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Mongo Benchmarks (40396 lectures)

Per **Guillem Cantallops Ramis**, [Beowulf](http://bulma.net/beowulf/) (<http://bulma.net/beowulf/>)

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Una vez pasado el efecto /. (en versión española e inglesa :-) supongo que ya puedo poner este artículo en su sitio y quitar las páginas estáticas... Espero que no tengamos hecatombe en Bulma, porque estoy a punto de hacer copy&paste de 75KB de HTML lleno de tablas y cosas que nunca antes habia puesto en un artículo. Una prueba interesante para nuestra web, eh? } ; -]

Mongo Benchmarks

- [Ext2FS vs. ReiserFS vs. XFS vs. JFS \(slow CPU, may 2001\)](#)
- [Ext2FS vs. ReiserFS vs. XFS \(fast CPU, may 2001\)](#)

[Spanish] Nota: Es probable que publique un artículo sobre los diferentes sistemas de ficheros disponibles para Linux en la revista Sólo Programadores Linux de Julio de 2001.

Guillem Cantallops Ramis.

Mongo Benchmarks: Ext2FS vs. ReiserFS vs. XFS vs. JFS (slow CPU, may 2001)

by G. Cantallops Ramis (Beowulf in Bulma)

Kernel: Linux 2.4.4-ac5.xfs.kdb for Ext2FS, ReiserFS and XFS.
Linux 2.4.4-jfs for JFS

System: Iwill P55XB2 motherboard,
Cyrix MII 233MHz CPU,
128MB SDRAM,



Samsung SV0844A hard disk (8GB total, 2.6GB partition used in benchmarks)

Mongo: Trivially modified run_mongo and mongo.pl to support XFS and JFS.

JFS had serious trouble deleting files and Mongo couldn't benchmark this case.

Incidencies: I added -i 4096 to mke2fs command line in mongo.pl because I needed more inodes reserved in my relatively small partition: with default values, I got errors when I ran out of inodes (doing Mongo benchmark with small files).

Benchmark results!!!

[Ext2FS vs. ReiserFS](#)

[JFS vs. Ext2FS](#)

[JFS vs. ReiserFS](#)

[JFS vs. XFS](#)

[XFS vs. Ext2FS](#)

[XFS vs. ReiserFS](#)

[ReiserFS vs. ReiserFS -notail](#) [NEW]

Links: You can download the original Mongo Benchmark from [NameSys](#)⁽¹⁾ (see "Benchmarks" section) and [my modified Mongo with some benchmark results](#)⁽²⁾ from this server.

Ext2FS vs. ReiserFS (slow CPU)

MONGO_SINGLE_PROCESS parameters: files=403770 base_size=100 bytes dirs=746	MONGO_SINGLE_PROCESS parameters: files=403770 base_size=100 bytes dirs=745
FSYS=ext2 FSYS=reiserfs	
(time in sec.)	
Create 	1128.02 / 210.43 = 5.36
Fragm. 	1.35 / 1.49 = 0.90
Copy 	1967.06 / 478.12 = 4.11
Fragm. 	1.35 / 1.56 = 0.87
Slinks 	3004.88 / 390.50 = 7.69
Read 	5591.77 / 1732.27 = 3.23
Stats 	3910.89 / 403.95 = 9.68
Rename 	3499.22 / 208.72 = 16.77
Delete 	194.78 / 288.17 = 0.68
MONGO_SINGLE_PROCESS parameters: files=68532 base_size=1000 bytes dirs=242	MONGO_SINGLE_PROCESS parameters: files=68532 base_size=1000 bytes dirs=241
FSYS=ext2 FSYS=reiserfs	
(time in sec.)	
Create 	135.18 / 143.46 = 0.94



