

F O R U M   L I S T

RECEIVED  
NOV 20 1975  
J. H. SALTZER

G. Ackerman-Lewis

D. Clark

C. Clingen

R. Daley

J. Gintell

G. Lundberg

J. Regester

Prof. J. Saltzer

R. Shoemaker



TO: List of Attendees

cc: List

SUBJECT: Forum Minutes for November 5, 1975

ATTENDEES: W. J. Burner P. B. Kelley L. J. Ryan  
R. J. Chevalier E. D. Kleinow J. R. Steinberg  
W. J. Flaherty W. McFall  
D. Jordan R. A. Roach

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HARDWARE - E. D. Kleinow

- Processors . Appears that character comparisons are failing when they should not, or succeeding when they should not.
  - . Processor B to SCU-A has a potential interface problem. FED will check this out when time is available.
- DSU190A . Spare unit arrived this AM. FED will install as soon as possible.
- DSU190B . 3 units test out okay on T&D's.
- SCU-A . Stor-A Store faults. FED completed schmoo on unit and changed CD board.
- PRT202 . Down for 12 hours last week due to a loose wire on clutch circuit board.
- MTH505 . Unit #2 down with faulty board. Awaiting part.
- Firmware . LA works at CISL and other Multics sites but not at MIT.

SOFTWARE - P. B. Kelley

- . MSS.27.1A running.
- . Answering Service Problem.
- . MDS2400 also caused problems. Jordan says that a design problem in the HSLA is being addressed by M. Grady of CISL.
- . Pd\_\_\_Util bug has been fixed.

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BILLERICA - W. J. Flaherty

- . CEO-B considering addition of a free standing LSLA at MIT. Flaherty will coordinate this move and installation with Leo Ryan when it becomes firm.
- . Billerica users somewhat concerned about printer problems. i.e., turn around time and lost columns. Flaherty requested spooling of B queue print load.

Bl





Massachusetts Institute of Technology  
Programming Development Office  
Cambridge, Massachusetts 02139

To: Forum Attendants  
From: Grace E. Ackerman-Lewis  
Date: November 5, 1975  
Subject: Multics Availability October 20 - November 2

Summary of Lost Time

	# of Crashes	Crashes	Time Lost Other	Total
Software:	3	01:29	0:00	01:29
Hardware:	5	07:09	0:00	07:09
Not Analyzable:	2	00:48	0:00	00:48
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Total:	10	09:26	0:00	09:26

Total lost time/Scheduled up time = 9:26/173:00 = .054 (94.6% up time)

Total lost time/Unattended up time = 0:00/110:00 = .00 (100% up time)

October lost time 29:23 (scheduled)

October lost time 13:02 (unattended)

November month-to-date lost time 0:09 (scheduled)

