

MPM112
 11/24/70
 # users = 40
 MFTN3
 11.3X

***** MULTICS PERFORMANCE ANALYSIS *****

USER NO	COMMAND	TIME	CPU TIME	NO OF P.F.
0	login	1334	2.349	1 + 107
	edm	1343	4.365	136 + 284
	fortran	1344	3.423	30 + 195
	edm	1349	1.804	66 + 102
	fortran	1350	3.257	3 + 205
	rename	1351	.846	1 + 56
	print	1352	.912	5 + 40
	a_prime\$prime	1353	2.326	39 + 76
	list	1354	.553	1 + 33
	df	1355	1.122	1 + 48
	edm	1404	4.337	108 + 306
	fortran	1405	2.715	11 + 166
	edm	1410	2.687	57 + 190
	fortran	1411	3.060	4 + 220
	rename	1412	.531	1 + 32
	print	1413	.632	1 + 30
	b_prime\$prime	1414	2.062	23 + 92
	list	1415	.587	1 + 35
	df	1416	.923	1 + 53
	logout			+

384 K
 1 CPU
 w.s. factor = .50

***** SUMMARY *****

USER NO	TOTAL CPU TIME	TOTAL REAL TIME	TOTAL NO OF P.F.	NO OF INTER-ACTIONS	AVERAGE CPU TIME	AVERAGE RESPONSE TIME	AVERAGE NO OF P.F.
USER 0	36.492	2463	489 + 2163	66	.552	10.5 (7.3)	7 + 32

***** # users

(18.908	1196	282 + 1039	33	.573	9.2 (7.0)	8 + 31	40 first half
	17.584	1234	207 + 1124	33	.533	11.7 (7.6)	6 + 34	40 second half

↑
average except "fortran"

Note: A new estimation method for working sets was installed.

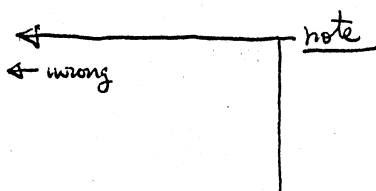
Generally speaking, the above result is pretty good.

>udd>m>w>o>tcn -all

MPM112

Total metering time 0:08:49

Ave queue length 12.45
 Ave eligible 7.97
 Pre-page factor 131072
 Te first (seconds) 2
 Te last (seconds) 2
 Ti max (seconds) 8



IDLE TYPE	TIME	%
Total idle	0:00:01	.23
Multi-prog idle	0:00:00	.17
Non-multi-prog idle	0:00:00	.06
Zero idle	0:00:00	0.00

COUNTER	TOTAL	ATB	#/INT
Interactions	36	14.701 sec	wrong
Loadings	631	.839 sec	17.528
Blocks	505	1.048 sec	
Wakeups	517	1.024 sec	
Waits	19380	27.309 msec	538.333
Notifies	58410	9.061 msec	
Schedulings	643	.823 sec	17.861
Pre-empts	11194	47.280 msec	310.944

Time	%Int	%Cum	Ave	%T	%CumT
0.0	73	73	.239	15	15
.5	15	88	.693	9	24
1.0	5	94	1.268	5	29
1.5	3	97	1.884	5	34
2.0	1	98	2.418	2	36
2.5	1	99	2.809	2	37
3.0	0	99	3.286	1	39
3.5	0	99	3.850	1	39
4.0	0	99	4.570	1	40
4.5	0	99	5.045	1	41
5.0	0	99	5.243	0	41
5.5	0	99	5.767	0	41
6.0	0	100	6.601	1	42
6.5	0	100	7.190	1	44
7.0	0	100	7.533	1	45
7.5	0	100	7.864	55	100

DEPTH	%PF	TBPF	%GTW	TBS	%CPU
1	35.8	34.0	27.0	27.1	44.6
2	23.0	30.4	24.6	16.9	25.5
3	15.2	22.5	17.0	12.0	12.7
4	11.1	17.8	13.0	9.0	7.4
5	7.4	17.4	8.5	9.0	4.9
6	4.8	19.5	5.8	9.4	3.5
7	3.1	19.8	3.8	9.3	2.4
8	3.7	21.2	4.3	10.5	3.0

truncated

1358 2.785 15+67

psm -all

Total metering time 0:27:08

Deactivations 3718
 Ast grace 0:00:24
 Used ASTs 359
 Free ASTs 0
 Held ASTs 187
 Seg Faults 4622

	#	ATB
Needs	94408	17.246 msec.
Steps	237004	6.870 msec.
Ceiling	194	.140 min.
Laps	609	2.673 sec.
Skip wired	3243	502.053 msec.
Skip used	119836	13.587 msec.
Skip mod	15891	102.458 msec.
Skip os	3626	449.023 msec.

299 pages, 38 wired.
 Average steps 2.510

← 384 K core system

	DRUM	DSU270	DSU170
Left	1080	5022	0
Reads	82858	9005	0
ATB	19.650	180.806	0.000
Writes	51540	6053	0
ATB	31.590	268.983	0.000
ATB I/O	12.114	108.126	0.000
% Crcty	17	48	0
Ave Latency	23.053	86.034	0.000
W Errors	0	0	0
F Errors	0	0	0

r 1400 1.644 9+41

>udd>m>w>o>ppmt

Total metering time 0:11:46

Ave pre-page time 18.906
 Ave post_purge time 30.245
 Pre-page calls 818
 Post-purge calls 817
 Ave pre-pagings 12.533
 Ave post-purgings 20.834
 Ave working-set size 44.033
 Working-set factor .50
 Working-set addend 0
 Ave misses 4.065
 Thrashing index 6.274

} ← note

r 1401 .736 1+22

hmu

Multics 11.3X, load 41.0/41.0; 40 users

r 1402 .335 1+20

ttm -all

Total metering time 0:29:53

	%	AVE
Page Faults	7.34	1892.349
Drum interrupts	4.25	1294.741
Getwork	8.24	1254.596
Seg Faults	5.15	17753.118
Interrupts	5.89	3586.108
Gate faults	3.99	3670.000
MP Idle	.30	
MMP Idle	.26	
Zero idle	0.00	
Cther	<u>64.59</u>	

} ← note

r 1402 1.067 6+46

>udd>m>w>o>q

avq=15, elapsed time=756 sec, 21 active last 15 sec.

flags	tu	dtu	te	ts	ti	event	pp	process
NLEI	20	17	674	0	0	7610	34	Naeem
NLERI	37	13	302	0	0	0	7	Sekino
NLEI	8	-29	334	0	0	0	42	Morton
LEI	27	6	132	0	0	0	17	Tilden
NLEXI	511	28	163	0	0	0	12	IO
LEI	31	14	87	0	2000	0	60	GClancy
W	24	10	0	0	0	0	16	PDP8
W	126	19	0	0	0	0	12	tty
	25	10	51	0	2000	0	41	Lay
	24	-36	33	0	2000	0	29	Reed
W	52	35	36	0	2003	0	72	Abramson
W	2	-4	41	0	2005	0	37	Lamson
	56	21	14	0	6001	0	16	Testa
	202	32	59	0	6034	0	60	VanVleck
W	108	65	68	0	8000	0	79	lang2
W	825	45	47	6017	8000	0	76	Backup
W	970	60	79	0	8000	0	61	Translator

r 1404 1.886 22+72

hnu

Multics 11.3X, load 40.0/41.0; 39 users

r 1404 .364 5+14

ppm -all

Pre-paging mode is ON.

r 1404 .289 5+10