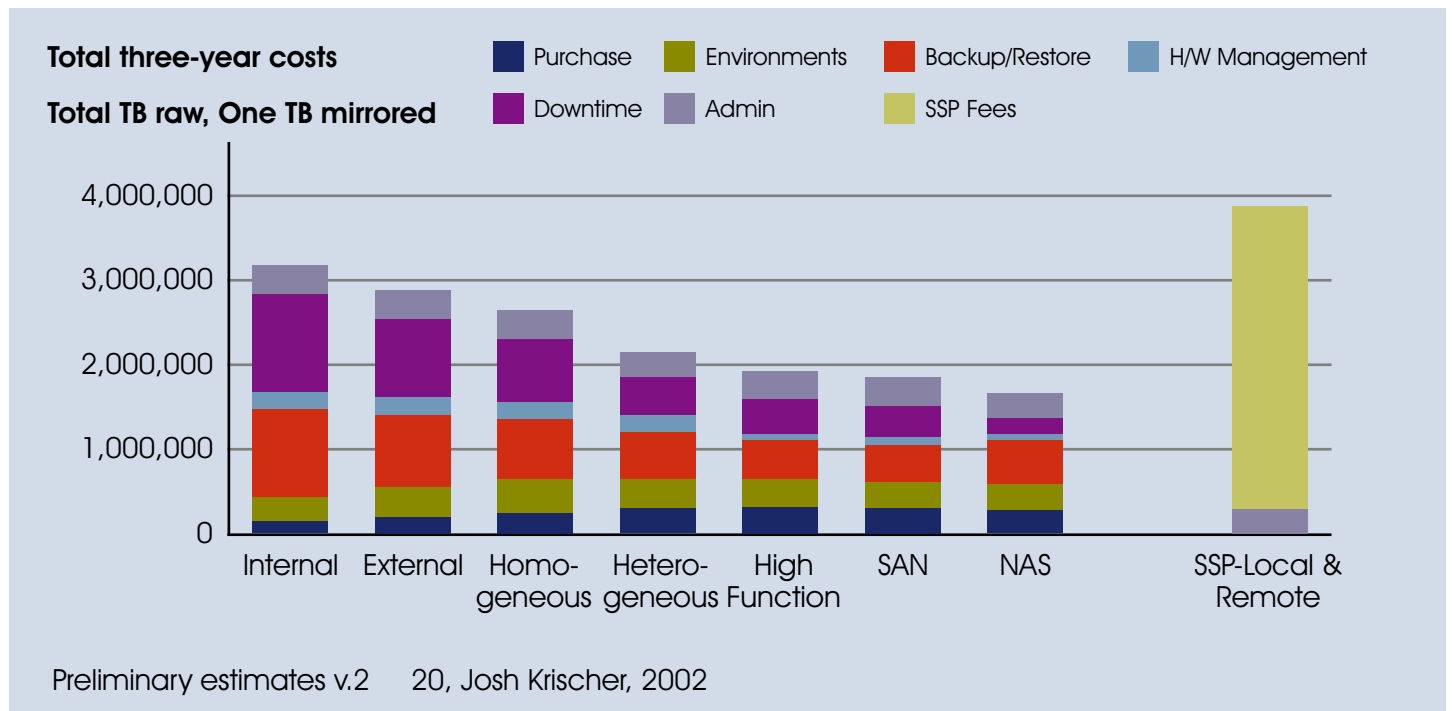
A Typical Direct Attach (DAS) or Internal Storage Environment

The table below from Gartner Group shows that consolidating storage either via a monolithic subsystem such as the StorageWorks Disk Array XP or to a Storage Area Network helps the business to scale without employing additional people costs.

