

**CASE STUDY**

# Double disk failure of RAID5, and all patient-data is gone.

Data-recovery of: EMC NX4 SAN RAID5 System with 48 hard drives.

## THE CLIENT

When two hard drives in a RAID5 system fail at the same time, not even a data recovery can be done internally. If on top of that the most important drives' backups and urgently needed configuration files are missing as well, it is time to call an expert. In this project, Kroll Ontrack was able to recover very important patient data and save the client from high compensation claims.

## THE SITUATION

An Italian manufacturer of medical devices experienced a simultaneous failure of two hard drives in an EMC NX4 SAN system based on a RAID5 hard disk array, leading to an inconsistency of the system files. The company decided to fix this situation by setting-up the system with two new hard drives. Their IT department knew how to set-up the RAID system but while preparing the data restoration they noticed that the backup of several SAN drives was missing. Even in cases such as this, it is still possible to restore the system's latest configuration status but only if the four most important configuration files are accessible. Unfortunately, the company had set up the system internally and never saved or stored the respective configuration files or used the manufacturer's support services, so even EMC couldn't help. Important patient data such as MRI scans that was stored for hospitals became inaccessible.

## THE SOLUTION

The client sent all the hard drives to Kroll Ontrack, who mechanically repaired the drives, read out the data and then created a 1:1 copy of the content on the Kroll Ontrack Server Farm. There were a total of 43 LUN's on the 48 hard drives. As the client was able to name the two LUNs that contained the important patient data, we could accurately search for fragments of both LUNs as well as file-links within the system's tables. The search was conducted automatically with Kroll Ontrack laboratory's proprietary tools, as well as manually by our data recovery engineers.

## THE RESOLUTION

More than three million so-called dicon-files, image files of MRI-scans, could be rescued from the two most important LUNs. The first LUN contained 1.46 million files, and the second LUN 1.78 million files. Finding and composing the fragments was not easy: fourteen days of highly complex data recovery knowhow had to be invested in each of the two volumes. But the effort paid off for the medical equipment producer: the recovery of the patient data saved them from high financial claims potentially made by their clients, including hospitals, as their contract included the storage of the MRI-scans.

## CONTACT

For more information, call or visit us online:  
T: 0800 5 765 565

[krollontrack.nl](http://krollontrack.nl)