Time Lost  
Down At Up At

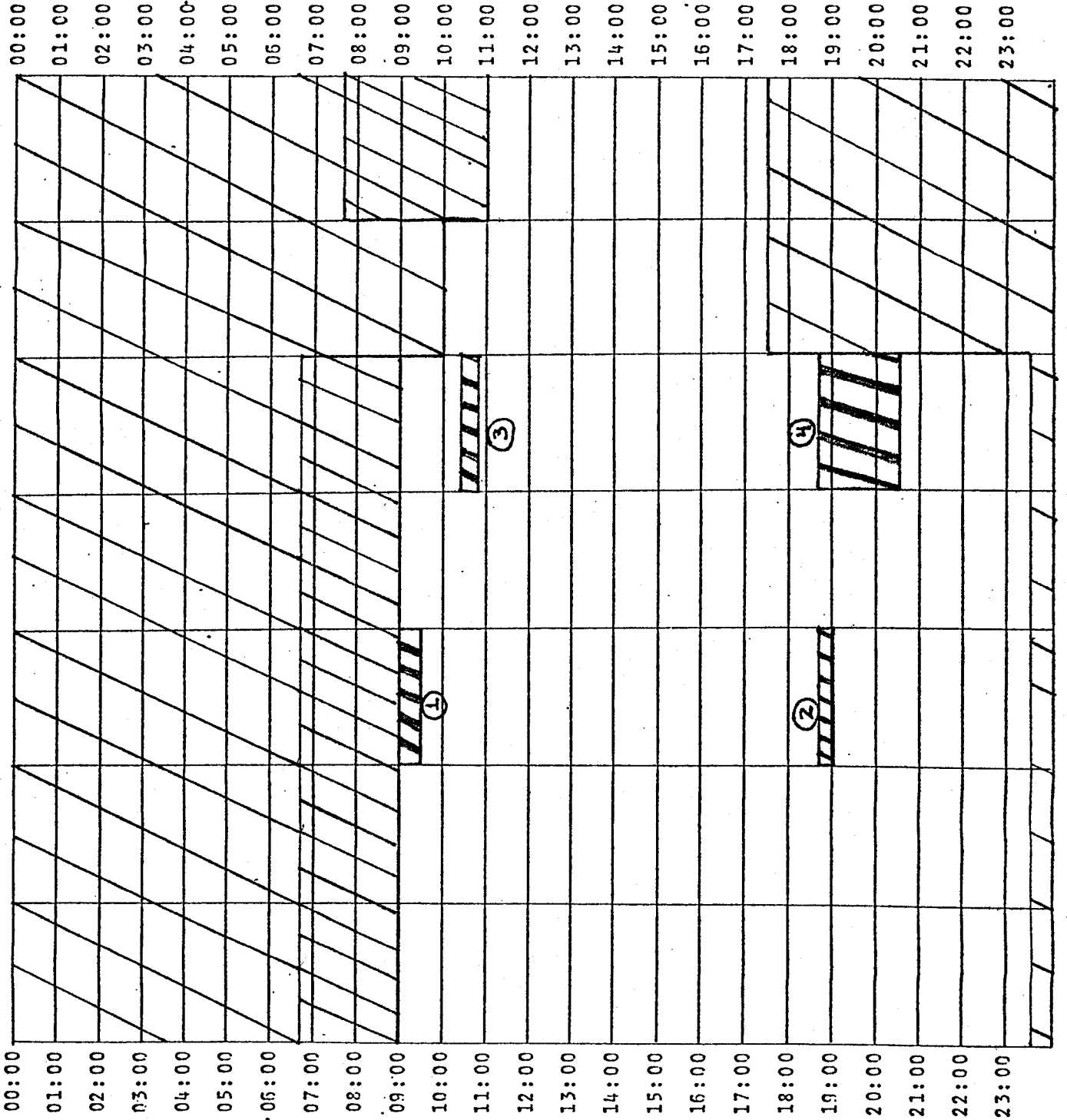
1 09:00 10/22 - 09:27 10/22 Crash, ERF 420  
 2 18:48 10/22 - 19:04 10/22 Crash, ERF 421  
 3 10:23 10/24 - 10:55 10/24 Crash, ERF 421a  
 4 18:50 10/24 - 20:24 10/24 Crash, ERF 422  
 5 11:28 10/27 - 11:55 10/27 Crash, ERF 423  
 6 12:30 10/27 - 13:14 10/27 Crash, ERF 424  
 7 17:33 10/27 - 22:16 10/27 Crash, ERF 425  
 8 07:07 10/28 - 09:41 10/28 Crash, ERF 426  
 9 15:10 10/28 - 15:49 10/28 Crash, ERF 427  
 10 12:40 11/02 - 12:49 11/02 Crash, ERF 428

