

RAID SAN DATA RECOVERY

SUCCESSFUL DATA RECOVERY OF 10 MILLION FILES FROM A FAILED DELL EMC SAN

CLIENT

First Quantum Minerals is a global leader in copper mining, with operations on four continents, involving 20,000 industry professionals.

HARDWARE

The critical data was stored on a Dell EMC VNXe3150 SAN set up in a RAID 5 configuration with 12 Seagate Constellation 2 TB SAS hard drives, running VMware.

CHALLENGE

When First Quantum Mineral experienced a power outage long enough in duration to shut down their data center, they lost more than just the lights. The 12-disk RAID array configured within a Dell VNXe3150 suffered multiple disk failures, compounding and preventing a successful rebuild. Because of the sensitivity of the data and the need for its recovery, Dell support recommended First Quantum Mineral contact a professional, experienced data recovery provider.

Secure Data Recovery Services engineers took possession of the 12 Seagate hard drives and conducted a thorough cleanroom diagnostic, identifying several read errors within the corrupt array, resulting in severe logical damage. The 12-disk RAID 5 held 4 out of 9 LUNs that made up the overall file system of the VMWare store. The complex file system of the unit consisted of 52 low-level RAID arrays combined into 4 multi-terabyte volumes. Secure Data Recovery Services engineers had to assemble each array separately in order to reconstruct the volumes storing the data in question. These 4 LUNs were extracted as binary replica files to be utilized during datastore reassembly. SDR RAID data recovery specialists then cloned the remaining 5 LUNs remotely and manually reconstructed the VMFS volume. It was then discovered that the VMware volume contained severe logical damage and had to be repaired manually as well as deduplicated.



This presented a new set of challenges as no native tools were available to perform the task at hand. A reputable global data recovery competitor analyzed the volume and has deemed it impossible to restore the data. Secure Data Recovery Services' R&D engineers had to develop a new, custom set of tools capable of addressing the issues caused by the aforementioned file system damage, compounded by deduplication in order to save First Quantum Minerals' critical data.

OUTCOME

Using a combination of industry standard and newly developed proprietary tools, Secure Data Recovery Services engineers were able to recover the entire data set, consisting of 10 million files in 27 TBs that were successfully reintroduced into First Quantum Minerals' network.

"All our fears were allayed by the prompt response and professionalism of the SecureData team".