

### Anatomy of a Disaster – Averted

The Lukmire Partnership, early October 2007, Bill Evans: “I know we need to implement a better Disaster Recovery solution, I just haven’t gotten to your proposal yet. I’ll get to it this week.” It’s a good thing he did.

The Lukmire Partnership (TLP) provides high-quality professional architectural design services to public sector projects in the Washington DC metro area. They live and die by their computers. **Their clients have no sense of humor about missed deadlines.** Bill had been relying on a tape-based solution for years, and doing all of the right things: off-site backup, test restores, a good rotation algorithm. But with 300+ GB of data, backups were taking longer and becoming unwieldy. Further, Bill didn’t want to risk losing an entire day’s worth of work. Worse, he knew that if a server failed, his network could be down for days while it was being repaired or replaced, and then while the data was restored.



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The Lukmire Partnership is going into its eighteenth year in business, offering architectural, planning and interior design services to their institutional and public sector clients. They recently completed the new Shirlington Library and Signature Theatre complex shown here.” Photo by Eric Taylor.

On November 16<sup>th</sup> we implemented our NAS appliance-based solution at Lukmire. On November 26<sup>th</sup>, in the wee hours of the morning, during his overnight backup, his server crashed. Hard. An electrical failure took out his RAID controller and destroyed the data on his RAID array. [Insert name of your favorite hardware vendor here (we'll call them FHV for short)] was summoned. With a four hour response time for parts, Bill assumed his server would be up fairly quickly. The parts arrived: much hardware fiddling ensued. They did not solve the problem.

The backup image of Bill's server that is on the NAS appliance is spun up as a VM. There is a minor unanticipated problem with AutoCAD licensing, which is tied to the MAC address of the controller card of the server. The problem is that everyone from AutoCAD is in Vegas at an event. Once the right people are reached, this issue is substantially solved, and Bill's staff can get back to work.

The next day FHV sends over a more complete repair kit: motherboard, memory, memory daughter cards, more drives. More hardware fiddling ensues, and the server is repaired. After hours we begin a restore from the NAS to the server, but the server isn't interested in cooperating. Early in the process new errors crop up. The restore process fails, and FHV is called again.

All parties agree to try one more time. We're now into the weekend. FHV sends over a technician and practically every spare part for this model server in the known universe. The technician spends all day Saturday mixing and matching, stirring and baking, before finally declaring the patient has well and truly died. FHV agrees to completely replace the server with a newer model, but that is going to take a week. Fortunately, we have a week: the NAS appliance is carrying the load.

After the new server arrives, Bill makes the decision to delay the restore even longer, as his company is close to a major deadline and the NAS solution is working so perfectly. When the restore process is finally done, the total time that has elapsed between failure and restore is three weeks.

TLP did almost everything right. They planned for a disaster before it happened. They use Windows Server open licensing (instead of OEM software), which allowed them to run the server on the NAS appliance and then transfer it to new hardware when it arrived. There were still unanticipated problems, but Bill commented in retrospect that "from the users' perspective, this whole episode was pretty seamless. They didn't see much downtime at all, certainly not what they would have been facing with the backup tape recovery scheme. But I know how much effort went into this whole process and the hurdles that we hit. Without DBLS's Disaster Recovery solution, we'd have been in real trouble."