Time Lost  
Due to

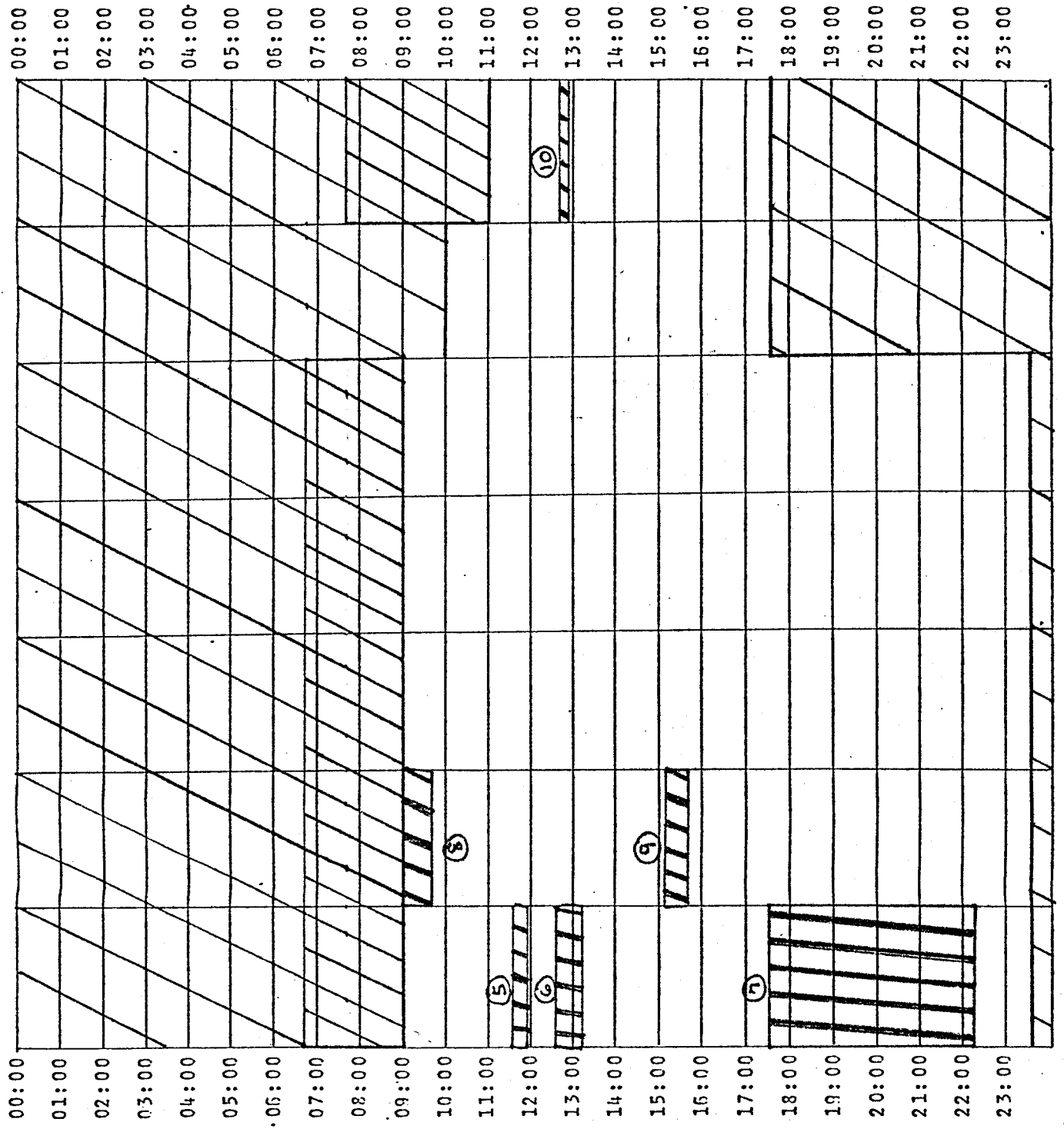
00:27 S Answering Service problems  
 00:16 H Handler dropped out of ready causing MPC to hang  
 00:32 H HSLA problem  
 01:34 H Loose board, CPU-A  
 00:27 S Apparent problem with handling Billerica MDS 2400  
 00:44 H Repeated store faults CPU-A SCU-A  
 04:43 H Parity errors SCU-A  
 00:41 S Bug in pd\_util  
 00:39 NA System loop, no dump taken  
 00:09 NA Initializer process went blocked



Monday 10/20 Tuesday 10/21 Wednesday 10/22 Thursday 10/23 Friday 10/24 Saturday 10/25 Sunday 10/26



Monday 10/27 Tuesday 10/28 Wednesday 10/29 Thursday 10/30 Friday 10/31 Saturday 11/1 Sunday 11/2



