

Honeywell

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JUN 2 1975

J. H. SALTZER

F O R U M A T T E N D E E S

C.T. Clingen

D. Clarke

J.W. Gintell

R.M. Gross

R.E. Hoffman

G.M. Lundberg

J.G. Register

Prof. J. Saltzer

R.E. Shoemaker



Honeywell

TO: List of Attendees cc: List

SUBJECT: FORUM Minutes for 20 May 1975

ATTENDEES: G. Ackerman-Lewis PB Kelley
WJ Burner ED Kleinow
RJ Chevalier RA Roach
M. Grady LJ Ryan
DM Jordan JR Steinberg

Hardware - ED Kleinow

- DSU 190 - Area 1 problems caused by wire which had shorted out. FED located and replaced.
- Memory - Failing bit in memory unit. FED spared-out bit. Board replaced.
- Processors - FCO's received to correct op-not-complete problems. Change is accomplished with board swaps and wire change.
- DN-355 - FCO received for fix of interval timer problem.
- PRT-301 - Hood problem still has not been resolved. Kleinow will monitor this over the next few days.
- FCO's - Non-Processor FCO's amounting to 34 hours are outstanding.

Software - DM Jordan

- MSS 25.5 running
- MSS 25.6 scheduled for installation on May 21.
- New version of PL 1 compiler scheduled for installation this week.
- Roach has asked that we investigate cause for crashes which occur while attempting to add 2nd CPU.


RJC/jmn





Massachusetts Institute of Technology
Programming Development Office
Cambridge, Massachusetts 02139

To: Forum Attendants
From: Grace E. Ackerman-Lewis
Date: May 16, 1975
Subject: Multics Availability May 3 - May 16

Summary of Lost Time

	# of Crashes	Crashes	Time Lost Other	Total
Hardware Suspected:	2	0:20	0:00	0:20
Hardware:	1	0:27	0:00	0:27
Software Suspected:	2	0:35	0:00	0:35
Operations:		0:00	1:05	1:05
-----	-----	-----	-----	-----
Total:	5	1:22	1:05	2:27

Total lost time/Scheduled up time = 2:27/175:00 = .014 (98.6 up time)

May month-to-date lost time = 2:46

#	Down At	Time Lost	Up At	Explanation	Time Due Lost To
1	8:45 05/07	-	8:53 05/07	Crash, EPF 299	0:00 H? attempting to add 2nd CPU
2	17:20 05/08	-	17:45 05/08	Crash, EPF 300	0:25 S? attempt to destroy a process failed
3	14:53 05/09	-	15:20 05/09	Crash, EPF 301	0:27 H tty_free error 10 (vadic)
4	9:00 05/13	-	10:04 05/13	Operations	1:04 Oper Attempt to boot with wrong configuration deck
5	10:59 05/13	-	11:09 05/13	Crash, EPF 302	0:10 S? attempt to destroy a process failed
6	9:02 05/14	-	9:14 05/14	Crash, EPF 303	0:12 H? attempting to add 2nd CPU

Saturday
5/3

Sunday
5/4

Monday
5/5

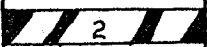
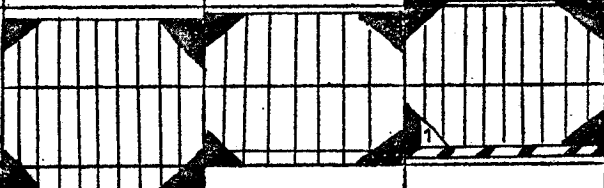
Tuesday
5/6

Wednesday
5/7

Thursday
5/8

Friday
5/9

00:00								00:00
01:00								01:00
02:00								02:00
03:00								03:00
04:00								04:00
05:00								05:00
06:00								06:00
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17:00								17:00
18:00								18:00
19:00								19:00
20:00								20:00
21:00								21:00
22:00								22:00
23:00								23:00



To: Administrative Distribution
From: Grace E. Ackerman-Lewis
Date: May 20, 1975
Subject: Multics Crash Analysis for May 3 - May 16

Total number of crashes = 5 (ERF's 299 - 303)

Hardware Suspected:

Problems adding 2nd CPU

2

Total

2

Hardware:

Vadic

1

Total

1

Software Suspected:

Attempt to destroy a process failed
(probably got a wakeup)

2

Total

2

#	sys.	date	time	type	brief explanation
	25.5	05/16/75			NO CRASHES
	25.5	05/15/75			NO CRASHES
303	25.5	05/14/75	9:27	H?	Attempting to add 2nd CPU
302	25.5	05/13/75	10:59	NYA	Attempt to destroy a process failed (probably got a wakeup)
	25.5	05/12/75			NO CRASHES
	25.5	05/11/75			NO CRASHES
	25.5	05/10/75			NO CRASHES
301	25.5	05/09/75	14:53	H	"tty_free error 10" vadic
300	25.5	05/08/75	17:15	NYA	Attempt to destroy a process failed (probably got a wakeup)
299	25.5	05/07/75	08:45	H?	Crashed trying to add CPU-B
	25.5	05/06/75			NO CRASHES
	25.5	05/05/75			NO CRASHES
	25.5	05/04/75			NO CRASHES
	25.5	05/03/75			NO CRASHES

This segment lists some of the known bugs in 6180 Multics.