Fragm. 	1.38 / 3.29 = 0.42
Copy 	235.75 / 304.37 = 0.77
Fragm. 	1.38 / 3.29 = 0.42
Slinks 	57.42 / 53.76 = 1.07
Read 	466.53 / 1288.05 = 0.36
Stats 	16.91 / 10.16 = 1.66
Rename 	34.85 / 19.88 = 1.75
Delete 	13.65 / 39.10 = 0.35
MONGO_SINGLE_PROCESS parameters: files=7584 base_size=10000 bytes dirs=44	MONGO_SINGLE_PROCESS parameters: files=7584 base_size=10000 bytes dirs=43
FSYS=ext2 FSYS=reiserfs	
(time in sec.)	
Create 	32.72 / 56.90 = 0.58
Fragm. 	1.49 / 2.22 = 0.67
Copy 	98.53 / 131.81 = 0.75
Fragm. 	1.49 / 2.26 = 0.66
Slinks 	4.82 / 5.08 = 0.95
Read 	187.90 / 299.23 = 0.63
Stats 	1.01 / 0.99 = 1.02
Rename 	2.40 / 2.23 = 1.08
Delete 	6.55 / 4.82 = 1.36
MONGO_SINGLE_PROCESS parameters: files=1398 base_size=100000 bytes dirs=32	MONGO_SINGLE_PROCESS parameters: files=1398 base_size=100000 bytes dirs=31
FSYS=ext2 FSYS=reiserfs	
(time in sec.)	
Create 	33.19 / 34.10 = 0.97
Fragm. 	1.84 / 1.91 = 0.96
Copy 	95.56 / 101.88 = 0.94
Fragm. 	1.84 / 1.94 = 0.95
Slinks 	0.84 / 0.83 = 1.01
Read 	183.65 / 199.49 = 0.92
Stats 	0.56 / 0.30 = 1.87
Rename 	0.54 / 0.51 = 1.06
Delete 	3.36 / 1.29 = 2.60

JFS vs. Ext2FS (slow CPU)

MONGO_SINGLE_PROCESS parameters:	MONGO_SINGLE_PROCESS parameters:
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files=403770 base_size=100 bytes dirs=745	files=403770 base_size=100 bytes dirs=746
FSYS=jfs FSYS=ext2	
(time in sec.)	
Create 	628.80 / 1128.02 = 0.56
Fragm. 	1.05 / 1.35 = 0.78
Copy 	7615.30 / 1967.06 = 3.87
Fragm. 	1.05 / 1.35 = 0.78
Slinks 	730.75 / 3004.88 = 0.24
Read 	7691.76 / 5591.77 = 1.38
Stats 	1656.95 / 3910.89 = 0.42
Rename 	1100.77 / 3499.22 = 0.31
Delete 	0.00 / 194.78 = 0.00
MONGO_SINGLE_PROCESS parameters: files=68532 base_size=1000 bytes dirs=241	MONGO_SINGLE_PROCESS parameters: files=68532 base_size=1000 bytes dirs=242
FSYS=jfs FSYS=ext2	
(time in sec.)	
Create 	109.68 / 135.18 = 0.81
Fragm. 	1.05 / 1.38 = 0.76
Copy 	1420.69 / 235.75 = 6.03
Fragm. 	1.06 / 1.38 = 0.77
Slinks 	120.61 / 57.42 = 2.10
Read 	1359.95 / 466.53 = 2.92
Stats 	211.90 / 16.91 = 12.53
Rename 	180.13 / 34.85 = 5.17
Delete 	0.00 / 13.65 = 0.00
MONGO_SINGLE_PROCESS parameters: files=7584 base_size=10000 bytes dirs=43	MONGO_SINGLE_PROCESS parameters: files=7584 base_size=10000 bytes dirs=44
FSYS=jfs FSYS=ext2	
(time in sec.)	
Create 	32.47 / 32.72 = 0.99
Fragm. 	1.03 / 1.49 = 0.69
Copy 	232.27 / 98.53 = 2.36
Fragm. 	1.04 / 1.49 = 0.69
Slinks 	6.09 / 4.82 = 1.26
Read 	173.37 / 187.90 = 0.92
Stats 	1.35 / 1.01 = 1.34
Rename 	1.51 / 2.40 = 0.63



