

MPM79
 # users = 26
 12/16/69
 MFTN3
 4.9F

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

USER NO	COMMAND	TIME	CPU TIME	NO OF P.F.
0	login	1502	5.081	183
	edm	1512	6.384	405
	fortran	1513	5.095	222
	edm	1519	2.846	182
	fortran	1519	4.000	161
	rename	1521	.964	45
	print	1521	.784	40
	a_prime\$prime	1523	3.538	151
	list	1524	.846	50
	df	1525	1.376	80
	edm	1534	6.123	389
	fortran	1535	3.193	119
	edm	1540	3.031	187
	fortran	1541	3.167	125
	rename	1542	.569	28
	print	1542	1.187	78
	b_prime\$prime	1544	2.030	79
	list	1545	.833	45
	df	1546	.649	48
	logout			

***** SUMMARY *****

USER NO	TOTAL CPU TIME	TOTAL REAL TIME	TOTAL NO OF P.F.	NO OF INTER-ACTIONS	AVERAGE CPU TIME	AVERAGE WAIT TIME	AVERAGE NO OF P.F.
USER 0	46.615	2610	2434	66	.706	—	36

Note : The number of eligibility was two in this experiment.
 In this experiment, the total CPU time was exceptionally shorter than others.

MPM79

rm\$inc apt
tcm all
fsm
who

???????????????	3:32.3	200100000002	75662635006	19:38.6	016101000002
756626360471	53.2	000100000002	756626361245	1:01.2	200100000002
75662636341	45.1	000100000004	756626360606	24.1	001100000004
756626362372	62:64.0	001100000004	756626362214	89.9	001100000004
756626361643	38.7	001100000004	756626361143	55.7	001100000004
756626361417	49.9	000100000002	756626356667	1:17.0	200100000002
756626357177	1:51.6	000100000002	756626362113	31.4	001100000004
PDP8 756626361711	(.1+ 45.5)	320100000000	756626357266		001100000004
756626362021	20.3	001100000004	756626357360	35.6	001100000004
756626362174	83.2	001100000004	756626361775	12.2	001100000004
756626362404	63.4	300100000000	756626362133	61:92.4	001100000004
756626357655	45.0	001100000004	756626361117	28.3	001100000004
756626362337	76.7	000100000002	756626361675	1:07.8	034100000001
756626362422	17.5	200100000002	756626362240	38.0	001100000004
756626362063	41.2	320100000000	756626362252	35.9	000100000002
756626362265	7.0	034100000002	000000000000		000000000000
000000000000		000000000000	000000000000		000000000000
000000000000		000000000000	000000000000		000000000000
000000000000		000000000000	000000000000		000000000000
000000000000		000000000000	000000000000		000000000000
000000000000		000000000000	000000000000		000000000000
000000000000		000000000000	000000000000		000000000000
1549	4.751	107			

Total metering time 0:48: 1

Ave queue length(X10) 126

Max eligible 2 ← 2 eligible programs
Te min (seconds) 4
Ti max (seconds) 8

IDLE TYPE	TIME	%
Total idle	0:21: 5	44
Multi-prog idle	0:21: 5	44
Non-multi-prog idle	0: 0: 0	0
Zero idle	0: 0: 0	0

COUNTER	TOTAL	ATB
Loadings	1239	2325
Blocks	1121	2570
Wakeups	1168	2466
Waits	54985	52
Notifies	127865	22
Schedulings	1271	2267
Interactions	1014	2841
Pre-empts	47673	60

Time	%int	%Cum	Ave
0.0	45	45	302
0.5	25	70	732
1.0	11	81	1270
1.5	5	86	1736
2.0	3	89	2284
2.5	1	90	2844
3.0	1	91	3254
3.5	2	93	3711
4.0	1	94	4371
4.5	1	95	4901
5.0	0	95	5327
5.5	1	96	5782
6.0	0	96	6415
6.5	0	96	6869
7.0	0	96	7452
7.5	2	98	7970

DEPTH	%PF	TBPF	%GTW	TBS	%CPU
1	49	35	47	31	59
2	51	23	53	19	41

r 1550 2.125 50

File System Meters

Deact count	12683
Ast grace	1:21.101
Used ASTs	237
Free ASTs	0
Held ASTs	120
Steps	1803334
Needc	406326
Ave.steps	4
Ceiling	15
Laps	9137
Skip wired	29396
Skip used	1161282
Skip mod	203914
Skip os	2416
No. pages	177
Wired pages	16
Drum left	538
Drum reads	356743
Drum writes	181429
Drum errors	
Non-fatal	0
Fatal	0
Disk left	2500
Disk reads	38430
Disk writes	23918
Disk errors	
Non-fatal	6
Fatal	0

r 1552 1.808 54

File System Meters

Deact count	8707
Ast grace	1:44.171
Used ASTs	243
Free ASTs	0
Held ASTs	108
Steps	1527600
Needc	340408
Ave.steps	4
Ceiling	9
Laps	7771
Skip wired	24661
Skip used	993240
Skip mod	167125
Skip os	2166
No. pages	177
Wired pages	16
Drum left	770
Drum reads	298338
Drum writes	148474
Drum errors	
Non-fatal	0
Fatal	0
Disk left	1521
Disk reads	32594
Disk writes	19793
Disk errors	
Non-fatal	3
Fatal	0