To: Administrative Distribution  
From: Grace Ackerman-Lewis  
Date: November 5, 1975  
Subject: Multics Crash Analysis for October 20 - November 2

Total number of crashes = 10 (ERFs 420 - 428)

Hardware:

Handler dropped out of ready causing MPC to hang	1
PSLA problem	1
Loose board, CPU-A	1
Store faults CPU-A SCU-A	1
Parity errors SCU-A	1
Total:	<u>5</u>

Not Analyzable:

System loop	1
Initializer process went blocked	1
Total:	<u>2</u>

Software:

Answering service problem	1
Problem with Billerica MDS 2400	1
Bug in pd_util	1
Total:	<u>3</u>

#	sys.	date	time	type	brief explanation
428	27.1a	11/02/75	12:40	NA	Initializer process went blocked, no initializer dump taken
	27.1a	11/01/75			NO CRASHES
	27.1a	10/31/75			NO CRASHES
	27.1a	10/30/75			NO CRASHES
	27.1a	10/29/75			NO CRASHES
427	27.1	10/28/75	15:10	NA	System loop, no dump taken
426	27.1	10/28/75	7:00	S	bug in pd_utl1
425	27.1	10/27/75	18:00	H	parity error - SCU A
424	27.1	10/27/75	12:30	H	store faults - CPU A - SCU A
423	27.1	10/27/75	11:28	S	DM355 - problem with the Billerica MMS2400
	27.1	10/26/75			NO CRASHES
	27.1	10/25/75			NO CRASHES
422	27.1	10/24/75	18:50	H	CPU-A board loose
421	27.1	10/24/75	10:23	S	DM355 problem with Billerica MDS 2400
	27.1	10/23/75			NO CRASHES
420	27.1	10/22/75	18:48	H	Tape MPC hung - handler dropped ready
	27.1	10/21/75			NO CRASHES
	27.1	10/20/75			NO CRASHES

Utilities Software Bugs List as of 14:33 Tuesday, November 4, 1975

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384 09/17/75 1 dmv      ITT can overflow very easily, leading to system crashes
356 02/21/75 1 dmv      Bug(s) exist in Network locking software -> pass timeouts

383 08/21/75 2 shw      copyright_archive fails if archive longer than 64K
381 08/21/75 2 shw      shutdown with 2 CPUs may not work (depends on which CPU is used for shutdown)
350 01/02/75 2 mjg      Users who hangup may not be logged out
348 12/03/74 2 tac      security problems in the automatic creating of home directories

382 08/21/75 3          add_copyright will not work with several recent source types
380 07/30/75 3 srh      delete_acl with no args deletes user's access to working dir (MPPF 8588)
378 07/30/75 3 mam      qedx won't edit some loop (>64K) segments (MPPF 8591)
375 05/22/75 3 nlm      printer dlm does not raise food when out of paper (if in nep mode or printing head sheet)
369 04/10/75 3          Shutdown with 3 CPUs may result in a loop (stz used to clear lock, should be stac)
366 03/22/75 3 shw      user can get into loop creating/destroying processes thus tying up system.
364 03/02/75 3 srh      msle does not handle star convention error message on a msgq (bug in chname_sfile)
362 03/02/75 3 srh      delete_name gives incorrect error message on a msgq (bug in chname_sfile)
359 03/02/75 3 bsg      initialize_peek_limits leaves old (possibly dangerous) limit table on an error (missing seg)
358 02/27/75 3 rab      EXI compiler faults if used for 1st time after debug has listed object code (fixed with prelinking)
354 02/12/75 3 bsg      initialize_peek_limits fails if any error is encountered while processing (security problem?)
338 09/26/74 3          restarted printer requests indicate a zero charge ($0.00)
324 08/27/74 3 tvy      message coordinator can lose a wakeup and then stops printing
322 08/21/74 3 srh      command_processor can get fatal process errors (with some cases of iteration)
315 07/24/74 3 amk      Long salpaper (after clean shutdown) is detecting bad filemap checksums
282 05/05/74 3 mam      qedx fails to find expressions like /a.b.c.*a.b.d/ in strings like "a.b.c a.b a.b.d"
240 01/10/74 3 NSS      lock does not handle directory deletions well. (May result in seg fault -> crawlout)
141 07/22/73 3 ***      >system_library_tools should be removed from default search rules
129 07/07/73 3 rgh      renaming directories does not terminate them and can cause serious problems
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\*\*\* - fix completed (to be installed)