Delete 	0.00 / 6.55 = 0.00
MONGO_SINGLE_PROCESS parameters: files=1398 base_size=100000 bytes dirs=31	MONGO_SINGLE_PROCESS parameters: files=1398 base_size=100000 bytes dirs=32
FSYS=jfs FSYS=ext2	
(time in sec.)	
Create 	29.59 / 33.19 = 0.89
Fragm. 	1.03 / 1.84 = 0.56
Copy 	105.58 / 95.56 = 1.10
Fragm. 	1.03 / 1.84 = 0.56
Slinks 	0.36 / 0.84 = 0.43
Read 	0.93 / 183.65 = 0.01
Stats 	0.29 / 0.56 = 0.52
Rename 	0.35 / 0.54 = 0.65
Delete 	0.00 / 3.36 = 0.00

JFS vs. ReiserFS (slow CPU)

MONGO_SINGLE_PROCESS parameters: files=403770 base_size=100 bytes dirs=745	MONGO_SINGLE_PROCESS parameters: files=403770 base_size=100 bytes dirs=745
FSYS=jfs FSYS=reiserfs	
(time in sec.)	
Create 	628.80 / 210.43 = 2.99
Fragm. 	1.05 / 1.49 = 0.70
Copy 	7615.30 / 478.12 = 15.93
Fragm. 	1.05 / 1.56 = 0.67
Slinks 	730.75 / 390.50 = 1.87
Read 	7691.76 / 1732.27 = 4.44
Stats 	1656.95 / 403.95 = 4.10
Rename 	1100.77 / 208.72 = 5.27
Delete 	0.00 / 288.17 = 0.00
MONGO_SINGLE_PROCESS parameters: files=68532 base_size=1000 bytes dirs=241	MONGO_SINGLE_PROCESS parameters: files=68532 base_size=1000 bytes dirs=241
FSYS=jfs FSYS=reiserfs	
(time in sec.)	
Create 	109.68 / 143.46 = 0.76



Fragm. 	1.05 / 3.29 = 0.32
Copy 	1420.69 / 304.37 = 4.67
Fragm. 	1.06 / 3.29 = 0.32
Slinks 	120.61 / 53.76 = 2.24
Read 	1359.95 / 1288.05 = 1.06
Stats 	211.90 / 10.16 = 20.86
Rename 	180.13 / 19.88 = 9.06
Delete 	0.00 / 39.10 = 0.00
MONGO_SINGLE_PROCESS parameters: files=7584 base_size=10000 bytes dirs=43	MONGO_SINGLE_PROCESS parameters: files=7584 base_size=10000 bytes dirs=43
FSYS=jfs FSYS=reiserfs	
(time in sec.)	
Create 	32.47 / 56.90 = 0.57
Fragm. 	1.03 / 2.22 = 0.46
Copy 	232.27 / 131.81 = 1.76
Fragm. 	1.04 / 2.26 = 0.46
Slinks 	6.09 / 5.08 = 1.20
Read 	173.37 / 299.23 = 0.58
Stats 	1.35 / 0.99 = 1.36
Rename 	1.51 / 2.23 = 0.68
Delete 	0.00 / 4.82 = 0.00
MONGO_SINGLE_PROCESS parameters: files=1398 base_size=100000 bytes dirs=31	MONGO_SINGLE_PROCESS parameters: files=1398 base_size=100000 bytes dirs=31
FSYS=jfs FSYS=reiserfs	
(time in sec.)	
Create 	29.59 / 34.10 = 0.87
Fragm. 	1.03 / 1.91 = 0.54
Copy 	105.58 / 101.88 = 1.04
Fragm. 	1.03 / 1.94 = 0.53
Slinks 	0.36 / 0.83 = 0.43
Read 	0.93 / 199.49 = 0.00
Stats 	0.29 / 0.30 = 0.97
Rename 	0.35 / 0.51 = 0.69
Delete 	0.00 / 1.29 = 0.00

JFS vs. XFS (slow CPU)