372 05/05/75 1 *** Attempt to boot fails if process dirs left after previous shutdown
365 03/12/75 1 *** Security bug allowing user to patch PDS
357 02/21/75 1 m19 Several timing loops for 355 timeouts are too short (with cache processors)
356 02/21/75 1 dmw Bug(s) exist in Network locking software -> pxxx timeouts

369 04/10/75 2 Shutdown with 2 CPUs may result in a loop (stz used to clear lock, should be stac)
367 03/25/75 2 status with "--md" option also gives bit count, records used and max length
361 03/02/75 2 Output to one terminal can end up in another user's input buffers (MPRF 8035)
352 01/14/75 2 Deletion of CPU appears to result in clobbered words (ERFs 207 & 208)

350 01/02/75 2 m19 Users who hangup may not be logged out
348 12/03/74 2 Security problems in the automatic creating of home directories
346 11/25/74 2 Backup bombs when handling dir with msf indicator on but no inferior segments (See 11/23/74)
339 10/10/74 2 rem bug in traffic controller (-> idle loops)
318 07/25/74 2 m19 tty dim seems to be able to go blocked for output and forgets to wakeup

371 04/12/75 3 delete_dir can not delete directories with lower ring segments (gives misleading message)
370 04/12/75 3 set_act says "no match" if satisfying entry names all in lower rings
366 03/22/75 3 user can get into loop creating/destroying processes thus tying up system.
364 03/02/75 3 msa does not handle star convention properly (MPRF 8010)

362 03/02/75 3 sbh delete_name gives incorrect error message on a msg (bug in cname_\$file)
360 03/02/75 3 Salvager appears not to flush its logging buffer when finished (errors absent from log)
359 03/02/75 3 Initialize_peek_limits leaves old (possibly dangerous) limit table on an error (missing seg)
358 02/27/75 3 EXL compiler faults if used for 1st time after debug has listed object code (fixed with prelinking)
354 02/12/75 3 rfm Initialize_peek_limits fails if AND error is encountered while processing (security problem?)
353 01/14/75 3 delete_dir fails if safety switch is on

347 12/03/74 3 I/O driver ignores -ln option when -pl is used
338 09/26/74 3 restarted printer requests indicate a zero charge (\$0.00)
337 09/26/74 3 IO Daemon restarts can start at wrong request if more than one cycle is being saved
325 08/27/74 3 IO.SysDaemon was charged for a large negative amount of cpu time (08/26/74)

324 08/27/74 3 tvv message coordinator can lose a wakeup and then stops printing
323 08/21/74 3 tac Users log out but remain in who table; also, process dirs not always deleted
322 08/21/74 3 srh command_processor_ can get fatal process errors (with some cases of iteration)
320 07/26/74 3 tac Initializer's alarm clock can fail and doesn't resync properly. (see online for 07/26/74)

315 07/24/74 3 amk Long salvager (after clean shutdown) is detecting bad filemap checksums
305 07/02/74 3 m19 logout messages get lost due to timing problems in tty dim
302 06/29/74 3 cross directory retrievals sometimes fail (see RAR for details)
282 05/05/74 3 mam qedx fails to find expressions like /a.bc.*a.bd/ in strings like "a.bc a.b a.bd"

268 03/05/74 3 rsc IO Daemon prints an lengthy error message when request deleted from under it
258 02/11/74 3 shr Boot cold won't work if too much disk storage (dies on fsdct page fault)
240 01/10/74 3 eds lock does not handle directory deletions well. (May result in seg fault -> crawlout)
238 03/18/74 3 srh timer_manager_ may not properly reset alarm calls if called more than once from same loc (V1)

216 11/29/73 3 srh System crashes on attempts to wire a page in a RWS
180 09/01/73 3 *** retrieve does not accept control files with 50 names as documented (limit about 20) (Documentation change)
179 09/01/73 3 *** retrieve sometimes requires full primary path names (supposed to accept alternate names) (Documentation change)
148 07/26/73 3 lwg absentee or I/O message segments can get truncated by ms salvager with no messages
141 07/22/73 3 *** >system_library_tools should be removed from default search rules

129 07/07/73 3 lwg renaming directories does not terminate them and can cause serious problems
363 03/02/75 4 unbump fails to do its function completely (user logged out on new_proc - MPRF 8019)
336 09/26/74 4 IO Daemon's save request does an automatic start
307 07/02/74 4 m19 hardwired terminals do not get identified correctly when turned on after system is up (on 150 baud)
197 10/29/73 4 rar fss has not been updated for 6180 libraries

*** - fix completed (to be installed)

Inst - fix installed

This segment contains a list of known CPU hardware bugs/deficiencies.

ID	Date	Hardware	Severity	Description
083	04/19/75	ENG	2	IP2 faults occur if target string of move (etc) is zero length.
082	01/15/75	Inst		CMN does not always work
080	01/15/75	FED	2	CMPC sometimes fails
079	10/14/74	***	2	Bounds faults not being recognized on decimal instructions (PHAG-PE036, PHAG-PE060)
078	10/14/74	Inst		Ring alarm faults are only sampled at RIGD time (PHAG-PE052)
077	10/14/74	***		Packed pointer load faults (FC0 not yet released)
076	09/05/74	Inst	2	CMPC sometimes fails at page boundaries.
075	08/26/74	Inst		MLR sometimes stores extra fill characters.
074	08/05/74	Inst		CMPC sometimes fails with multiple page faults.
073	05/02/74	***		MLR (CMPC, etc) will not work with 1048576 characters.
072	05/02/74	Inst	1	ADAP sometimes fetches operand from even word instead of odd.
071	05/02/74	***		CHP8 fails with certain bit offsets not on character boundaries.
070	03/25/74	Inst	2	XED'd instructions fail to do indexing correctly (PHAG-PE052)
069	03/18/74	Inst		MLR and CMPC place fill characters in last few words at page bdry
068	03/11/74	Inst		MPY gets overflow on -2**35 Inst -2**35.
067	02/14/74	Inst		MLR sometimes places 8 zeros near page boundary.
066	02/14/74	Inst		MYN gets fixedoverflow when moving 02.
065	02/13/74	Inst		MLR sometimes changes a single character to fill character at page boundary.
064	02/12/74	Inst		MLR moves 8 characters extra at page boundary.
063	02/06/74	Inst		CMPC fails at connect fault time processing fill chars.
062	02/04/74	Inst		CSL instruction fails across boundary.
061	01/24/74	Inst		MLR sometimes fails if take page fault on table.
060	01/12/74	Inst		MLR gets op-not-completes.
059	01/12/74	Inst		MLR get no-write-permission by miscalculating TSR.
058	01/12/74	Inst		CMPC sometimes gives wrong results.
057	01/03/74	Inst		MLR instruction fails across boundary.
056	01/03/74	Inst		SREG gets op-not-complete if at end of page.
042	10/13/73	Inst		CI and/or SC modification does not always work.