Inst - fix installed

(END)

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

084	06/13/75	***	CSL causes 2-bit shift at boundsfault boundary (PIA0-FC070)
083	04/19/75	***	IPR faults occur if target string of move (etc) is zero length.
082	01/15/75	inst	CI*PI does not always work
081	01/15/75	ENC	CI*PC sometimes fails
080	10/14/74	ENC	Bounds faults not being recognized on decimal instructions (PIA0-PE036, PIA0-PC060)
079	10/14/74	inst	Ring alarm faults are only sampled at RTCN time (PIA0-PE052)
078	10/14/74	***	Facked pointer load faults (FC0 released)
077	10/14/74	***	CI*Pr sometimes fails at page boundaries.
076	09/05/74	inst	MLR sometimes stores extra fill characters.
075	08/26/74	inst	MLR sometimes fails with multiple page faults.
074	08/05/74	inst	CI*PR (PI*P, etc) will not work with 1048576 characters.
073	05/02/74	***	ANVP sometimes fetches operand from even word instead of odd.
072	05/02/74	inst	CI*PR falls with certain bit offsets not on character boundaries.
071	05/02/74	***	XFN'd instructions fail to do indexing correctly (PIA0-PE052)
070	03/25/74	inst	MLP and CI*PC place fill characters in last few words at page bdry
069	03/18/74	inst	MPY gets overflow on -2**35 inst -2**35.
068	03/11/74	inst	MLR sometimes places 8 zeros near page boundary.
067	02/14/74	inst	MVN gets fixedoverflow when moving 02.
066	02/14/74	inst	MLR sometimes changes a single character to fill character at page boundary.
065	02/13/74	inst	MLP moves 8 characters extra at page boundary.
064	02/12/74	inst	CI*PC fails at connect fault time processing fill chars.
063	02/06/74	inst	CSL instruction fails across boundfault boundaries.
062	02/04/74	inst	MVT sometimes fails if take page fault on table.
061	01/24/74	inst	MLP gets op-not-completes.
060	01/12/74	inst	MLR get no-write-permission by miscalculating TSR.
059	01/12/74	inst	CI*PC sometimes gives wrong results.
058	01/12/74	inst	MLP instruction fails across boundfault boundaries.
057	01/03/74	inst	SRER gets op-not-complete if at end of page.
056	01/03/74	inst	CI and/or SC modification does not always work.
042	10/13/73	inst	

0006

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)

