

Introduction to the book

"I close my eyes, and think of home.
Another city goes by in the night.
Ain't it funny how it is,
you never miss it 'til it has gone away.
And my heart is lying there,
and will be 'til my dying day."

We would like to dedicate this book
to the greatest band on earth, **Iron Maiden**.

Introduction to the book

When talking about virtualization and the underlying infrastructure that it runs on, one component that always comes up in conversation is storage. The reason for this is fairly simple: In many environments, storage is a pain point. Although the storage landscape has changed with the introduction of flash technologies that mitigate many of the traditional storage issues, many organizations have not yet adopted these new architectures and are still running into the same challenges.

Storage challenges range from operational effort or complexity to performance problems or even availability constraints. The majority of these problems stem from the same fundamental problem: legacy architecture. The reason is that most storage platform architectures were developed long before virtualization existed, and virtualization changed the way these shared storage platforms were used.

In a way, you could say that virtualization forced the storage industry to look for new ways of building storage systems. Instead of having a single server connect to a single storage device (also known as a logical unit or LUN for short), virtualization typically entails having one (or many) physical server(s) running many virtual machines connecting to one or multiple storage devices. This did not only increase the load on these storage systems, it also changed the workload patterns and increased the total capacity required.

As you can imagine, for most storage administrators, this required a major shift in thinking. What should the size of my LUN be? What are my performance requirements, and how many spindles will that result in? What kind of data services are required on these LUNs, and where will virtual machines be stored? Not only did it require a major shift in thinking, but it also required working in tandem with other IT teams. Whereas in the past server admins and network and storage admins could all live in their own isolated worlds, they now

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