The severity of the problem is interpreted as follows:

1. Severe, the problem is holding up system progress.
 2. Medium, the problem is annoying but can be circumvented.
 3. Slight, the problem is not very serious.
- ***. Fix known, awaiting installation.

(END)

Information Processing Center

Multics availability for last week to 05/10/75 2359.0

Time	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Time
100001	13.0 2 384 2.01	11.0 2 384 2.01	20.0 2 384 2.01	20.0 2 384 2.01	19.0 2 384 2.01	15.0 2 384 2.01	10.0 2 384 2.01	100001
100301	11.0 2 384 2.01	13.0 2 384 2.01	19.0 2 384 2.01	19.0 2 384 2.01	18.0 2 384 2.01	17.0 2 384 2.01	8.0 2 384 2.01	100301
101001	11.0 2 384 2.01	12.0 2 384 2.01	18.0 2 384 2.01	21.0 2 384 2.01	19.0 2 384 2.01	16.0 2 384 2.01	7.0 2 384 2.01	101001
101301	10.0 2 384 2.01	11.0 2 384 2.01	13.0 2 384 2.01	18.0 2 384 2.01	18.0 2 384 2.01	15.0 2 384 2.01	8.0 2 384 2.01	101301
102001	10.0 2 384 2.01	9.0 2 384 2.01	13.0 2 384 2.01	17.0 2 384 2.01	15.0 2 384 2.01	14.0 2 384 2.01	8.0 2 384 2.01	102001
102301	9.0 2 384 2.01	10.0 2 384 2.01	11.0 2 384 2.01	12.0 2 384 2.01	12.0 2 384 2.01	13.0 2 384 2.01	8.0 2 384 2.01	102301
103001	9.0 2 384 2.01	9.0 2 384 2.01	12.0 2 384 2.01	12.0 2 384 2.01	10.0 2 384 2.01	14.0 2 384 2.01	7.0 2 384 2.01	103001
103301	9.0 2 384 2.01	9.0 2 384 2.01	10.0 2 384 2.01	12.0 2 384 2.01	11.0 2 384 2.01	10.0 2 384 2.01	7.0 2 384 2.01	103301
104001	9.0 2 384 2.01	8.0 2 384 2.01	10.0 2 384 2.01	8.0 2 384 2.01	13.0 2 384 2.01	8.0 2 384 2.01	7.0 2 384 2.01	104001
104301	7.0 2 384 2.01	8.0 2 384 2.01	11.0 2 384 2.01	8.0 2 384 2.01	12.0 2 384 2.01	8.0 2 384 2.01	6.0 2 384 2.01	104301
105001	5.0 2 384 2.01	7.0 2 384 2.01	10.0 2 384 2.01	8.0 2 384 2.01	11.0 2 384 2.01	8.0 2 384 2.01	7.0 2 384 2.01	105001
105301	5.0 2 384 2.01	7.0 2 384 2.01	8.0 2 384 2.01	7.0 2 384 2.01	8.0 2 384 2.01	8.0 2 384 2.01	7.0 2 384 2.01	105301
106001	5.0 2 384 2.01	5.0 2 384 2.01	8.0 2 384 2.01	8.0 2 384 2.01	10.0 2 384 2.01	6.0 2 384 2.01	6.0 2 384 2.01	106001
106301	4.0 2 384 2.01	6.0 2 384 2.01	8.0 2 384 2.01	8.0 2 384 2.01	9.0 2 384 2.01	6.0 2 384 2.01	6.0 2 384 2.01	106301
107001	4.0 2 384 2.01	299	0.0 1 384 2.01	299	14.0 2 384 2.01	0.0 1 384 2.01	6.0 2 384 2.01	107001
107301	5.0 2 384 2.01	shutdown	shutdown	299	12.0 2 384 2.01	shutdown	6.0 2 384 2.01	107301
108001	4.0 2 384 2.01	41.0 1 256 2.01	shutdown	299	14.0 2 384 2.01	shutdown	7.0 2 384 2.01	108001
108301	4.0 2 384 2.01	41.0 1 256 2.01	shutdown	299	13.0 2 384 2.01	shutdown	5.0 2 384 2.01	108301
109001	0.0 2 384 2.01	0.0 1 256 2.01	9.0 2 384 2.01	11.0 2 384 2.01	15.0 2 384 2.01	14.0 2 384 2.01	5.0 2 384 2.01	109001
109301	shutdown	10.0 2 384 2.01	13.0 2 384 2.01	17.0 2 384 2.01	24.0 2 384 2.01	17.0 2 384 2.01	5.0 2 384 2.01	109301
110001	shutdown	26.0 2 384 2.01	26.0 2 384 2.01	22.0 2 384 2.01	28.0 2 384 2.01	22.0 2 384 2.01	8.0 2 384 2.01	110001
110301	shutdown	28.0 2 384 2.01	32.0 2 384 2.01	31.0 2 384 2.01	33.0 2 384 2.01	30.0 2 384 2.01	8.0 2 384 2.01	110301
111001	shutdown	31.0 2 384 2.01	32.0 2 384 2.01	30.0 2 384 2.01	32.0 2 384 2.01	33.0 2 384 2.01	9.0 2 384 2.01	111001
111301	9.0 2 384 2.01	36.0 2 384 2.01	36.0 2 384 2.01	34.0 2 384 2.01	37.0 2 384 2.01	34.0 2 384 2.01	12.0 2 384 2.01	111301