Massachusetts Institute of Technology  
Information Processing Center

Multics availability for last week to 10/25/75 2359.0

Time	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Time
100001	9.0 2 384 2.01	9.0 2 384 2.01	16.0 2 384 2.01	13.0 2 384 2.01	13.0 2 384 2.01	17.0 2 384 2.01	10.0 1 384 2.01	100001
100301	9.0 2 384 2.01	10.0 2 384 2.01	13.0 2 384 2.01	10.0 2 384 2.01	16.0 2 384 2.01	17.0 2 384 2.01	13.0 1 384 2.01	100301
101001	11.0 2 384 2.01	10.0 2 384 2.01	15.0 2 384 2.01	12.0 2 384 2.01	16.0 2 384 2.01	16.0 2 384 2.01	15.0 1 384 2.01	101001
101301	11.0 2 384 2.01	10.0 2 384 2.01	10.0 2 384 2.01	10.0 2 384 2.01	13.0 2 384 2.01	14.0 2 384 2.01	14.0 1 384 2.01	101301
102001	9.0 2 384 2.01	7.0 2 384 2.01	9.0 2 384 2.01	10.0 2 384 2.01	10.0 2 384 2.01	11.0 2 384 2.01	15.0 1 384 2.01	102001
102301	9.0 2 384 2.01	6.0 2 384 2.01	8.0 2 384 2.01	10.0 2 384 2.01	10.0 2 384 2.01	11.0 2 384 2.01	15.0 1 384 2.01	102301
103001	7.0 2 384 2.01	5.0 2 384 2.01	8.0 2 384 2.01	12.0 2 384 2.01	9.0 2 384 2.01	11.0 2 384 2.01	11.0 1 384 2.01	103001
103301	7.0 2 384 2.01	5.0 2 384 2.01	9.0 2 384 2.01	11.0 2 384 2.01	9.0 2 384 2.01	8.0 2 384 2.01	9.0 1 384 2.01	103301
104001	5.0 2 384 2.01	5.0 2 384 2.01	9.0 2 384 2.01	9.0 2 384 2.01	9.0 2 384 2.01	6.0 2 384 2.01	8.0 1 384 2.01	104001
104301	5.0 2 384 2.01	5.0 2 384 2.01	8.0 2 384 2.01	8.0 2 384 2.01	7.0 2 384 2.01	6.0 2 384 2.01	8.0 1 384 2.01	104301
105001	6.0 2 384 2.01	5.0 2 384 2.01	8.0 2 384 2.01	8.0 2 384 2.01	7.0 2 384 2.01	6.0 2 384 2.01	5.0 1 384 2.01	105001
105301	6.0 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	7.0 2 384 2.01	5.0 1 384 2.01	105301
106001	6.0 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	7.0 2 384 2.01	5.0 1 384 2.01	106001
106301	6.0 2 384 2.01	5.0 2 384 2.01	7.0 2 384 2.01	7.0 2 384 2.01	7.0 2 384 2.01	6.0 2 384 2.01	5.0 1 384 2.01	106301
107001	6.0 2 384 2.01	5.0 2 384 2.01	7.0 2 384 2.01	7.0 2 384 2.01	7.0 2 384 2.01	6.0 2 384 2.01	5.0 1 384 2.01	107001
107301	7.0 2 384 2.01	0.0 1 256 2.01	6.0 2 384 2.01	0.0 1 384 2.01	4.0 1 256 2.01	0.0 1 384 2.01	5.0 1 384 2.01	107301
108001	4.0 2 384 2.01	4.0 1 256 2.01	shut down	shut down	33.0 1 256 2.01	shut down	0.0 1 384 2.01	108001
108301	shut down	0.0 1 256 2.01	shut down	shut down	8.0 1 384 2.01	shut down	shut down	108301
109001	shut down	shut down	shut down	9.0 1 384 2.01	8.0 1 384 2.01	shut down	9.0 1 384 2.01	109001
109301	shut down	shut down	shut down	crash	11.0 2 384 2.01	shut down	11.0 1 384 2.01	109301
110001	shut down	30.0 2 384 2.01	27.0 2 384 2.01	0.0 1 384 2.01	13.0 2 384 2.01	shut down	10.0 2 384 2.01	110001
