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DNA and the future of data storage

Modern data centres are miracles of technology (yes, we would say that). But for all that, data is now getting created faster than we're creating the storage needed to house it, and the gap is growing. By 2017, you, me and the other seven-billion or so people on the planet will generate more than 16 trillion gigabytes of digital data annually.

Capacity isn't the only burning issue. So's time. Data stored on modern technology is only good for up to 30 years, if you're lucky.

Biology offers a neat solution that you might have heard of: it's called DNA.

DNA can last for centuries. What's more, in the space that our best technology uses to house 10 gigabytes of data, DNA can pack in billions of gigabytes.

What's really exciting is that this is not science fiction: DNA storage has been proven to work in practice. In fact, the only real barrier left to overcome is cost. Which is to say, DNA will almost inevitably be the next humungous and affordable thing – and within the next decade.

Of course ten years is a long time in business. So until then software-defined storage will likely remain the best option for any business serious about managing large volumes of data.

And we do mean large. Nuance Communications, the company behind Dragon voice recognition software, processes around 600 TB of data every day, spread across 20 million jobs.

Senior Storage Engineer Bob Oesterlin is a big fan of IBM's Spectrum Scale solution, a high-performance, highly scalable storage solution for unstructured data.

One of its IBM Spectrum Scale's strengths is that it lets Nuance Communications staff access data in multiple ways without having to learn new technology.

"We can implement the technology," says Oesterlin, "and users, by and large, don't need to *know* the technology." Or even be aware of it, for that matter.

One of the interesting things about Nuance Communications' approach is that it's something of a hybrid. "We're always looking to tie on-premise storage with cloud enabled technologies to get more value for our IT dollar," says Oesterlin. Consequently, the company buys higher performance storage where it's needed, and doesn't buy it where it's not. That means it's able to grow its storage environment at a relatively low cost, because not all storage *has* to be high performance.

IBM Spectrum Scale is just one part of the full IBM Spectrum Storage family. Other solutions include:

- IBM Spectrum Control: Analytics-driven data management to reduce costs by up to 50 percent.
- IBM Spectrum Protect: Optimised data protection to reduce backup costs by up to 38 percent.
- IBM Spectrum Archive: Fast data retention that reduces total cost of ownership for active archive data by up to 90 percent.
- IBM Spectrum Virtualize: Virtualisation of mixed environments which stores up to five times more data than other approaches.
- IBM Spectrum Accelerate: Enterprise storage for cloud deployed in minutes instead of months.

For more about IBM Spectrum Scale or any other IBM storage solution, get in touch with us today.