112001	12.0 2 384 2.01	40.0 2 384 2.01	43.0 2 384 2.01	33.0 2 384 2.01	40.0 2 384 2.01	35.0 2 384 2.01	14.0 2 384 2.01	112001
112301	13.0 2 384 2.01	44.0 2 384 2.01	41.0 2 384 2.01	38.0 2 384 2.01	43.0 2 384 2.01	35.0 2 384 2.01	15.0 2 384 2.01	112301
113001	13.0 2 384 2.01	48.0 2 384 2.01	43.0 2 384 2.01	39.0 2 384 2.01	42.0 2 384 2.01	42.0 2 384 2.01	13.0 2 384 2.01	113001
113301	13.0 2 384 2.01	48.0 2 384 2.01	46.0 2 384 2.01	35.0 2 384 2.01	40.0 2 384 2.01	48.0 2 384 2.01	14.0 2 384 2.01	113301
114001	13.0 2 384 2.01	56.0 2 384 2.01	48.0 2 384 2.01	34.0 2 384 2.01	42.0 2 384 2.01	48.0 2 384 2.01	14.0 2 384 2.01	114001
114301	13.0 2 384 2.01	49.0 2 384 2.01	47.0 2 384 2.01	34.0 2 384 2.01	43.0 2 384 2.01	43.0 2 384 2.01	15.0 2 384 2.01	114301
115001	12.0 2 384 2.01	42.0 2 384 2.01	47.0 2 384 2.01	33.0 2 384 2.01	42.0 2 384 2.01	41.0 2 384 2.01	15.0 2 384 2.01	115001
115301	13.0 2 384 2.01	41.0 2 384 2.01	52.0 2 384 2.01	31.0 2 384 2.01	38.0 2 384 2.01	35.0 2 384 2.01	14.0 2 384 2.01	115301
116001	14.0 2 384 2.01	38.0 2 384 2.01	49.0 2 384 2.01	35.0 2 384 2.01	30.0 2 384 2.01	29.0 2 384 2.01	14.0 2 384 2.01	116001
116301	18.0 2 384 2.01	39.0 2 384 2.01	42.0 2 384 2.01	31.0 2 384 2.01	27.0 2 384 2.01	29.0 2 384 2.01	14.0 2 384 2.01	116301
117001	16.0 2 384 2.01	35.0 2 384 2.01	43.0 2 384 2.01	34.0 2 384 2.01	21.0 2 384 2.01	32.0 2 384 2.01	18.0 2 384 2.01	117001
117301	18.0 2 384 2.01	35.0 2 384 2.01	40.0 2 384 2.01	35.0 2 384 2.01	26.0 2 384 2.01	35.0 2 384 2.01	20.0 2 384 2.01	117301
118001	19.0 2 384 2.01	38.0 2 384 2.01	37.0 2 384 2.01	34.0 2 384 2.01	25.0 2 384 2.01	43.0 2 384 2.01	19.0 2 384 2.01	118001
118301	18.0 2 384 2.01	41.0 2 384 2.01	34.0 2 384 2.01	39.0 2 384 2.01	34.0 2 384 2.01	46.0 2 384 2.01	20.0 2 384 2.01	118301
119001	19.0 2 384 2.01	43.0 2 384 2.01	42.0 2 384 2.01	37.0 2 384 2.01	35.0 2 384 2.01	51.0 2 384 2.01	19.0 2 384 2.01	119001
119301	21.0 2 384 2.01	49.0 2 384 2.01	46.0 2 384 2.01	49.0 2 384 2.01	35.0 2 384 2.01	56.0 2 384 2.01	19.0 2 384 2.01	119301
120001	18.0 2 384 2.01	53.0 2 384 2.01	48.0 2 384 2.01	50.0 2 384 2.01	39.0 2 384 2.01	56.0 2 384 2.01	21.0 2 384 2.01	120001
120301	19.0 2 384 2.01	62.0 2 384 2.01	49.0 2 384 2.01	50.0 2 384 2.01	38.0 2 384 2.01	301	23.0 2 384 2.01	120301
121001	18.0 2 384 2.01	57.0 2 384 2.01	54.0 2 384 2.01	46.0 2 384 2.01	51.0 2 384 2.01	301	26.0 2 384 2.01	121001
121301	23.0 2 384 2.01	53.0 2 384 2.01	49.0 2 384 2.01	44.0 2 384 2.01	50.0 2 384 2.01	301	22.0 2 384 2.01	121301
122001	25.0 2 384 2.01	52.0 2 384 2.01	50.0 2 384 2.01	42.0 2 384 2.01	50.0 2 384 2.01	33.0 2 384 2.01	25.0 2 384 2.01	122001
122301	25.0 2 384 2.01	51.0 2 384 2.01	50.0 2 384 2.01	40.0 2 384 2.01	53.0 2 384 2.01	47.0 2 384 2.01	24.0 2 384 2.01	122301
123001	26.0 2 384 2.01	46.0 2 384 2.01	47.0 2 384 2.01	45.0 2 384 2.01	42.0 2 384 2.01	52.0 2 384 2.01	21.0 2 384 2.01	123001
123301	25.0 2 384 2.01	51.0 2 384 2.01	48.0 2 384 2.01	47.0 2 384 2.01	43.0 2 384 2.01	52.0 2 384 2.01	20.0 2 384 2.01	123301
124001	27.0 2 384 2.01	49.0 2 384 2.01	47.0 2 384 2.01	57.0 2 384 2.01	47.0 2 384 2.01	51.0 2 384 2.01	19.0 2 384 2.01	124001