← 3 errors

r 1458 2.404 100

MPM80
 # users = 26
 12/16/69
 MFTN3
 4.9F

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

USER NO	COMMAND	TIME	CPU TIME	NO OF P.F.
0	login	1627	5.529	233
	edm	1636	6.910	425
	fortran	1638	5.285	210
	edm	1644	3.986	247
	fortran	1652	4.793	223
	rename	1653	1.470	86
	print	1654	1.243	76
	a_prime\$prime	1655	3.799	170
	list	1656	1.545	99
	df	1657	1.569	94
	edm	1706	4.770	337
	fortran	1707	9.479	178
	edm	1713	2.586	191
	fortran	1714	3.200	149
	rename	1714	.584	44
	print	1715	.827	61
	b_prime\$prime	1717	2.112	100
	list	1717	.844	53
	df	1718	.529	33
	logout			

***** SUMMARY *****

USER NO	TOTAL CPU TIME	TOTAL REAL TIME	TOTAL NO OF P.F.	NO OF INTER-ACTIONS	AVERAGE CPU TIME	AVERAGE WAIT TIME	AVERAGE NO OF P.F.
USER 0	55.531	3030	2776	66	.841	—	42

The total real time was exceptionally long. The exceptionally long time was spent in the execution of the second "edm" of the first half of the script when the number of users happened to be 29.

Total metering time 0:54:33

MPM80

Ave queue length(X10) 84
 Max eligible 3
 Te min (seconds) 4
 Ti max (seconds) 8

IDLE TYPE	TIME	%
Total idle	0:21:23	39
Multi-prog idle	0:21:23	39
Ncn-multi-prog idle	0: 0: 0	0
Zero idle	0: 0: 0	0

COUNTER	TOTAL	ATB
Loadings	1412	2318
Blocks	1234	2653
Wakeups	1276	2565
Waits	79318	41
Notifies	164660	19
Schedulings	1436	2279
Interactions	1123	2915
Pre-empts	61593	53

Time	%Int	%Cum	Ave
0.0	50	50	302
0.5	21	71	710
1.0	10	81	1217
1.5	5	86	1768
2.0	3	89	2264
2.5	3	92	2788
3.0	1	93	3318
3.5	2	95	3775
4.0	0	95	4372
4.5	1	96	4836
5.0	1	97	5373
5.5	1	98	5894
6.0	0	98	6485
6.5	1	99	6935
7.0	0	99	7181
7.5	2	101	7900

DEPTH	%PF	TBPF	%GTW	TBS	%CPU
1	35	28	32	24	40
2	32	26	35	19	34
3	33	20	34	15	27

r 1.723 1.889 38

File System Meters

Deact count	19588
Ast grace	1: 3.246
Used ASTs	247
Free ASTs	0
Held ASTs	100
Steps	2431749
Needc	548736
Ave.steps	4
Ceiling	33
Lars	12292
Skip wired	44719
Skip used	1553420
Skip mod	281422
Skip os	3452
No. pages	177
Wired pages	19
Drum left	1073
Drum reads	483363
Drum writes	250520
Drum errors	
Non-fatal	2
Fatal	0
Disk left	2392
Disk reads	51659
Disk writes	32719
Disk errors	
Non-fatal	6
Fatal	0

r 1724 1.612 56

File System Meters

Deact count	15178
Ast grace	1:12.929
Used ASTs	237
Free ASTs	0
Held ASTs	120
Steps	2030392
Needc	457800
Ave.steps	4
Ceiling	25
Laps	10275
Skip wired	34890
Skip used	1302665
Skip mod	232214
Skip os	2823
No. pages	177
Wired pages	19
Drum left	745
Drum reads	402512
Drum writes	206723
Drum errors	
Non-fatal	0
Fatal	0
Disk left	2530
Disk reads	43335
Disk writes	27053
Disk errors	
Non-fatal	6
Fatal	0

← 2 errors

r 1625 2.330 82

20 users (max=30) at 12/16/69 1724.1 25 users (max=30) at 12/16/69 1625.4