MONGO_SINGLE_PROCESS parameters:	MONGO_SINGLE_PROCESS parameters:
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files=403770 base_size=100 bytes dirs=745	files=403770 base_size=100 bytes dirs=745
FSYS=jfs FSYS=xfs	
(time in sec.)	
Create 	628.80 / 638.72 = 0.98
Fragm. 	1.05 / 1.01 = 1.04
Copy 	7615.30 / 2563.15 = 2.97
Fragm. 	1.05 / 1.01 = 1.03
Slinks 	730.75 / 664.31 = 1.10
Read 	7691.76 / 3113.75 = 2.47
Stats 	1656.95 / 1407.59 = 1.18
Rename 	1100.77 / 669.56 = 1.64
Delete 	0.00 / 1376.26 = 0.00
MONGO_SINGLE_PROCESS parameters: files=68532 base_size=1000 bytes dirs=241	MONGO_SINGLE_PROCESS parameters: files=68532 base_size=1000 bytes dirs=241
FSYS=jfs FSYS=xfs	
(time in sec.)	
Create 	109.68 / 137.81 = 0.80
Fragm. 	1.05 / 1.00 = 1.05
Copy 	1420.69 / 447.59 = 3.17
Fragm. 	1.06 / 1.01 = 1.05
Slinks 	120.61 / 88.44 = 1.36
Read 	1359.95 / 767.89 = 1.77
Stats 	211.90 / 186.46 = 1.14
Rename 	180.13 / 110.80 = 1.63
Delete 	0.00 / 143.81 = 0.00
MONGO_SINGLE_PROCESS parameters: files=7584 base_size=10000 bytes dirs=43	MONGO_SINGLE_PROCESS parameters: files=7584 base_size=10000 bytes dirs=43
FSYS=jfs FSYS=xfs	
(time in sec.)	
Create 	32.47 / 39.14 = 0.83
Fragm. 	1.03 / 1.00 = 1.03
Copy 	232.27 / 98.13 = 2.37
Fragm. 	1.04 / 1.00 = 1.04
Slinks 	6.09 / 8.23 = 0.74
Read 	173.37 / 197.59 = 0.88
Stats 	1.35 / 1.66 = 0.81
Rename 	1.51 / 6.39 = 0.24



Delete nbsp;	0.00 / 14.76 = 0.00 nbsp;
MONGO_SINGLE_PROCESS parameters: files=1398 base_size=100000 bytes dirs=31	MONGO_SINGLE_PROCESS parameters: files=1398 base_size=100000 bytes dirs=31
FSYS=jfs FSYS=xfs	
(time in sec.)	
Create nbsp;	29.59 / 29.43 = 1.01 nbsp;
Fragm. nbsp;	1.03 / 1.00 = 1.03 nbsp;
Copy nbsp;	105.58 / 76.03 = 1.39 nbsp;
Fragm. nbsp;	1.03 / 1.00 = 1.03 nbsp;
Slinks nbsp;	0.36 / 0.88 = 0.41 nbsp;
Read nbsp;	0.93 / 181.53 = 0.01 nbsp;
Stats nbsp;	0.29 / 0.69 = 0.42 nbsp;
Rename nbsp;	0.35 / 0.64 = 0.55 nbsp;
Delete nbsp;	0.00 / 2.60 = 0.00 nbsp;

ReiserFS vs. ReiserFS -notail (slow CPU)

MONGO_SINGLE_PROCESS parameters: files=403770 base_size=100 bytes dirs=745	MONGO_SINGLE_PROCESS parameters: files=403770 base_size=100 bytes dirs=745
FSYS=reiserfs FSYS=reiserfs-notail	
(time in sec.)	
Create nbsp;	210.43 / 176.65 = 1.19 nbsp;
Fragm. nbsp;	1.49 / 1.06 = 1.40 nbsp;
Copy nbsp;	478.12 / 710.97 = 0.67 nbsp;
Fragm. nbsp;	1.56 / 1.06 = 1.47 nbsp;
Slinks nbsp;	390.50 / 379.83 = 1.03 nbsp;
Read nbsp;	1732.27 / 2089.88 = 0.83 nbsp;
Stats nbsp;	403.95 / 334.47 = 1.21 nbsp;
Rename nbsp;	208.72 / 140.61 = 1.48 nbsp;
Delete nbsp;	288.17 / 200.91 = 1.43 nbsp;
MONGO_SINGLE_PROCESS parameters: files=68532 base_size=1000 bytes dirs=241	MONGO_SINGLE_PROCESS parameters: files=68532 base_size=1000 bytes dirs=241
FSYS=reiserfs FSYS=reiserfs-notail	
(time in sec.)	
Create nbsp;	143.46 / 128.29 = 1.12 nbsp;