Storage Type	GB managed per administrator
Direct Attach (DAS) or internal storage	200
Direct Attach – co-located	400
Consolidated Direct Attach – i.e. to Monolithic Subsystem	1600
SAN Initial Phase	2000
SAN after 18 months	8000

So what are the ways in that we can achieve consolidation? The graph below shows a 3 year TCO study for 2TB of storage in various environments. The key points are:

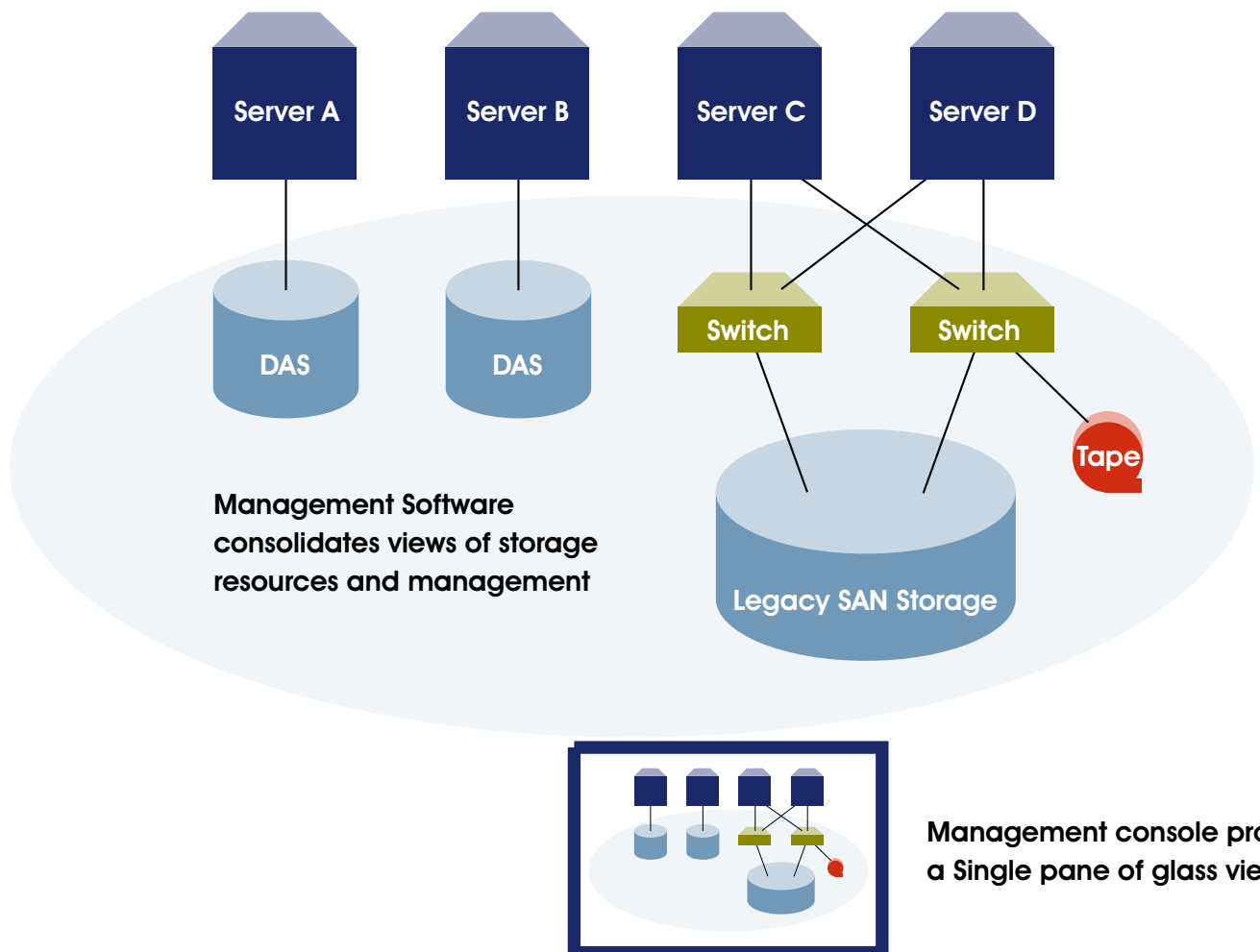
- Consolidation platforms such as Heterogeneous Direct Attach, NAS and SAN have a much lower TCO than using local internal storage or direct attach storage
- NAS has the lowest TCO closely followed by SAN
- Managed Storage Services represent the highest TCO over 3 years



There are three ways in which we can consolidate:

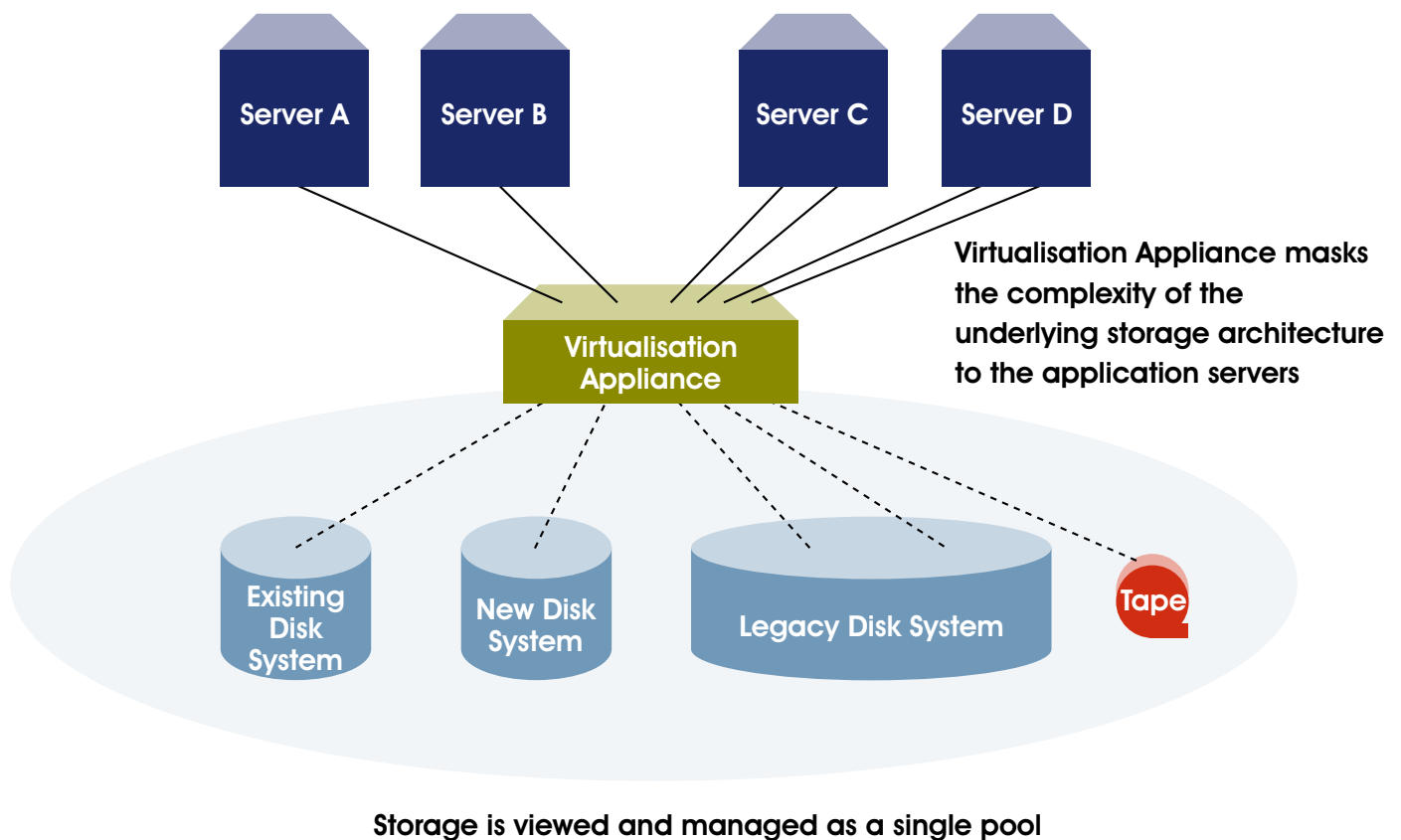
1. Consolidate management tasks of multiple storage systems to a single pane of glass view using high level storage management.

- Reduces number of interfaces and locations used to manage storage
- Increases ability to scale within same people print
- Reduces management costs
- Protects existing investment in storage systems
- Increases storage utilisation through use of capacity management tools



2. Consolidate storage systems into a single pool of storage using storage virtualisation. This enables it to be managed more effectively and increases the utilisation and flexibility of storage.

- Reduces number of interfaces
- Reduces complexity
- Protects existing investment in storage systems
- Increases storage utilisation
- Increases flexibility of existing storage



3. Consolidate storage into a single storage subsystem (for example a StorageWorks XP, EVA or NAS).

Reducing complexity and management costs

- Reduces number of management interfaces
- Reduces complexity
- Increases storage utilisation
- Reduced TCO
- Easy to scale