124301	27.0 2 384 2.01	49.0 2 384 2.01	46.0 2 384 2.01	51.0 2 384 2.01	41.0 2 384 2.01	50.0 2 384 2.01	18.0 2 384 2.01	124301
125001	25.0 2 384 2.01	45.0 2 384 2.01	34.0 2 384 2.01	46.0 2 384 2.01	37.0 2 384 2.01	49.0 2 384 2.01	19.0 2 384 2.01	125001
125301	24.0 2 384 2.01	45.0 2 384 2.01	35.0 2 384 2.01	44.0 2 384 2.01	300	41.0 2 384 2.01	21.0 2 384 2.01	125301
126001	25.0 2 384 2.01	42.0 2 384 2.01	32.0 2 384 2.01	40.0 2 384 2.01	300	38.0 2 384 2.01	20.0 2 384 2.01	126001
126301	25.0 2 384 2.01	38.0 2 384 2.01	28.0 2 384 2.01	37.0 2 384 2.01	8.0 1 384 2.01	36.0 2 384 2.01	18.0 2 384 2.01	126301
127001	21.0 2 384 2.01	37.0 2 384 2.01	26.0 2 384 2.01	36.0 2 384 2.01	20.0 2 384 2.01	33.0 2 384 2.01	19.0 2 384 2.01	127001
127301	19.0 2 384 2.01	36.0 2 384 2.01	26.0 2 384 2.01	36.0 2 384 2.01	26.0 2 384 2.01	31.0 2 384 2.01	17.0 2 384 2.01	127301
128001	19.0 2 384 2.01	28.0 2 384 2.01	20.0 2 384 2.01	32.0 2 384 2.01	27.0 2 384 2.01	29.0 2 384 2.01	15.0 2 384 2.01	128001
128301	19.0 2 384 2.01	25.0 2 384 2.01	21.0 2 384 2.01	31.0 2 384 2.01	25.0 2 384 2.01	28.0 2 384 2.01	17.0 2 384 2.01	128301
129001	18.0 2 384 2.01	26.0 2 384 2.01	21.0 2 384 2.01	30.0 2 384 2.01	19.0 2 384 2.01	24.0 2 384 2.01	16.0 2 384 2.01	129001
129301	18.0 2 384 2.01	25.0 2 384 2.01	21.0 2 384 2.01	31.0 2 384 2.01	19.0 2 384 2.01	23.0 2 384 2.01	16.0 2 384 2.01	129301
130001	19.0 2 384 2.01	25.0 2 384 2.01	22.0 2 384 2.01	31.0 2 384 2.01	19.0 2 384 2.01	20.0 2 384 2.01	15.0 2 384 2.01	130001
130301	16.0 2 384 2.01	24.0 2 384 2.01	20.0 2 384 2.01	30.0 2 384 2.01	21.0 2 384 2.01	21.0 2 384 2.01	16.0 2 384 2.01	130301
131001	12.0 2 384 2.01	25.0 2 384 2.01	25.0 2 384 2.01	31.0 2 384 2.01	20.0 2 384 2.01	24.0 2 384 2.01	13.0 2 384 2.01	131001
131301	12.0 2 384 2.01	28.0 2 384 2.01	28.0 2 384 2.01	33.0 2 384 2.01	24.0 2 384 2.01	23.0 2 384 2.01	14.0 2 384 2.01	131301
132001	12.0 2 384 2.01	22.0 2 384 2.01	29.0 2 384 2.01	30.0 2 384 2.01	23.0 2 384 2.01	22.0 2 384 2.01	14.0 2 384 2.01	132001
132301	14.0 2 384 2.01	22.0 2 384 2.01	26.0 2 384 2.01	29.0 2 384 2.01	25.0 2 384 2.01	21.0 2 384 2.01	14.0 2 384 2.01	132301
133001	16.0 2 384 2.01	23.0 2 384 2.01	26.0 2 384 2.01	28.0 2 384 2.01	26.0 2 384 2.01	23.0 2 384 2.01	15.0 2 384 2.01	133001
133301	17.0 2 384 2.01	26.0 2 384 2.01	24.0 2 384 2.01	30.0 2 384 2.01	28.0 2 384 2.01	22.0 2 384 2.01	15.0 2 384 2.01	133301
134001	15.0 2 384 2.01	30.0 2 384 2.01	25.0 2 384 2.01	29.0 2 384 2.01	27.0 2 384 2.01	23.0 2 384 2.01	14.0 2 384 2.01	134001
134301	18.0 2 384 2.01	31.0 2 384 2.01	28.0 2 384 2.01	29.0 2 384 2.01	29.0 2 384 2.01	20.0 2 384 2.01	12.0 2 384 2.01	134301
135001	18.0 2 384 2.01	33.0 2 384 2.01	27.0 2 384 2.01	31.0 2 384 2.01	28.0 2 384 2.01	19.0 2 384 2.01	13.0 2 384 2.01	135001
135301	17.0 2 384 2.01	33.0 2 384 2.01	31.0 2 384 2.01	31.0 2 384 2.01	30.0 2 384 2.01	21.0 2 384 2.01	14.0 2 384 2.01	135301
136001	18.0 2 384 2.01	36.0 2 384 2.01	33.0 2 384 2.01	32.0 2 384 2.01	26.0 2 384 2.01	18.0 2 384 2.01	14.0 2 384 2.01	136001
136301	17.0 2 384 2.01	34.0 2 384 2.01	30.0 2 384 2.01	36.0 2 384 2.01	28.0 2 384 2.01	19.0 2 384 2.01	13.0 2 384 2.01	136301
137001	19.0 2 384 2.01	34.0 2 384 2.01	30.0 2 384 2.01	33.0 2 384 2.01	29.0 2 384 2.01	21.0 2 384 2.01	15.0 2 384 2.01	137001</

