

**CASE STUDY**

# Faulty SSD memory lets a virtual machine disappear in a new vSAN system.

Data recovery of: VMware vSAN/ VMware EXSi.

**THE SITUATION**

Since March 2014 VMware's vSAN offers the option for vSphere EXSi servers to organise and manage storages. A vSAN system combines applications or data saved in virtual machines in a joint, clustered Shared Storage Datastore. All connected host computers and their hard drives are part of this joint data-store. This means that in the event of a hardware-fault or data-loss, the data-rescue engineers need to deal with an additional information level.

The Dutch client's affected vSAN system only consisted of 15 hard drives and 3 SSD memories, but the additional level makes the process of data recovery even more complex. Three host computers / nodes failed because of a faulty SSD memory, bringing the whole system down. This caused the temporary loss of four large virtual machines.

**THE SITUATION**

To recover the vSAN system and the virtual machines, we developed new software tools to find the description and log-files necessary for the identification and assembly of data. The data-stores were functioning as containers, so we first needed to identify the links to the contained virtual machines and then reconstruct them in the next step. Thanks to the new tools we were able to get information about how the virtual machines were saved in the vSAN's data-store and distributed to the affected hard drives. This allowed us to find the necessary description and log-files much faster, making the recovery process significantly easier.

**THE OUTCOME**

An international team of experts from Kroll Ontrack was able to save all the data from the failed storage-system. The newly-developed tools could reconstruct and recover the virtual machines and all data stored on the 15 failed hard drives of the vSAN storage-system in no time.

**CONTACT**

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