110301	shut down	33.0 2 384 2.01	42.0 2 384 2.01	0.0 1 384 2.01	31.0 2 384 2.01	32.0 2 384 2.01	11.0 2 384 2.01	110301
111001	shut down	36.0 2 384 2.01	47.0 2 384 2.01	26.0 1 384 2.01	47.0 2 384 2.01	33.0 2 384 2.01	13.0 2 384 2.01	111001
111301	shut down	42.0 2 384 2.01	54.0 2 384 2.01	37.0 1 256 2.01	46.0 2 384 2.01	39.0 2 384 2.01	12.0 2 384 2.01	111301
112001	shut down	45.0 2 384 2.01	53.0 2 384 2.01	43.0 2 384 2.01	51.0 2 384 2.01	48.0 2 384 2.01	11.0 2 384 2.01	112001
112301	shut down	54.0 2 384 2.01	58.0 2 384 2.01	47.0 2 384 2.01	51.0 2 384 2.01	42.1	12.0 2 384 2.01	112301
113001	shut down	55.0 2 384 2.01	59.0 2 384 2.01	53.0 2 384 2.01	59.0 2 384 2.01	42.1	12.0 2 384 2.01	113001
113301	13.0 1 384 2.01	61.0 2 384 2.01	64.0 2 384 2.01	53.0 2 384 2.01	60.0 2 384 2.01	42.1	16.0 2 384 2.01	113301
114001	16.0 1 384 2.01	59.0 2 384 2.01	55.0 2 384 2.01	51.0 2 384 2.01	60.0 2 384 2.01	38.0 2 384 2.01	17.0 2 384 2.01	114001
114301	19.0 2 384 2.01	65.0 2 384 2.01	47.0 2 384 2.01	55.0 2 384 2.01	59.0 2 384 2.01	62.0 2 384 2.01	20.0 2 384 2.01	114301
115001	20.0 2 384 2.01	61.0 2 384 2.01	40.0 2 384 2.01	45.0 2 384 2.01	55.0 2 384 2.01	52.0 2 384 2.01	24.0 2 384 2.01	115001
115301	20.0 2 384 2.01	60.0 2 384 2.01	40.0 2 384 2.01	46.0 2 384 2.01	53.0 2 384 2.01	48.0 2 384 2.01	23.0 2 384 2.01	115301
116001	23.0 2 384 2.01	60.0 2 384 2.01	40.0 2 384 2.01	41.0 2 384 2.01	46.0 2 384 2.01	51.0 2 384 2.01	19.0 2 384 2.01	116001
116301	24.0 2 384 2.01	56.0 2 384 2.01	35.0 2 384 2.01	40.0 2 384 2.01	53.0 2 384 2.01	56.0 2 384 2.01	20.0 2 384 2.01	116301
117001	21.0 2 384 2.01	59.0 2 384 2.01	39.0 2 384 2.01	38.0 2 384 2.01	56.0 2 384 2.01	54.0 2 384 2.01	21.0 2 384 2.01	117001
117301	21.0 2 384 2.01	63.0 2 384 2.01	36.0 2 384 2.01	42.0 2 384 2.01	59.0 2 384 2.01	55.0 2 384 2.01	21.0 2 384 2.01	117301
118001	24.0 2 384 2.01	59.0 2 384 2.01	48.0 2 384 2.01	48.0 2 384 2.01	62.0 2 384 2.01	62.0 2 384 2.01	17.0 2 384 2.01	118001
118301	25.0 2 384 2.01	60.0 2 384 2.01	51.0 2 384 2.01	59.0 2 384 2.01	72.0 2 384 2.01	68.0 2 384 2.01	20.0 2 384 2.01	118301
119001	25.0 2 384 2.01	57.0 2 384 2.01	52.0 2 384 2.01	67.0 2 384 2.01	59.0 2 384 2.01	79.0 2 384 2.01	20.0 2 384 2.01	119001
119301	29.0 2 384 2.01	64.0 2 384 2.01	53.0 2 384 2.01	59.0 2 384 2.01	68.0 2 384 2.01	80.0 2 384 2.01	22.0 2 384 2.01	119301
120001	24.0 2 384 2.01	67.0 2 384 2.01	56.0 2 384 2.01	68.0 2 384 2.01	65.0 2 384 2.01	78.0 2 384 2.01	21.0 2 384 2.01	120001
120301	28.0 2 384 2.01	68.0 2 384 2.01	62.0 2 384 2.01	69.0 2 384 2.01	65.0 2 384 2.01	79.0 2 384 2.01	25.0 2 384 2.01	120301
121001	23.0 2 384 2.01	70.0 2 384 2.01	67.0 2 384 2.01	58.0 2 384 2.01	67.0 2 384 2.01	75.0 2 384 2.01	24.0 2 384 2.01	121001