Massachusetts Institute of Technology
Information Processing Center

Multics availability for last week to 05/17/75 2359.0

Time	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Time
00001	13.0 2 384 2.01	15.0 2 384 2.01	17.0 2 384 2.01	12.0 2 384 2.01	20.0 2 384 2.31	14.0 2 384 2.01	9.0 2 384 2.01	00001
00001	12.0 2 384 2.01	15.0 2 384 2.01	16.0 2 384 2.01	14.0 2 384 2.01	16.0 2 384 2.31	12.0 2 384 2.01	8.0 2 384 2.01	00001
00301	11.0 2 384 2.01	17.0 2 384 2.01	17.0 2 384 2.01	11.0 2 384 2.01	16.0 2 384 2.01	9.0 2 384 2.01	8.0 2 384 2.01	00301
00301	12.0 2 384 2.01	15.0 2 384 2.01	18.0 2 384 2.01	12.0 2 384 2.01	15.0 2 384 2.01	10.0 2 384 2.01	9.0 2 384 2.01	00301
01001	9.0 2 384 2.01	12.0 2 384 2.01	17.0 2 384 2.01	13.0 2 384 2.01	15.0 2 384 2.01	10.0 2 384 2.01	9.0 2 384 2.01	01001
01001	10.0 2 384 2.01	11.0 2 384 2.01	18.0 2 384 2.01	12.0 2 384 2.01	19.0 2 384 2.01	11.0 2 384 2.01	9.0 2 384 2.01	01001
01301	9.0 2 384 2.01	11.0 2 384 2.01	18.0 2 384 2.01	13.0 2 384 2.01	16.0 2 384 2.01	11.0 2 384 2.01	9.0 2 384 2.01	01301
01301	10.0 2 384 2.01	9.0 2 384 2.01	17.0 2 384 2.01	11.0 2 384 2.01	14.0 2 384 2.01	9.0 2 384 2.01	9.0 2 384 2.01	01301
02001	8.0 2 384 2.01	9.0 2 384 2.01	16.0 2 384 2.01	10.0 2 384 2.01	15.0 2 384 2.01	11.0 2 384 2.01	10.0 2 384 2.01	02001
02001	7.0 2 384 2.01	9.0 2 384 2.01	15.0 2 384 2.01	11.0 2 384 2.01	15.0 2 384 2.01	11.0 2 384 2.01	9.0 2 384 2.01	02001
02301	8.0 2 384 2.01	8.0 2 384 2.01	12.0 2 384 2.01	11.0 2 384 2.01	14.0 2 384 2.01	12.0 2 384 2.01	9.0 2 384 2.01	02301
02301	8.0 2 384 2.01	10.0 2 384 2.01	10.0 2 384 2.01	10.0 2 384 2.01	15.0 2 384 2.01	12.0 2 384 2.01	9.0 2 384 2.01	02301
03001	9.0 2 384 2.01	8.0 2 384 2.01	10.0 2 384 2.01	10.0 2 384 2.01	12.0 2 384 2.01	10.0 2 384 2.01	9.0 2 384 2.01	03001
03001	9.0 2 384 2.01	10.0 2 384 2.01	9.0 2 384 2.01	9.0 2 384 2.01	11.0 2 384 2.01	11.0 2 384 2.01	8.0 2 384 2.01	03001
03301	8.0 2 384 2.01	9.0 2 384 2.01	8.0 2 384 2.01	9.0 2 384 2.01	12.0 2 384 2.01	10.0 2 384 2.01	7.0 2 384 2.01	03301
03301	9.0 2 384 2.01	8.0 2 384 2.01	10.0 2 384 2.01	10.0 2 384 2.01	10.0 2 384 2.01	9.0 2 384 2.01	8.0 2 384 2.01	03301
04001	8.0 2 384 2.01	8.0 2 384 2.01	9.0 2 384 2.01	10.0 2 384 2.01	12.0 2 384 2.01	10.0 2 384 2.01	8.0 2 384 2.01	04001
04001	8.0 2 384 2.01	8.0 2 384 2.01	8.0 2 384 2.01	7.0 2 384 2.01	11.0 2 384 2.01	9.0 2 384 2.01	8.0 2 384 2.01	04001
04301	8.0 2 384 2.01	7.0 2 384 2.01	8.0 2 384 2.01	8.0 2 384 2.01	10.0 2 384 2.01	8.0 2 384 2.01	6.0 2 384 2.01	04301
04301	9.0 2 384 2.01	8.0 2 384 2.01	8.0 2 384 2.01	8.0 2 384 2.01	9.0 2 384 2.01	8.0 2 384 2.01	6.0 2 384 2.01	04301
05001	9.0 2 384 2.01	8.0 2 384 2.01	7.0 2 384 2.01	8.0 2 384 2.01	8.0 2 384 2.01	8.0 2 384 2.01	6.0 2 384 2.01	05001
05001	10.0 2 384 2.01	8.0 2 384 2.01	7.0 2 384 2.01	5.0 2 384 2.01	8.0 2 384 2.01	7.0 2 384 2.01	6.0 2 384 2.01	05001
05301	9.0 2 384 2.01	7.0 2 384 2.01	7.0 2 384 2.01	7.0 2 384 2.01	8.0 2 384 2.01	7.0 2 384 2.01	6.0 2 384 2.01	05301
