

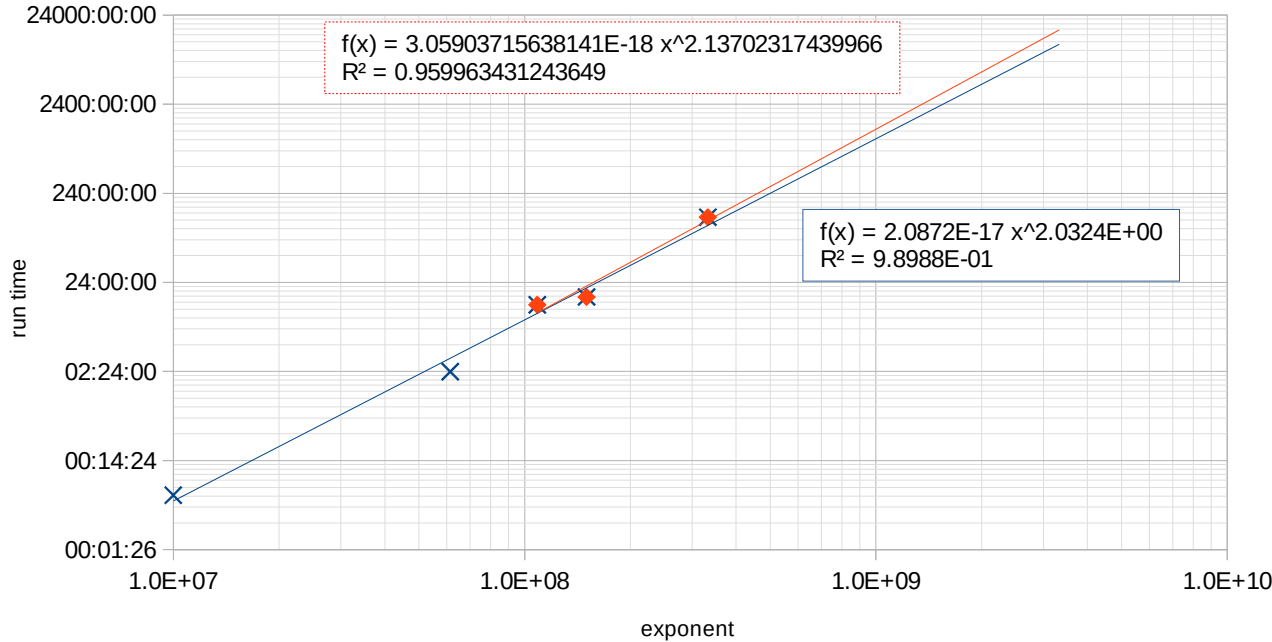
Mlucas V20.1.1 (built 2022-01-16) P-1 run time scaling Test system raven i5-7600T, 32 GiB nonECC ram, CentOS 7.9
 Firefox and Libre Office draw were mostly also running on the system during scaling measurements. (No mprime, Mfactor, etc.)

Exponent	B1	B2	Stage 1 time	gcd1 time	Buffer init	Stage 2 time	gcd2 time	total time	s2/s1	notes	factor if found
10000831	65000	1500000	00:02:17.08	00:00:01.68	00:01:44.77	00:01:48.95	00:00:01.65	00:05:54.14	0.797	2	"646560662529991467527"
61411307	400000	13000000	01:09:28.91	00:00:15.77	00:01:45.06	01:11:03.97	00:00:15.77	02:22:49.49	1.023	2	none
108729589	900000	41000000	05:11:09.05	00:00:31.84	00:00:54.47	08:10:04.61	00:00:32.00	13:23:11.97	1.574	1	none
150001087	1000000	36000000	07:31:36.05	00:00:46.87	00:01:51.26	08:51:46.21	00:00:46.86	16:26:47.25	1.177	2	none
332224441	1900000	103000000	51:01:18.44	00:02:01.04	00:00:58.77	78:10:00.33	00:02:00.97	129:16:19.55	1.532	1	none
3321928319	17000000	1000000000	00:00:00.00			00:00:00.00		00:00:00.00	#DIV/0!	2	na

1 run with -cpu 0:3 (4 cores), 32 GiB, default -maxalloc

2 system ram increased to 64 GiB, run with -cpu 0:3 -maxalloc 90

Mlucas 20.1.1 P-1 run time scaling on Centos 7.9 4 cores i5-7600T



Extrapolate to gigadigit

T=a p^b

a 3.05903716E-18

b 2.1370231744

p 3321928319

T 680.8
(days)

T=a p^b

a 2.09E-17

b 2.0324

p 3321928319

T 468.6
(days)

