

MPM82

users = 15
12/30/69
MFTN3

5.1

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

USER NO	COMMAND	TIME	CPU TIME	NO OF P.F.
0	login	1657	4.797	166
	edm	1706	4.898	350
	fortran	1707	5.016	190
	edm	1711	2.572	195
	fortran	1712	4.682	217
	rename	1713	1.001	75
	print	1714	.827	54
	a_prime\$prime	1715	3.501	173
	list	1716	.974	61
	df	1716	1.154	71
	edm	1725	4.093	304
	fortran	1726	3.485	160
	edm	1731	2.697	198
	fortran	1731	3.886	174
	rename	1732	.530	41
	print	1733	.756	44
	b_prime\$prime	1734	1.721	92
	list	1735	.426	26
	df	1735	.555	34
	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	42.774	2250	2459	66	.648	—	37

MPM82

rm\$inc apt					
7777777777777	1:21.9	000100000004	757042230656	11:57.2	016101000002
757042230665	1:17.6	001100000004	757042236446	17.2	001100000004
757042230711	1:46.1	000100000004	757042235436	39.1	001100000004
757042236373	8.1	034100000001	757042235665		300100000000
757042235311		001100000004	757042234654	26.5	001100000004
757042236534	63.9	001100000004	757042236267		100100000000
757042236674	75.4	001100000004	757042236711	92.9	300100000000
757042236342	9.1	001100000004	757042234066		100100000000
757042236111	47.0	100100000000	757042236002	38.6	001100000004
757042236415	43.0	100100000000	757042233556	12:41.2	000100000004
757042236627	14.6	001100000004	757042236515	1:39.9	001100000004
000000000000		000000000000	000000000000		000000000000

QUIT

r 1737 3.741 47

tcm all

Total metering time 0:40:32

Ave queue length(X10)	9
Max eligible	3
Te min (seconds)	2
Ti max (seconds)	8

IDLE TYPE	TIME	%
Total idle	0:13:16	33
Multi-prog idle	0: 0:47	2
Non-multi-prog idle	0: 4: 1	10
Zero idle	0: 8:28	21

COUNTER	TOTAL	ATB
Loadings	1790	1358
Blocks	1439	1690
Wakeups	1441	1687
Waits	37704	64
Notifies	76046	31
Schedulings	1947	1249
Interactions	1327	1832
Pre-empts	30913	78

Time	%Int	%Cum	Ave
0.0	78	78	172
0.5	11	89	722
1.0	4	93	1228
1.5	2	95	1793
2.0	1	96	2347
2.5	1	97	2777
3.0	1	98	3342
3.5	0	98	3917
4.0	0	98	4253
4.5	1	99	4842
5.0	0	99	5355
5.5	0	99	5812
6.0	0	99	6522
6.5	0	99	6656
7.0	0	99	7305
7.5	1	100	7884

DEPTH	%PF	TBPF	%TW	TBS	%CPU
1	65	46	50	41	70
2	25	40	36	19	24
3	10	29	14	13	6

r 1738 1.752 34

fsm

File System Meters

Deact count	9389		
Ast grace	3:17.666		
Used ASTs	257		
Free ASTs	0		
Held ASTs	80		
Steps	3183605		
Needc	715043		
Ave.steps	4		
Ceiling	97		
Laps	16193		
Skip wired	39040		
Skip used	2092231		
Skip mod	336391		
Skip os	900		
No. pages	177		
Wired pages	19		
	DRUM	DSU270	DS10
Left	1652	507	3006
Reads	637184	49720	7533
Writes	308384	28352	3196
N/Errors	1-?;05865216		0
F/Errors	0?=74681151	200000	

r 1739 1.243 34

hmu

PO(1, 15), P1(10, 12), P2(4, 6); Total: 15 users, 30 max.

r 1740 .163 5

File System Meters

Deact count	8683		
Ast grace	3:16.600		
Used ASTs	259		
Free ASTs	0		
Held ASTs	76		
Steps	2984587		
Needc	670827		
Ave.steps	4		
Ceiling	97		
Laps	15186		
Skip wired	36519		
Skip used	1962065		
Skip mod	314349		
Skip os	827		
No. pages	177		
Wired pages	16		
	DRUM	DSU270	DS10
Left	1652	530	3126
Reads	598395	46420	7028
Writes	288234	26593	2834
N/Errors	1-?;05865216		0
F/Errors	0>227113951	200000	

r 1656 1.836 71

MPM83
 # users = 19
 1/2/70
 MFTN3
 5.18

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

USER NO	COMMAND	TIME	CPU TIME	NO OF P.F.
0	login	1714	6.471	256
	edm	1723	6.577	383
	fortran	1724	5.934	228
	edm	1729	3.729	222
	fortran	1730	5.045	226
	rename	1731	1.279	69
	print	1731	1.042	55
	a_prime\$prime	1733	3.963	181
	list	1733	1.267	67
	df	1734	1.616	98
	edm	1743	6.129	399
	fortran	1744	4.133	196
	edm	1749	3.228	204
	fortran	1749	4.684	254
	rename	1750	.458	33
	print	1751	.813	44
	b_prime\$prime	1752	2.585	115
	list	1753	.734	36
	df	1754	.830	59
	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	54.046	2370	2869	66	.818	—	43

