

MPM111

11/18/70

#users = 40

MFTN3

11.2 ax

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

USER NO	COMMAND	TIME	CPU TIME	NO OF P.F.
0	login	1453	2.575	0 + 177
	edm	1502	5.289	213 + 403
	fortran	1505	7.089	36 + 652
	edm	1510	2.697	81 + 268
	fortran	1512	3.862	22 + 346
	rename	1513	1.365	1 + 148
	print	1513	1.084	4 + 79
	a_prime\$prime	1515	2.562	23 + 155
	list	1516	1.130	3 + 146
	df	1516	.788	3 + 47
	edm	1526	4.208	158 + 422
	fortran	1527	2.904	12 + 241
	edm	1532	2.446	68 + 221
	fortran	1533	3.823	10 + 383
	rename	1534	.633	1 + 66
	print	1535	.838	5 + 67
	b_prime\$prime	1536	2.199	14 + 172
	list	1537	.821	4 + 96
	df	1538	.916	1 + 128
	logout			+

256 K core
CPU

pre-paging factor = -48

***** 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	44.654	2660	664 + 4040	66	.676	15.5 (8.6)	10+ 61

***** #users

(25.866	1376	391 + 2244	33	.783	18.2 (8.8)	11 + 68	40 first half
	18.788	1251	273 + 1796	33	.569	12.7 (8.4)	8 + 54	40 second half

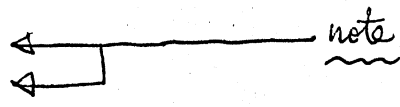
↑
average except "fortran"

Note: A lot of missing-page faults have been seen. The response time to the PDP8 user was very long. Maybe, these were caused by an unusual value of the pre-

tcm -all

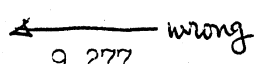
Total metering time 0:40:30

Ave queue length 11.85
 Ave eligible 6.65
 Pre-page factor -48
 Te first (seconds) 2
 Te last (seconds) 2
 Ti max (seconds) 8



IDLE TYPE	TIME	%
Total idle	0:07:09	17.66
Multi-prog idle	0:06:59	17.26
Non-multi-prog idle	0:00:09	.40
Zero idle	0:00:00	0.00

COUNTER	TOTAL	ATB	#/INT
Interactions	264	9.205 sec	9.277
Loadings	2449	.992 sec	
Blocks	2214	1.098 sec	
Wakeups	2301	1.056 sec	
Waits	148624	16.350 msec	562.970
Notifies	318644	7.626 msec	
Schedulings	2518	.965 sec	9.538
Pre-empts	108135	22.472 msec	409.602



Time	%Int	%Cum	Ave	%T	%CumT
0.0	09	69	.232	15	15
.5	16	85	.719	11	26
1.0	5	91	1.279	6	33
1.5	5	95	1.938	9	41
2.0	2	97	2.359	4	45
2.5	1	98	2.823	2	47
3.0	0	98	3.389	2	49
3.5	0	99	3.835	2	50
4.0	0	99	4.434	1	51
4.5	0	99	5.036	2	53
5.0	0	100	5.567	1	54
5.5	0	100	5.787	0	54
6.0	0	100	6.291	0	54
6.5	0	100	6.932	1	55
7.0	0	100	7.340	0	55
7.5	0	100	8.143	44	100

DEPTH	%PF	TBPF	%GTW	TBS	%CPU
1	28.0	14.6	24.7	11.0	30.4
2	22.5	15.0	22.1	10.2	25.0
3	16.4	13.8	17.2	8.7	16.7
4	11.9	11.9	12.6	7.5	10.5
5	8.4	11.7	9.1	7.1	7.3
6	6.2	10.7	6.6	6.6	5.0
7	4.4	10.8	4.9	6.4	3.6
8	6.3	11.3	7.0	6.8	5.4

fsm -all

Total metering time 0:42:54

Deactivations	4260
Ast grace	0:00:33 ←
Used ASTs	359
Free ASTs	0
Held ASTs	187
Seg Faults	5914

	#	ATB
Needs	190609	13.505 msec.
Steps	792043	3.250 msec.
Ceiling	555	.077 min.
Laps	4196	.613 sec.
Skip wired	29280	87.916 msec.
Skip used	491207	5.241 msec.
Skip mod	64369	39.991 msec.
Skip os	16578	155.277 msec.

169 pages, 41 wired. ←
Average steps 4.155

	DRUM	DSU270	DSU170
Left	1202	4281	0
Reads	169071	18866	0
ATB	15.225	136.446	0.000
Writes	92581	10597	0
ATB	27.805	242.916	0.000
ATB I/O	9.838	87.370	0.000
% Cpcty	21	60	0
Ave Latency	28.409	91.674	0.000
N Errors	1	0	0
F Errors	0	0	0

r 1541 1.961 2+111

ttm -all

Total metering time 0:44:21

	%	AVE
Page Faults	11.34	1909.815
Drum interrupts	6.12	1207.426
Getwork	9.85	909.480
Seg Faults	3.92	17229.890
Interrupts	5.89	3354.922
Gate faults	3.06	3670.000
MP Idle	17.34	
NMP Idle	.38	
Zero idle	0.00	
Other	42.11	

r 1543 1.071 4+55

ppm -all

Pre-paging mode is ON.

r 1544 361 5+25