Above extrapolations =

1.87

1.28

years

One year =

365 days

8760 hours

3.65 times 2400 hours

Usage in above was 4 mlucas threads, across 4 cores / 4 hyperthread capable hardware;

Initial timing of 1Gdigit S1 is 2.786 hours for 0.04143%; 2.786 hours / 0.0004143 * (1 + 1.586) / 24 / 365 =

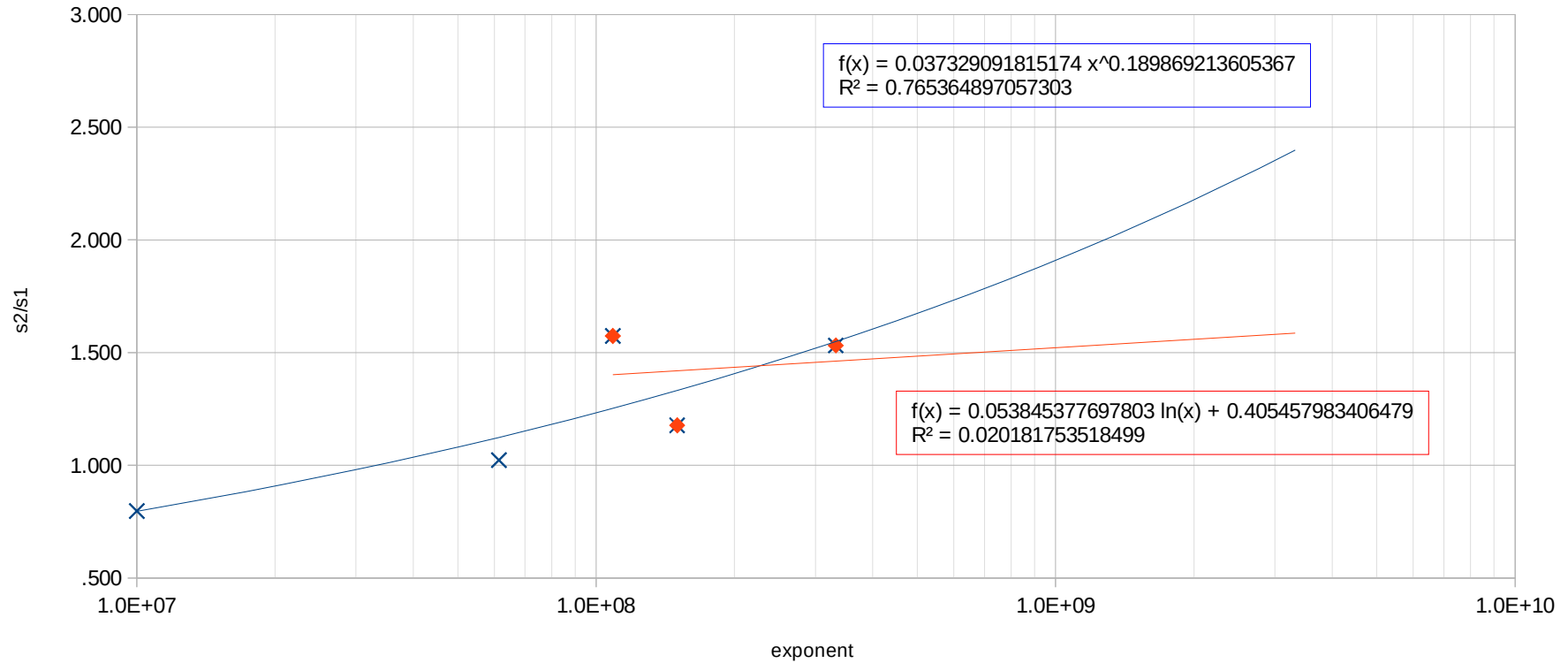
Estimated stage 1 time = 9.21 months; yrs ~ 0.77 from observed stage 1 iteration time

1.985 years s1&s2

Update to Mlucas past V20.1.1 (when available) might also help.
 Slightly higher -maxalloc than the implicit default 90% used may help stage 2 performance..
 Splitting stage 2 with a slightly faster system would allow completion within 1.5 years.
 System will probably soon be used for a P-1 factoring attempt on M 2252945257
 System ram 64 GiB is sufficient for OBD P-1, but not F33 which requires ~120GiB free.

Judging by top output, perhaps another 0.1% overhead could be removed.
 Overclocking would lower reliability and will not be attempted.
 1.38 years of two equal systems in stage 2 extrapolated from stage 1 timing
 which is estimated to take overall, both stages, 9.76 months solo.

duration ratio s2/s1 vs. exponent



a	-----	-	-----
b	0.18986921	d	0.4054579834
x	3321928319	x	3321928319
Y = a x ^b	2.39809445	Y = c ln x + d	1.58595388187