MPM83

rm\$inc apt

hmu

7777777777777	2:10.3	034100000002	757104015537	4:08.8	016101000002
757104015546	1:06.8	001100000004	757104015560	2:24.2	000100000002
757104015572	2:37.5	000100000002	757104015604	2:14.5	200100000002
757104015641	2:52.2	200100000002	757104016602	1:01.3	000100000002
757104016524	7.4	001100000004	757104016545	99.8	001100000004
757104016340	20.7	300100000000	757104016010	2:07.8	001100000004
757104016167	2:09.5	001100000004	757104016053	2:31.5	001100000004
757104016732	62.5	001100000004	757104016126	50.3	001100000004
757104016151	45.2	074100000001	757104016236	54.3	300100000000 ← PDP8
757104016361	19.8	001100000004	757104016273	48.9	034100000002
757104016374	2:04.8	200100000002	757104016756	11.4	001100000004
757104016563	1:13.2	300100000000	000000000000		000000000000
000000000000		000000000000	000000000000		000000000000

QUIT

r 1755 5.053 129

hmu

P0(3, 15), P1(10, 12), P2(5, 6); Total: 18 users, 30 max.

r 1756 .441 20

tcm all

Total metering time 0:42:35

Ave queue length(X10) 79

Max eligible 3

Te min (seconds) 2

Ti max (seconds) 8

IDLE TYPE	TIME	%
Total idle	0: 4:23	10
Multi-prog idle	0: 4:23	10
Non-multi-prog idle	0: 0: 0	0
Zero idle	0: 0: 0	0

COUNTER	TOTAL	ATB
Loadings	1920	1331
Blocks	1252	2041
Wakeups	1273	2007
Waits	91331	27
Notifies	181502	14
Schedulings	1956	1306
Interactions	1128	2265
Pre-empts	57974	44

Time	%Int	%Cum	Ave
0.0	55	55	296
0.5	21	76	732
1.0	9	85	1268
1.5	5	90	1756
2.0	2	92	2305
2.5	1	93	2825
3.0	1	94	3272
3.5	1	95	3860
4.0	1	96	4419
4.5	1	97	4880
5.0	0	97	5463
5.5	1	98	5912
6.0	0	98	6460
6.5	0	98	6927
7.0	0	98	7262
7.5	2	100	7871

DEPTH	%PF	TBPF	%GTW	TBS	%CPU
1	46	26	39	21	48
2	33	26	37	16	34
3	22	20	24	13	18

r 1757 2.455 54

fsm

File System Meters

Deact count	3225
Ast grace	1:15.984
Used ASTs	251
Free ASTs	0
Held ASTs	92
Steps	657602
Needc	144310
Ave.steps	4
Ceiling	0
Laps	3338
Skip wired	7908
Skip used	433517
Skip mod	71831
Skip os	36
No. pages	177
Wired pages	19
	DRUM DSU270 DS10

Left	1219	632	2724
Reads	130361	9397	683
Writes	66448	5664	66
N/Errors	0-?;05865216		0
F/Errors	0>227162847	200000	

r 1758 1.316 47

File System Meters

Deact count	481
Ast grace	3:46.688
Used ASTs	258
Free ASTs	0
Held ASTs	80
Steps	201505
Needc	42468
Ave.steps	4
Ceiling	0
Laps	1032
Skip wired	2373
Skip used	136649
Skip mod	20015
Skip os	0
No. pages	177
Wired pages	18
	DRUM DSU270 DS10

Left	1538	661	2750
Reads	37966	2589	81
Writes	18767	1387	12
N/Errors	0-?;05865216		0
F/Errors	0>243939519	200000	

r 1713 2.095 87

hmu

PD(3, 15), P1(11, 12), P2(5, 6); Total: 19 users, 30 max.

