Enclosure 4 – RAID Reference Chart

Summary of RAID Levels

RAID Level	Description	Disks requirement (Cost)	Data Reliability	Data Transfer Rate	I/O Request Rates
0	Also known as stripping. Data distributed across multiple drives in the array. There is no data protection	N	* No data Protection.	* Very High	* Very High for Both Reads and Writes.
1	Also known as mirroring. All data replicated on N Separated disks. N is almost always 2. This is a high availability Solution, but due to the 100% duplication, it is also a costly solution.	2	* Lower than RAID 6. * Higher than RAID 3,5.	* Reads are higher Than a single disk. * Writes similar to a single disk.	* Reads are twice faster than a single disk. * Write are similar to a single disk.
0+1	Also known Block-Interleaved Parity. Data and parity information is subdivided and distributed across all disk. Parity must be the equal to the smallest disk capacity in the array. Parity information normally stored on a dedicated parity disk.	N (N>2)	* Lower than RAID 6. * Higher than RAID 3,5.	* Transfer rates more similar to RAID 1.	* Reads are twice faster than a single disk. * Writes are similar to a single disk.
3	Also known Bit-Interleaved Parity. Data and parity information is subdivided and distributed across all disk. Parity must be the equal to the smallest disk capacity in the array. Parity information normally stored on a dedicated parity disk.	N+1	* Lower than RAID 1, 10, 6; * Higher than a single drive.	* Reads are similar to RAID 0; * Writes are slower than a single disk.	* Reads are similar twice faster than a single disk. * Writes are similar to a single disk.
5	Also known Block-Interleaved Distributed Parity. Data and parity information is subdivided and distributed across all disk. Parity must be the equal to the smallest disk capacity in the array. Parity information normally stored on a dedicated parity disk.	N+1	* Lower than RAID 1, 10, 6. * Higher than a single drive.	* Reads are similar to RAID 0. * Writes are slower than a single disk.	* Reads are similar to RAID 0. * Writes are slower than a single disk.
6	AS RAID level 5, but with additional independently computed redundant information	N+2	* Highest of all listed alternatives.	* Reads are similar to RAID 0. * Writes are slower than RAID 5.	* Reads are similar to RAID 0. * Writes are slower than a RAID 5.

(Riccardo)

Riccardo. "Configuring 2 mirrored disks on Ubuntu Linux." 28 December 2012. *Linuxaria.* Image. 26 August 2015.