RAIDIX TECHNOLOGY

# SILENT DATA CORRUPTION PROTECTION

**RAIDIX 4.X employes silent data corruption protection (SDCP) tool which helps user detect and correct latent data errors (different hardware defects, drive head failures, noisy data transfer, bugs in file systems, firmware, etc) during common drive operations. Tool is based on checksum analysis and can make data corrections with no performance loss.**

**System scans and fixes silent errors in background mode during reading operations from clients.**

## IMPLEMENTATION AREA

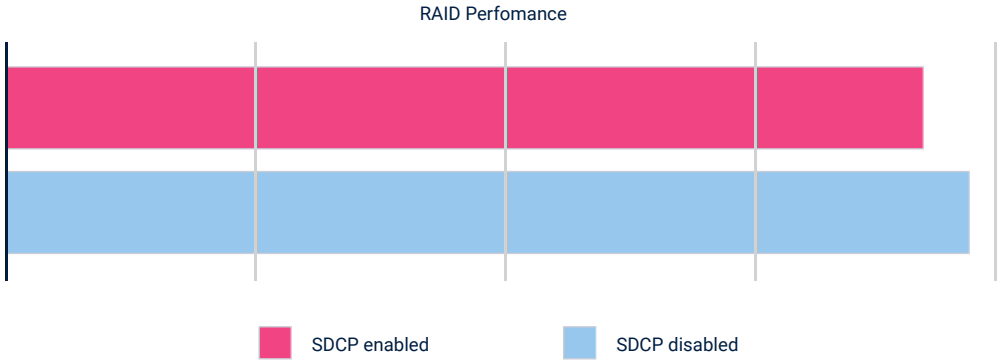
Silent Data Corruption is a wrong data modification on the drive, which comes from latent errors on hardware and software sides. On the hardware side, problem depends on drives run-out, head failure, noisy data transfer, power shutdowns and others. On the software layer, errors occurs due to coding bugs in OS, file system, devices firmware, and anywhere else where data exists in the computing stack.

The main problem is that on software side this corruptions are not detecting. System doesn't check data integrity if RAID has all drives on their own places. In this situation, system provides wrong data to application, and application, in turn, produces wrong results.

## HOW IT WORKS

RAIDIX's technology allows you detect and remove silent data corruptions during reading process from the drive. System reads particular data blocks, makes comparison with appropriate checksums, and analyses data integrity in this scope. Due to unique algorithms of checksum calculation this process goes very fast and with minimum impact to system performance rate.

*Silent Data Corruption Protection gives minimum impact to system performance*




When system load is quite low, you can also use deliberate storage space scanning to detect silent data errors. In this case, Silent Data Corruption Protection tool is able to automatically fix errors or send appropriate notifications.

The relevance of silent data corruption problems is increasing with raising storage systems volumes and drives capacity.



## FEATURES

Silent Data Corruption Protection enables to recognize and eliminate silent data errors during common storage workloads. This tool is based on advanced checksum analysis and gives minimum impact to system performance. Technology is available only for initialized RAID.

Silent Data Corruption Protection doesn't work at the same time with Advanced Reconstruction.

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