PARTIAL RECONSTRUCTION

Partial Reconstruction allows significantly reduce total RAID recovery time when drive removed emergently or got planned reconnection.

The technology distinctive edge is ability to reconstruct only particular drive area having changed data blocks. It can be possible via RAID logical mapping.

IMPLEMENTATION AREA

Partial Reconstruction tool dedicated to considerable reduction of RAID restoring time in case when drive removing and going back.

That sort of situations has following reasons:

1. Administrator misstep.

2. Necessity to drive relocation from one JBOD to another without system shutdown.

User can deactivate entire JBOD, as example for rearrangement, if total number of drives in array less than acceptable amount of disks for failure. That is why Partial Reconstruction is very effective for large-volume (high capacity) data arrays.

HOW IT WORKS

All array space divided by 2048 parts where each element gives information for change monitoring. When disk is going out RAID driver starts to mark the blocks with changing data. When disk comes back, data is restoring only in those logical blocks which have been marked since first disk removing. Noteworthy, that system is able to recognize which disk is going back.

Data is restoring only
in those logical blocks
which have been marked
since first disk removing
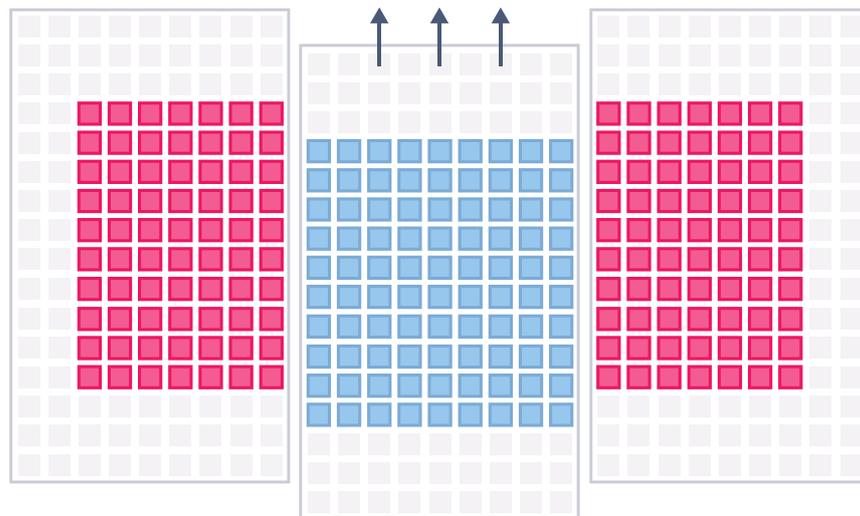
FEATURES

Partial Reconstruction allows to identify and reconstruct only those data blocks which have been changed since first disk removing.

Technology is characterized by following features:

- Significant reduction of RAID restoring time.
- High effectiveness for high-volume arrays.
- Less time spendings from JBOD re-commutation activities in huge systems.
- Less footprint from mistaken drive removal.

Current tool available only for RAIDs without active Sparepool.