Fragm. 	3.29 / 1.41 = 2.33
Copy 	304.37 / 234.69 = 1.30
Fragm. 	3.29 / 1.39 = 2.37
Slinks 	53.76 / 54.64 = 0.98
Read 	1288.05 / 495.42 = 2.60
Stats 	10.16 / 7.79 = 1.30
Rename 	19.88 / 20.13 = 0.99
Delete 	39.10 / 34.60 = 1.13
MONGO_SINGLE_PROCESS parameters: files=7584 base_size=10000 bytes dirs=43	MONGO_SINGLE_PROCESS parameters: files=7584 base_size=10000 bytes dirs=43
FSYS=reiserfs FSYS=reiserfs-notail (time in sec.)	
Create 	56.90 / 36.37 = 1.56
Fragm. 	2.22 / 1.65 = 1.35
Copy 	131.81 / 111.47 = 1.18
Fragm. 	2.26 / 1.71 = 1.32
Slinks 	5.08 / 5.07 = 1.00
Read 	299.23 / 233.72 = 1.28
Stats 	0.99 / 0.97 = 1.02
Rename 	2.23 / 2.40 = 0.93
Delete 	4.82 / 4.22 = 1.14
MONGO_SINGLE_PROCESS parameters: files=1398 base_size=100000 bytes dirs=31	MONGO_SINGLE_PROCESS parameters: files=1398 base_size=100000 bytes dirs=31
FSYS=reiserfs FSYS=reiserfs-notail (time in sec.)	
Create 	34.10 / 30.35 = 1.12
Fragm. 	1.91 / 1.71 = 1.12
Copy 	101.88 / 101.01 = 1.01
Fragm. 	1.94 / 1.86 = 1.04
Slinks 	0.83 / 0.74 = 1.12
Read 	199.49 / 199.09 = 1.00
Stats 	0.30 / 0.31 = 0.97
Rename 	0.51 / 0.53 = 0.96
Delete 	1.29 / 1.33 = 0.97

XFS vs. Ext2FS (slow CPU)

MONGO_SINGLE_PROCESS parameters:	MONGO_SINGLE_PROCESS parameters:
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files=403770 base_size=100 bytes dirs=745	files=403770 base_size=100 bytes dirs=746
FSYS=xfs FSYS=ext2	
(time in sec.)	
Create nbsp;nbsp;	638.72 / 1128.02 = 0.57 nbsp;nbsp;
Fragm. nbsp;nbsp;	1.01 / 1.35 = 0.75 nbsp;nbsp;
Copy nbsp;nbsp;	2563.15 / 1967.06 = 1.30 nbsp;nbsp;
Fragm. nbsp;nbsp;	1.01 / 1.35 = 0.75 nbsp;nbsp;
Slinks nbsp;nbsp;	664.31 / 3004.88 = 0.22 nbsp;nbsp;
Read nbsp;nbsp;	3113.75 / 5591.77 = 0.56 nbsp;nbsp;
Stats nbsp;nbsp;	1407.59 / 3910.89 = 0.36 nbsp;nbsp;
Rename nbsp;nbsp;	669.56 / 3499.22 = 0.19 nbsp;nbsp;
Delete nbsp;nbsp;	1376.26 / 194.78 = 7.07 nbsp;nbsp;
MONGO_SINGLE_PROCESS parameters: files=68532 base_size=1000 bytes dirs=241	MONGO_SINGLE_PROCESS parameters: files=68532 base_size=1000 bytes dirs=242
FSYS=xfs FSYS=ext2	
(time in sec.)	
Create nbsp;nbsp;	137.81 / 135.18 = 1.02 nbsp;nbsp;
Fragm. nbsp;nbsp;	1.00 / 1.38 = 0.73 nbsp;nbsp;
Copy nbsp;nbsp;	447.59 / 235.75 = 1.90 nbsp;nbsp;
Fragm. nbsp;nbsp;	1.01 / 1.38 = 0.73 nbsp;nbsp;
Slinks nbsp;nbsp;	88.44 / 57.42 = 1.54 nbsp;nbsp;
Read nbsp;nbsp;	767.89 / 466.53 = 1.65 nbsp;nbsp;
Stats nbsp;nbsp;	186.46 / 16.91 = 11.03 nbsp;nbsp;
Rename nbsp;nbsp;	110.80 / 34.85 = 3.18 nbsp;nbsp;
Delete nbsp;nbsp;	143.81 / 13.65 = 10.54 nbsp;nbsp;
MONGO_SINGLE_PROCESS parameters: files=7584 base_size=10000 bytes dirs=43	MONGO_SINGLE_PROCESS parameters: files=7584 base_size=10000 bytes dirs=44
FSYS=xfs FSYS=ext2	
(time in sec.)	
Create nbsp;nbsp;	39.14 / 32.72 = 1.20 nbsp;nbsp;
Fragm. nbsp;nbsp;	1.00 / 1.49 = 0.67 nbsp;nbsp;
Copy nbsp;nbsp;	98.13 / 98.53 = 1.00 nbsp;nbsp;
Fragm. nbsp;nbsp;	1.00 / 1.49 = 0.67 nbsp;nbsp;
Slinks nbsp;nbsp;	8.23 / 4.82 = 1.71 nbsp;nbsp;
Read nbsp;nbsp;	197.59 / 187.90 = 1.05 nbsp;nbsp;
Stats nbsp;nbsp;	1.66 / 1.01 = 1.64 nbsp;nbsp;
Rename nbsp;nbsp;	6.39 / 2.40 = 2.66 nbsp;nbsp;