r 1758 .325 18

MPM84
 # users = 17
 1/6/70
 MFTN3
 5.1g

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

USER NO	COMMAND	TIME	CPU TIME	NO OF P.F.
0	login	1458	5.334	158
	edm	1508	6.684	418
	fortran	1509	6.334	234
	edm	1514	2.935	177
	fortran	1515	5.214	259
	rename	1515	1.179	67
	print	1516	.815	36
	a_prime\$prime	1517	3.753	138
	list p	1518	1.280	80
	df	1519	1.537	75
	edm	1528	4.802	298
	fortran	1529	4.122	171
	edm	1533	3.116	205
	fortran	1534	4.150	166
	rename	1535	.566	37
	print	1535	.890	41
	b_prime\$prime	1537	2.482	106
	list	1537	.786	47
	df	1538	.911	
	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	51.558	2370	2597	66	.781	—	39

rm\$inc apt

MPM84

777777777777	3:34.4	000100000004	757153244746	3:42.1	016101000002
757153244755	3:07.3	000100000002	757153244767	3:13.7	034100000002
757153245001	6:27.4	200100000002	757153246123	98.6	001100000004
757153245717	75.9	001100000004	757153245645	95.1	001100000004
757153245567	3.5	001100000004	757153245145	1:52.9	000100000002
757153246221	63.2	001100000004	757153246164	61:72.1	001100000004
757153245453	1:20.9	034100000002	757153245356	3:07.0	001100000004
757153245255	33.1	200100000002	757153245415	49.1	074100000001
757153246103	10.6	001100000004	757153245501	<u>52.1</u>	100100000000
757153246013	8.8	001100000004	757153245616	1:05.3	034100000002
757153246135	7.8	000100000002	000000008000		000000000000
000000000000		000000000000	000000000000		000000000000

PDP8

QUIT
r 1540 5.272 90

tcm all

Total metering time 0:41:41

Ave queue length(X10) 80
 Max eligible 3
 Te min (seconds) 2
 Ti max (seconds) 8

IDLE TYPE	TIME	%
Total idle	0: 3:54	9
Multi-prog idle	0: 3:45	9
Non-multi-prog idle	0: 0: 8	0
Zero idle	0: 0: 0	0

COUNTER	TOTAL	ATB
Loadings	2347	1065
Blocks	1729	1446
Wakeups	1760	1421
Waits	83441	29
Notifies	160762	15
Schedulings	2370	1055
Interactions	1580	1583
Pre-empts	53615	46

Time	%Int	%Cum	Ave
0.0	73	73	253
0.5	12	85	751
1.0	6	91	1266
1.5	3	94	1775
2.0	1	95	2311
2.5	1	96	2746
3.0	0	96	3325
3.5	1	97	3829
4.0	0	97	4391
4.5	0	97	4720
5.0	0	97	5395
5.5	0	97	5866
6.0	0	97	6301
6.5	0	97	6874
7.0	0	97	7291
7.5	2	99	7865

DEPTH	%PF	TBPF	%GTW	TBS	%CPU
1	47	29	40	24	51
2	32	27	37	16	33
3	21	21	23	13	16

r 1542 2.550 64

fsm

File System Meters

Deact count	2146
Ast grace	1:59.710
Used ASTs	251
Free ASTs	0
Held ASTs	92
Steps	649339
Needc	146258
Ave.steps	4
Ceiling	27
Laps	3292
Skip wired	11689
Skip used	420251
Skip mod	71091
Skip os	50
No. pages	177
Wired pages	20
	DRUM DSU270 DS10
Left	1237 3492 2702
Reads	129743 11768 541
Writes	64239 7085 139
N/Errors	1-?:05865216 0
F/Errors	0?:24578465 200000

r 1543 1.452 38

hmu

P0(2, 15), P1(12, 12), P2(4, 6); Total: 18 users, 30 max.

r 1543 .365 20

File System Meters

Deact count	476
Ast grace	4:22.145
Used ASTs	257
Free ASTs	0
Held ASTs	80
Steps	230405
Needc	49471
Ave.steps	4
Ceiling	0
Laps	1182
Skip wired	4035
Skip used	154370
Skip mod	22529
Skip os	0
No. pages	177
Wired pages	20
	DRUM DSU270 DS10
Left	1535 3515 2636
Reads	43316 3832 182
Writes	20434 2216 50
N/Errors	0-?:05865216 0
F/Errors	0??<5319105 200000

r 1458 1.974 86

MPM
 #users = 22
 12/23/69
 MFTN3
 5,0

-- MULTICS PERFORMANCE ANALYSIS --

COMMAND	TIME	CPU TIME	NO. OF P.F.
login	1519	6.666	241
edm		6.069	358
fortran		4.657	154
edm		3.135	189
fortran		5.145	216
rename		1.338	66
print		.826	36
a_prime\$prime		1.808	55
list		1.171	64
setacl } df		1.545	82
remove			
edm		7.521	452
fortran		4.319	198
edm		3.671	233
fortran		4.436	205
rename		.826	49
print		1.017	53
b_prime\$prime		2.868	119
list		1.068	61
setacl } df		.907	49
remove			
logout			

Response Time
 (sec)

$\frac{123.5}{16} = 7.7$

$\frac{119}{16} = 7.4$

7.5 sec

-- SUMMARY --

TOTAL CPU TIME	TOTAL REAL TIME	TOTAL NO. OF P. F.	NO. OF INTER-ACTIONS	AVERAGE CPU TIME	AVERAGE NO. OF P. F.
52.327	---	2639	66	.793	40