05301	8.0 2 384 2.01	7.0 2 384 2.01	7.0 2 384 2.01	6.0 2 384 2.01	8.0 2 384 2.01	6.0 2 384 2.01	6.0 2 384 2.01	05301
06001	8.0 2 384 2.01	7.0 2 384 2.01	7.0 2 384 2.01	6.0 2 384 2.01	7.0 2 384 2.01	7.0 2 384 2.01	6.0 2 384 2.01	06001
06001	9.0 2 384 2.01	7.0 2 384 2.01	5.0 2 384 2.01	6.0 2 384 2.01	7.0 2 384 2.01	6.0 2 384 2.01	6.0 2 384 2.01	06001
06301	9.0 2 384 2.01	7.0 2 384 2.01	5.0 2 384 2.01	6.0 2 384 2.01	6.0 2 384 2.01	6.0 2 384 2.01	6.0 2 384 2.01	06301
06301	9.0 2 384 2.01	0.0 1 384 2.01	5.0 2 384 2.01	6.0 2 384 2.01	4.0 2 384 2.01	5.0 2 384 2.01	6.0 2 384 2.01	06301
07001	9.0 2 384 2.01	shutdown	0.0 1 384 2.01	303	0.0 1 384 2.01	0.0 1 384 2.01	6.0 2 384 2.01	07001
07001	9.0 2 384 2.01	0.0 1 256 2.01	shutdown	shutdown	0.0 1 384 2.01	shutdown	6.0 2 384 2.01	07001
07301	10.0 2 384 2.01	1.0 1 256 2.01	shutdown	shutdown	4.0 1 384 2.01	shutdown	6.0 2 384 2.01	07301
07301	9.0 2 384 2.01	crash	shutdown	shutdown	4.0 1 384 2.01	shutdown	5.0 2 384 2.01	07301
08001	9.0 2 384 2.01	1.0 1 256 2.01	shutdown	shutdown	36.0 1 384 2.01	shutdown	5.0 2 384 2.01	08001
08001	9.0 2 384 2.01	0.0 1 256 2.01	shutdown	shutdown	0.0 1 384 2.01	shutdown	6.0 2 384 2.01	08001
08301	10.0 2 384 2.01	shutdown	shutdown	shutdown	shutdown	shutdown	5.0 2 384 2.01	08301
08301	8.0 2 384 2.01	11.0 2 384 2.01	shutdown	shutdown	13.0 2 384 2.01	shutdown	5.0 2 384 2.01	08301
09001	crash	12.0 2 384 2.01	shutdown	shutdown	16.0 2 384 2.01	shutdown	5.0 2 384 2.01	09001
09001	crash	15.0 2 384 2.01	shutdown	12.0 2 384 2.01	24.0 2 384 2.01	8.0 2 384 2.01	5.0 2 384 2.01	09001
09301	crash	23.0 2 384 2.01	shutdown	27.0 2 384 2.01	29.0 2 384 2.01	29.0 2 384 2.01	8.0 2 384 2.01	09301
09301	crash	28.0 2 384 2.01	shutdown	35.0 2 384 2.01	36.0 2 384 2.01	36.0 2 384 2.01	9.0 2 384 2.01	09301
10001	crash	34.0 2 384 2.01	shutdown	43.0 2 384 2.01	41.0 2 384 2.01	42.0 2 384 2.01	9.0 2 384 2.01	10001
10001	crash	35.0 2 384 2.01	28.0 2 384 2.01	49.0 2 384 2.01	42.0 2 384 2.01	40.0 2 384 2.01	9.0 2 384 2.01	10001
10301	crash	36.0 2 384 2.01	35.0 2 384 2.01	44.0 2 384 2.01	50.0 2 384 2.01	45.0 2 384 2.01	9.0 2 384 2.01	10301
10301	crash	36.0 2 384 2.01	302	44.0 2 384 2.01	52.0 2 384 2.01	50.0 2 384 2.01	9.0 2 384 2.01	10301
11001	crash	45.0 2 384 2.01	302	44.0 2 384 2.01	56.0 2 384 2.01	52.0 2 384 2.01	10.0 2 384 2.01	11001
11001	12.0 2 384 2.01	42.0 2 384 2.01	23.0 2 384 2.01	46.0 2 384 2.01	51.0 2 384 2.01	53.0 2 384 2.01	9.0 2 384 2.01	11001
11301	14.0 2 384 2.01	39.0 2 384 2.01	34.0 2 384 2.01	48.0 2 384 2.01	51.0 2 384 2.01	52.0 2 384 2.01	10.0 2 384 2.01	11301
11301	16.0 2 384 2.01	41.0 2 384 2.01	42.0 2 384 2.01	41.0 2 384 2.01	50.0 2 384 2.01	53.0 2 384 2.01	13.0 2 384 2.01	11301
12001	15.0 2 384 2.01	38.0 2 384 2.01	45.0 2 384 2.01	38.0 2 384 2.01	47.0 2 384 2.01	46.0 2 384 2.01	12.0 2 384 2.01	12001
12001	16.0 2 384 2.01	36.0 2 384 2.01	47.0 2 384 2.01	36.0 2 384 2.01	50.0 2 384 2.01	40.0 2 384 2.01	11.0 2 384 2.01	12001