Delete 	14.76 / 6.55 = 2.25
MONGO_SINGLE_PROCESS parameters: files=1398 base_size=100000 bytes dirs=31	MONGO_SINGLE_PROCESS parameters: files=1398 base_size=100000 bytes dirs=32
FSYS=xfs FSYS=ext2	
(time in sec.)	
Create 	29.43 / 33.19 = 0.89
Fragm. 	1.00 / 1.84 = 0.54
Copy 	76.03 / 95.56 = 0.80
Fragm. 	1.00 / 1.84 = 0.54
Slinks 	0.88 / 0.84 = 1.05
Read 	181.53 / 183.65 = 0.99
Stats 	0.69 / 0.56 = 1.23
Rename 	0.64 / 0.54 = 1.19
Delete 	2.60 / 3.36 = 0.77

XFS vs. ReiserFS (slow CPU)

MONGO_SINGLE_PROCESS parameters: files=403770 base_size=100 bytes dirs=745	MONGO_SINGLE_PROCESS parameters: files=403770 base_size=100 bytes dirs=745
FSYS=xfs FSYS=reiserfs	
(time in sec.)	
Create 	638.72 / 210.43 = 3.04
Fragm. 	1.01 / 1.49 = 0.68
Copy 	2563.15 / 478.12 = 5.36
Fragm. 	1.01 / 1.56 = 0.65
Slinks 	664.31 / 390.50 = 1.70
Read 	3113.75 / 1732.27 = 1.80
Stats 	1407.59 / 403.95 = 3.48
Rename 	669.56 / 208.72 = 3.21
Delete 	1376.26 / 288.17 = 4.78
MONGO_SINGLE_PROCESS parameters: files=68532 base_size=1000 bytes dirs=241	MONGO_SINGLE_PROCESS parameters: files=68532 base_size=1000 bytes dirs=241
FSYS=xfs FSYS=reiserfs	
(time in sec.)	
Create 	137.81 / 143.46 = 0.96



