

Filesystems specs

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FS/Property	NTFS	FAT32	FAT16	FAT12	EXT2	EXT3	ReiserFS 3.6	Reiser4	JFS	XFS	UFS	HFS	HFS+	FS/Property	
Maximum size of filesystem	256TiB [Theoretically: 1YiB]	8TiB	4GiB	16MiB	32TiB		17.6TiB	32ZiB [Theoretically: 256ZiB]	32PiB	18EiB	1TiB	4GiB	16TiB [?]	Maximum size of filesystem	
Maximum filesize	16PiB [Theoretically: 16ZiB]	3.9(9)GiB			64TiB		1EiB	16EiB	4PiB	8EiB		2GiB	8EB	Maximum filesize	
Maximum number of files in filesystem.	4294967295	4194304	65535	4096	1300000000000000		4294967296	1152921504606846976	? [2 ³¹ ?]	? [2 ⁶³ ?]	2147483648 ?	65536	4294967296	Maximum number of files in filesystem.	
Maximum number of files in single directory	?						2167483648					65533	Maximum number of files in single directory		
Maximum number of sub-directories in single directory					32768		64536	4294967294	?		Maximum number of sub-directories in single directory				
Block sizes	512B, 1KiB, 2KiB, 4KiB, 8KiB, 16KiB, 32KiB, 64KiB	512B, 1KiB, 2KiB, 4KiB, 8KiB, 16KiB, 32KiB	512B, 1KiB, 2KiB, 4KiB, 8KiB, 16KiB, 32KiB, 64KiB	512B, 1KiB, 2KiB, 4KiB	1KiB, 2KiB, 4KiB, 8KiB		512B, 1KiB, 2KiB, 4KiB, 8KiB, 16KiB, 32KiB, 64KiB	512B, 1KiB, 2KiB, 4KiB, 8KiB, 16KiB, 32KiB	512B, 1KiB, 2KiB, 4KiB	512B, 1KiB, 2KiB, 4KiB, 8KiB, 16KiB, 32KiB, 64KiB (1MB for "real-time" data)	4KiB, 8KiB	512B, 512xn, 64KiB	512B, 1KiB, 2KiB, 4KiB ?	Block sizes	
Journaling	Y	N			Y			2/3		N		2/3		Journaling	
Journal on different partition	N	N/A			Y		? [N?]	Y		N/A		N		Journal on different partition	
XATTR and ACL support	A	N			Y					Y	A	Y	XATTR and ACL support		
Label and UUID	L				L+U										Label and UUID
Dynamic inodes	Y	N			Y					N	? [N?]			Dynamic inodes	
Bad-blocks support	Y					N		Y					Bad-blocks support		
Directory content organization	B-Tree	List			List/B-Tree	B*Tree	D-Tree	B+Tree		List	B-Tree			Directory content organization	
Sparse files support	Y	N			Y					N			Sparse files support		
Extents for Data and Free space	D	N			F	D+F				N	D	D [+F?]		Extents for Data and Free space	
Free blocks management	Bitmap								dmap tree + "Binary Buddy"	B+Tree	Bitmap			Free blocks management	
Quota support	Y	N			Y				N	Y				Quota support	
Transparent compression		1/2			Y		N	? [Y - plug-in?]	N		Y	N			Transparent compression
Transparent encryption (best cipher)	Y (3DES)	N			N	? [Y - plug-in?]	N		Y(?)	N			Transparent encryption (best cipher)		
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