

RAID Mode Guide

Different RAID for different needs



What's RAID?

RAID (Redundant Arrays of Inexpensive Disks) is a technology that recognizes multiple hard drives, while they appear to the computer as a single drive. RAID improves safety in data storage by enabling you to recover and access your data even after hard disk failure occurs. It can also be used to save data faster by distributing data to multiple drives. Each RAID mode has its own special merits, which allows you to set up your storage in variety of ways to meet your particular needs. RAID is used especially by businesses and other users who need highly reliable data storage.

Various RAID Modes and Their Features

- A number of configurations possible, with a focus either on safety of data in event of failure, or speed, or capacity
- Design must be determined before beginning use of NAS
- Enabling either spare drive or LVM must also be determined in advance.

RAID Modes	Fault Tolerance	Performance	Available Capacity (n = Single HDD capacity)	Minimum # of HDDs
RAID 61	★★★★★★	★	(Total # of drives - 2) x 1/2 x n	8
RAID 6	★★★★★	★	(Total # of drives - 2) x n	4
RAID 51	★★	★★★	(Total # of drives - 1) x 1/2 x n	6
RAID 5	★	★★★	(Total # of drives - 1) x n	3
RAID 10	★★★	★★★★	Total # of drives x 1/2 x n	4
RAID 1	★★★★	★★	Total # of drives x 1/2 x n	2
RAID 0	-	★★★★★	Total # of drives x n	2

Buffalo recommended

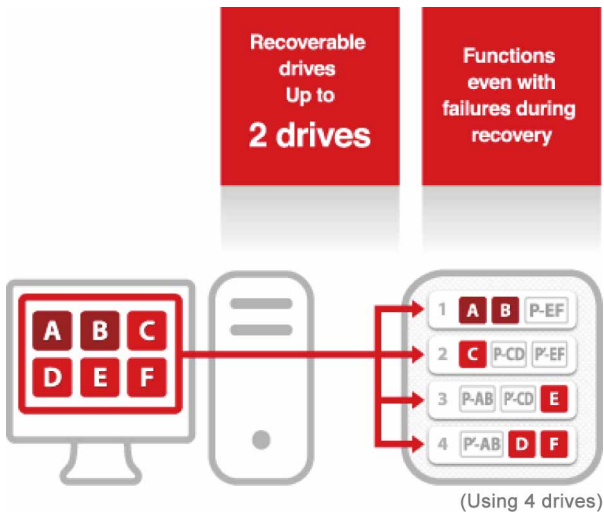
- RAID 5 Allows recovery of up to 1 failed drive. Provides good balance of capacity, safety, and speed.
- RAID 6 Allows recovery of up to 2 failed drives, regardless of the combination
- RAID 10 Redundant, distributed storage saves data safety and fast

About BUFFALO

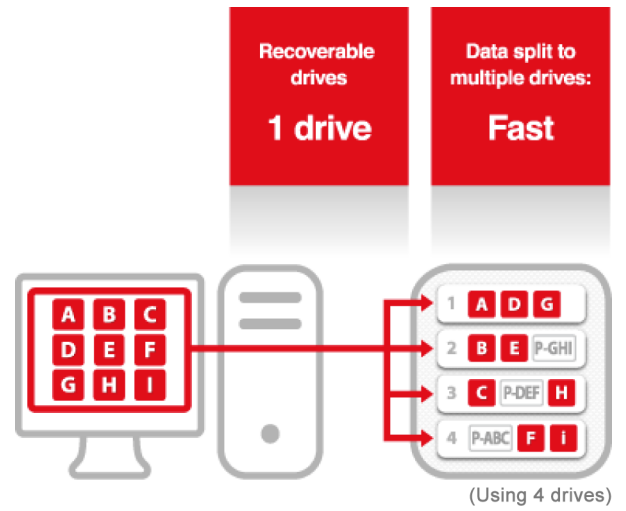
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BUFFALO Inc., based in Nagoya, Japan, is a leading global provider of award-winning networking, storage and multi-media solutions for the home and small business environments as well as for system builders and integrators. With three decades of networking and computer peripheral experience, BUFFALO has proven its commitment to delivering innovative, best-of-breed solutions that have put the company at the forefront of infrastructure technology.

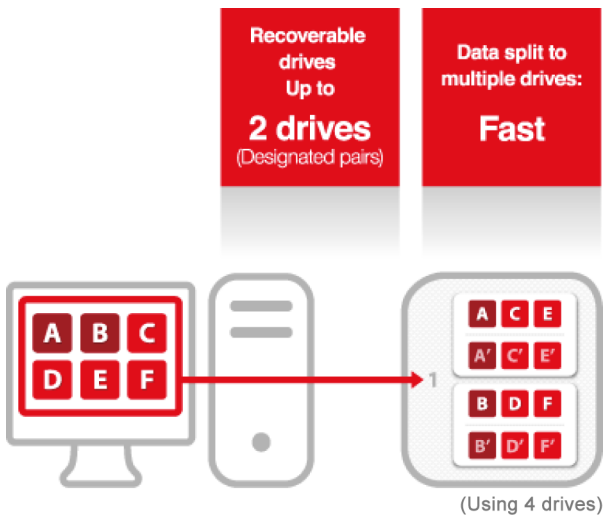
RAID 6



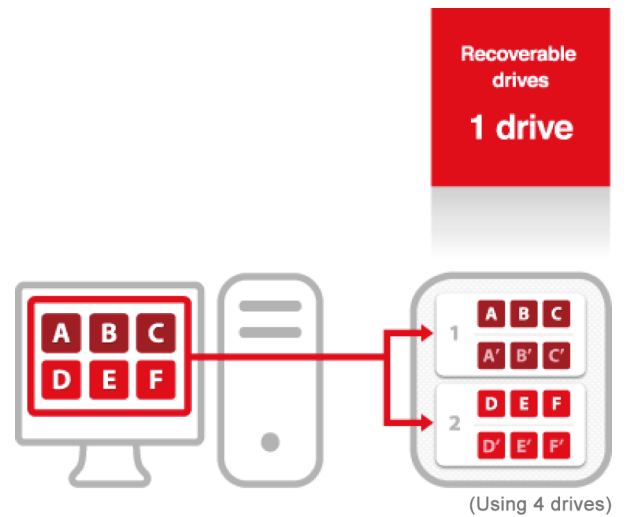
RAID 5



RAID 10



RAID 1



RAID 0