12301	15.0 2 384 2.01	37.0 2 384 2.01	44.0 2 384 2.01	32.0 2 384 2.01	43.0 2 384 2.01	41.0 2 384 2.01	12.0 2 384 2.01	12301
12301	20.0 2 384 2.01	33.0 2 384 2.01	43.0 2 384 2.01	37.0 2 384 2.01	38.0 2 384 2.01	37.0 2 384 2.01	13.0 2 384 2.01	12301
13001	20.0 2 384 2.01	32.0 2 384 2.01	46.0 2 384 2.01	34.0 2 384 2.01	35.0 2 384 2.01	38.0 2 384 2.01	12.0 2 384 2.01	13001
13001	21.0 2 384 2.01	34.0 2 384 2.01	48.0 2 384 2.01	37.0 2 384 2.01	42.0 2 384 2.01	41.0 2 384 2.01	13.0 2 384 2.01	13001
13301	19.0 2 384 2.01	45.0 2 384 2.01	54.0 2 384 2.01	40.0 2 384 2.01	41.0 2 384 2.01	45.0 2 384 2.01	14.0 2 384 2.01	13301
13301	18.0 2 384 2.01	47.0 2 384 2.01	51.0 2 384 2.01	43.0 2 384 2.01	42.0 2 384 2.01	48.0 2 384 2.01	16.0 2 384 2.01	13301
14001	18.0 2 384 2.01	45.0 2 384 2.01	47.0 2 384 2.01	40.0 2 384 2.01	43.0 2 384 2.01	48.0 2 384 2.01	18.0 2 384 2.01	14001
14001	17.0 2 384 2.01	45.0 2 384 2.01	56.0 2 384 2.01	45.0 2 384 2.01	43.0 2 384 2.01	47.0 2 384 2.01	19.0 2 384 2.01	14001
14301	17.0 2 384 2.01	47.0 2 384 2.01	56.0 2 384 2.01	47.0 2 384 2.01	39.0 2 384 2.01	47.0 2 384 2.01	22.0 2 384 2.01	14301
14301	19.0 2 384 2.01	49.0 2 384 2.01	60.0 2 384 2.01	49.0 2 384 2.01	38.0 2 384 2.01	48.0 2 384 2.01	18.0 2 384 2.01	14301
15001	22.0 2 384 2.01	55.0 2 384 2.01	59.0 2 384 2.01	50.0 2 384 2.01	41.0 2 384 2.01	50.0 2 384 2.01	20.0 2 384 2.01	15001
15001	25.0 2 384 2.01	54.0 2 384 2.01	57.0 2 384 2.01	53.0 2 384 2.01	48.0 2 384 2.01	49.0 2 384 2.01	23.0 2 384 2.01	15001
15301	25.0 2 384 2.01	55.0 2 384 2.01	62.0 2 384 2.01	56.0 2 384 2.01	52.0 2 384 2.01	55.0 2 384 2.01	21.0 2 384 2.01	15301
15301	25.0 2 384 2.01	55.0 2 384 2.01	60.0 2 384 2.01	58.0 2 384 2.01	49.0 2 384 2.01	55.0 2 384 2.01	23.0 2 384 2.01	15301
16001	27.0 2 384 2.01	57.0 2 384 2.01	55.0 2 384 2.01	57.0 2 384 2.01	54.0 2 384 2.01	50.0 2 384 2.01	22.0 2 384 2.01	16001
16001	26.0 2 384 2.01	59.0 2 384 2.01	53.0 2 384 2.01	59.0 2 384 2.01	51.0 2 384 2.01	51.0 2 384 2.01	19.0 2 384 2.01	16001
16301	24.0 2 384 2.01	56.0 2 384 2.01	51.0 2 384 2.01	57.0 2 384 2.01	52.0 2 384 2.01	52.0 2 384 2.01	17.0 2 384 2.01	16301
16301	24.0 2 384 2.01	50.0 2 384 2.01	48.0 2 384 2.01	60.0 2 384 2.01	49.0 2 384 2.01	51.0 2 384 2.01	17.0 2 384 2.01	16301
17001	24.0 2 384 2.01	50.0 2 384 2.01	46.0 2 384 2.01	56.0 2 384 2.01	45.0 2 384 2.01	41.0 2 384 2.01	19.0 2 384 2.01	17001
17001	25.0 2 384 2.01	42.0 2 384 2.01	47.0 2 384 2.01	54.0 2 384 2.01	43.0 2 384 2.01	34.0 2 384 2.01	19.0 2 384 2.01	17001
17301	25.0 2 384 2.01	35.0 2 384 2.01	40.0 2 384 2.01	48.0 2 384 2.01	43.0 2 384 2.01	31.0 2 384 2.01	0.0 2 384 2.01	17301
17301	23.0 2 384 2.01	34.0 2 384 2.01	40.0 2 384 2.01	40.0 2 384 2.01	37.0 2 384 2.01	29.0 2 384 2.01	shutdown	17301
18001	19.0 2 384 2.01	31.0 2 384 2.01	34.0 2 384 2.01	33.0 2 384 2.01	31.0 2 384 2.01	29.0 2 384 2.01	shutdown	18001
18001	16.0 2 384 2.01	34.0 2 384 2.01	27.0 2 384 2.01	32.0 2 384				