

# STORAGE SWITZERLAND

## PLANNING FOR THE EXABYTE DATA CENTER



An exabyte data center is one where the total capacity requirements are now approaching one exabyte of storage. In an exabyte data center you no longer worry about TB's or even PB's but now you have to store, protect and maintain exabytes of data. How exactly do you plan for data centers that are going to store an exabyte data center?

Does an exabyte seem out of reach? It shouldn't be, a large number of data centers are already approaching a petabyte of storage today. If you do the math on the current data growth, most of those data centers will be dealing with an exabyte of data in a few years. Even if your not approaching a petabyte today, if you are growing you can learn a lot from how larger companies plan to deal with this coming reality.

An exabyte of data or even hundreds of petabytes, is a all hands on deck problem. To exclude any type of storage medium from the solution is simply not smart. For example if you plan to store an exabyte of data only on a scale out storage system you should measure the cost, power and most importantly space, probably in number of data centers required, to accomplish that plan. For many systems, if they could scale that large, the costs associated with that are going to be impossible to cost justify. There has to be a tape archive involved.

Performance is also a concern on a system this big. Having a single mechanical disk system with an exabyte of capacity is

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probably not going to perform well. For many sites a small layer of solid state storage will be critical to meet performance services levels. Tape actually becomes an enabler for SSD by allowing old data, measured in days instead of years, be moved out of the way so that only very active data is on the premium storage tier.

The other factor is that different storage hardware solutions, either from a single vendor or different companies, will have strong points and weak points. Instead of suffering with a single product that can do it all but suffer through its weak points, we think it makes sense to merge these capabilities together. This is the ideal role for the [Active Archive Alliance](#) and is one of the reasons why there is such interest in the solutions from its member companies. It allows each storage medium (SSD, standard disk arrays, scale out storage and tape) to work together but allow you to pick the best solution for your environment at each level.

Ironically tape, you know the technology that was supposed to be dead, is probably in the best position to grow as a result of our desire to create and retain more and more information. While disk and especially SSD will grab the glamor roles, tape will be the single largest chunk of storage in the exabyte data center or it better be if you are going to be able to afford to have an exabyte data center.

### About Storage Switzerland

Storage Switzerland is an analyst firm focused on the virtualization and storage marketplaces. For more information please visit our web site: <http://www.storage-switzerland.com>

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