Fragm. 	1.00 / 3.29 = 0.30
Copy 	447.59 / 304.37 = 1.47
Fragm. 	1.01 / 3.29 = 0.31
Slinks 	88.44 / 53.76 = 1.65
Read 	767.89 / 1288.05 = 0.60
Stats 	186.46 / 10.16 = 18.35
Rename 	110.80 / 19.88 = 5.57
Delete 	143.81 / 39.10 = 3.68
MONGO_SINGLE_PROCESS parameters: files=7584 base_size=10000 bytes dirs=43	MONGO_SINGLE_PROCESS parameters: files=7584 base_size=10000 bytes dirs=43
FSYS=xfs FSYS=reiserfs	
(time in sec.)	
Create 	39.14 / 56.90 = 0.69
Fragm. 	1.00 / 2.22 = 0.45
Copy 	98.13 / 131.81 = 0.74
Fragm. 	1.00 / 2.26 = 0.44
Slinks 	8.23 / 5.08 = 1.62
Read 	197.59 / 299.23 = 0.66
Stats 	1.66 / 0.99 = 1.68
Rename 	6.39 / 2.23 = 2.87
Delete 	14.76 / 4.82 = 3.06
MONGO_SINGLE_PROCESS parameters: files=1398 base_size=100000 bytes dirs=31	MONGO_SINGLE_PROCESS parameters: files=1398 base_size=100000 bytes dirs=31
FSYS=xfs FSYS=reiserfs	
(time in sec.)	
Create 	29.43 / 34.10 = 0.86
Fragm. 	1.00 / 1.91 = 0.52
Copy 	76.03 / 101.88 = 0.75
Fragm. 	1.00 / 1.94 = 0.52
Slinks 	0.88 / 0.83 = 1.06
Read 	181.53 / 199.49 = 0.91
Stats 	0.69 / 0.30 = 2.30
Rename 	0.64 / 0.51 = 1.25
Delete 	2.60 / 1.29 = 2.02



Mongo Benchmarks: Ext2FS vs. ReiserFS vs. XFS (fast CPU, may 2001)

by G. Cantallops Ramis (Beowulf in Bulma)

thanks to R. Galli (gallir) and E. Llull (Daneel) for hardware and moral/technical support in this benchmark ;-)

Kernel: Linux 2.4.3-xfs for Ext2FS, ReiserFS and XFS.
 VIA VT82C686B chipset (UDMA5, ATA100),
System: Intel Pentium III 800MHz CPU,
 512MB SDRAM,
 Seagate ST330621A hard disk (30GB total, 7GB partition used in benchmarks)
Mongo: Trivially modified run_mongo and mongo.pl to support XFS.

Benchmark results!!!

[Ext2FS vs. ReiserFS](#)

[XFS vs. Ext2FS](#)

[XFS vs. ReiserFS](#)

Ext2FS vs. ReiserFS (fast CPU)

MONGO_SINGLE_PROCESS parameters: files=403770 base_size=100 bytes dirs=746	MONGO_SINGLE_PROCESS parameters: files=403770 base_size=100 bytes dirs=745
FSYS=ext2 FSYS=reiserfs	
(time in sec.)	
Create 	439.11 / 72.07 = 6.09
Fragm. 	1.35 / 1.20 = 1.12
Copy 	917.79 / 233.97 = 3.92
Fragm. 	1.35 / 1.30 = 1.04
Slinks 	981.45 / 85.59 = 11.47
Read 	3180.20 / 1307.96 = 2.43
Stats 	402.67 / 43.98 = 9.16
Rename 	1119.73 / 32.16 = 34.82
Delete 	28.12 / 86.57 = 0.32
MONGO_SINGLE_PROCESS parameters: files=68532 base_size=1000 bytes dirs=242	MONGO_SINGLE_PROCESS parameters: files=68532 base_size=1000 bytes dirs=241
FSYS=ext2 FSYS=reiserfs	
(time in sec.)	



Create nbsp;	20.08 / 38.69 = 0.52 nbsp;
Fragm. nbsp;	1.38 / 2.61 = 0.53 nbsp;
Copy nbsp;	109.94 / 163.60 = 0.67 nbsp;
Fragm. nbsp;	1.38 / 3.32 = 0.41 nbsp;
Slinks nbsp;	16.96 / 11.54 = 1.47 nbsp;
Read nbsp;	253.11 / 713.59 = 0.35 nbsp;
Stats nbsp;	1.78 / 2.43 = 0.73 nbsp;
Rename nbsp;	9.45 / 4.69 = 2.01 nbsp;
Delete nbsp;	3.56 / 11.43 = 0.31 nbsp;
MONGO_SINGLE_PROCESS parameters: files=7584 base_size=10000 bytes dirs=44	MONGO_SINGLE_PROCESS parameters: files=7584 base_size=10000 bytes dirs=43
FSYS=ext2 FSYS=reiserfs	
(time in sec.)	
Create nbsp;	11.74 / 15.55 = 0.75 nbsp;
Fragm. nbsp;	1.49 / 2.14 = 0.70 nbsp;
Copy nbsp;	51.93 / 64.47 = 0.81 nbsp;
Fragm. nbsp;	1.49 / 2.32 = 0.64 nbsp;
Slinks nbsp;	1.07 / 1.01 = 1.06 nbsp;
Read nbsp;	79.65 / 103.77 = 0.77 nbsp;
Stats nbsp;	0.15 / 0.15 = 1.00 nbsp;
Rename nbsp;	0.52 / 0.63 = 0.83 nbsp;
Delete nbsp;	0.17 / 0.89 = 0.19 nbsp;
MONGO_SINGLE_PROCESS parameters: files=1398 base_size=100000 bytes dirs=32	MONGO_SINGLE_PROCESS parameters: files=1398 base_size=100000 bytes dirs=31
FSYS=ext2 FSYS=reiserfs	
(time in sec.)	
Create nbsp;	10.25 / 6.28 = 1.63 nbsp;
Fragm. nbsp;	1.84 / 1.39 = 1.32 nbsp;
Copy nbsp;	48.27 / 50.34 = 0.96 nbsp;
Fragm. nbsp;	1.84 / 1.87 = 0.98 nbsp;
Slinks nbsp;	0.14 / 0.15 = 0.93 nbsp;
Read nbsp;	77.93 / 85.97 = 0.91 nbsp;
Stats nbsp;	0.03 / 0.03 = 1.00 nbsp;
Rename nbsp;	0.07 / 0.09 = 0.78 nbsp;
Delete nbsp;	0.24 / 0.28 = 0.86 nbsp;

XFS vs. Ext2FS (fast CPU)

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MONGO_SINGLE_PROCESS parameters: files=403770 base_size=100 bytes dirs=745	MONGO_SINGLE_PROCESS parameters: files=403770 base_size=100 bytes dirs=746
FSYS=xfs FSYS=ext2	
(time in sec.)	
Create nbsp;nbsp;	332.33 / 439.11 = 0.76 nbsp;nbsp;
Fragm. nbsp;nbsp;	1.00 / 1.35 = 0.74 nbsp;nbsp;
Copy nbsp;nbsp;	848.00 / 917.79 = 0.92 nbsp;nbsp;
Fragm. nbsp;nbsp;	1.00 / 1.35 = 0.74 nbsp;nbsp;
Slinks nbsp;nbsp;	374.23 / 981.45 = 0.38 nbsp;nbsp;
Read nbsp;nbsp;	2240.21 / 3180.20 = 0.70 nbsp;nbsp;
Stats nbsp;nbsp;	688.81 / 402.67 = 1.71 nbsp;nbsp;
Rename nbsp;nbsp;	344.49 / 1119.73 = 0.31 nbsp;nbsp;
Delete nbsp;nbsp;	602.05 / 28.12 = 21.41 nbsp;nbsp;
MONGO_SINGLE_PROCESS parameters: files=68532 base_size=1000 bytes dirs=241	MONGO_SINGLE_PROCESS parameters: files=68532 base_size=1000 bytes dirs=242
FSYS=xfs FSYS=ext2	
(time in sec.)	
Create nbsp;nbsp;	73.30 / 20.08 = 3.65 nbsp;nbsp;
Fragm. nbsp;nbsp;	1.00 / 1.38 = 0.73 nbsp;nbsp;
Copy nbsp;nbsp;	154.60 / 109.94 = 1.41 nbsp;nbsp;
Fragm. nbsp;nbsp;	1.00 / 1.38 = 0.73 nbsp;nbsp;
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