121301	22.0 2 384 2.01	74.0 2 384 2.01	61.0 2 384 2.01	62.0 2 384 2.01	67.0 2 384 2.01	75.0 2 384 2.01	24.0 2 384 2.01	121301
122001	21.0 2 384 2.01	68.0 2 384 2.01	55.0 2 384 2.01	69.0 2 384 2.01	70.0 2 384 2.01	80.0 2 384 2.01	25.0 2 384 2.01	122001
122301	23.0 2 384 2.01	66.0 2 384 2.01	61.0 2 384 2.01	67.0 2 384 2.01	74.0 2 384 2.01	77.0 2 384 2.01	20.0 2 384 2.01	122301
123001	20.0 2 384 2.01	64.0 2 384 2.01	62.0 2 384 2.01	65.0 2 384 2.01	74.0 2 384 2.01	71.0 2 384 2.01	23.0 2 384 2.01	123001
123301	20.0 2 384 2.01	66.0 2 384 2.01	65.0 2 384 2.01	68.0 2 384 2.01	73.0 2 384 2.01	73.0 2 384 2.01	20.0 2 384 2.01	123301
124001	24.0 2 384 2.01	70.0 2 384 2.01	66.0 2 384 2.01	71.0 2 384 2.01	73.0 2 384 2.01	67.0 2 384 2.01	20.0 2 384 2.01	124001
124301	21.0 2 384 2.01	64.0 2 384 2.01	63.0 2 384 2.01	58.0 2 384 2.01	73.0 2 384 2.01	63.0 2 384 2.01	21.0 2 384 2.01	124301
125001	20.0 2 384 2.01	55.0 2 384 2.01	57.0 2 384 2.01	50.0 2 384 2.01	60.0 2 384 2.01	58.0 2 384 2.01	19.0 2 384 2.01	125001
125301	20.0 2 384 2.01	47.0 2 384 2.01	44.0 2 384 2.01	45.0 2 384 2.01	58.0 2 384 2.01	39.0 2 384 2.01	14.0 2 384 2.01	125301
126001	18.0 2 384 2.01	35.0 2 384 2.01	33.0 2 384 2.01	38.0 2 384 2.01	46.0 2 384 2.01	36.0 2 384 2.01	10.0 2 384 2.01	126001
126301	16.0 2 384 2.01	30.0 2 384 2.01	45.0 2 384 2.01	30.0 2 384 2.01	44.0 2 384 2.01	36.0 2 384 2.01	10.0 2 384 2.01	126301
127001	14.0 2 384 2.01	24.0 2 384 2.01	36.0 2 384 2.01	31.0 2 384 2.01	41.0 2 384 2.01	37.0 2 384 2.01	10.0 2 384 2.01	127001
127301	16.0 2 384 2.01	26.0 2 384 2.01	34.0 2 384 2.01	32.0 2 384 2.01	38.0 2 384 2.01	38.0 2 384 2.01	11.0 2 384 2.01	127301
128001	15.0 2 384 2.01	22.0 2 384 2.01	32.0 2 384 2.01	30.0 2 384 2.01	39.0 2 384 2.01	37.0 2 384 2.01	11.0 2 384 2.01	128001
128301	16.0 2 384 2.01	19.0 2 384 2.01	28.0 2 384 2.01	42.0	35.0 2 384 2.01	crash	13.0 2 384 2.01	128301
129001	21.0 2 384 2.01	28.0 2 384 2.01	29.0 2 384 2.01	23.0 2 384 2.01	29.0 2 384 2.01	crash	16.0 2 384 2.01	129001
129301	21.0 2 384 2.01	26.0 2 384 2.01	28.0 2 384 2.01	29.0 2 384 2.01	24.0 2 384 2.01	crash	15.0 2 384 2.01	129301
130001	19.0 2 384 2.01	26.0 2 384 2.01	28.0 2 384 2.01	26.0 2 384 2.01	19.0 2 384 2.01	crash	15.0 2 384 2.01	130001
130301	18.0 2 384 2.01	25.0 2 384 2.01	26.0 2 384 2.01	24.0 2 384 2.01	22.0 2 384 2.01	crash	14.0 2 384 2.01	130301
131001	15.0 2 384 2.01	26.0 2 384 2.01	29.0 2 384 2.01	23.0 2 384 2.01	25.0 2 384 2.01	crash	12.0 2 384 2.01	131001
131301	14.0 2 384 2.01	29.0 2 384 2.01	30.0 2 384 2.01	21.0 2 384 2.01	28.0 2 384 2.01	crash	16.0 2 384 2.01	131301
132001	10.0 2 384 2.01	27.0 2 384 2.01	31.0 2 384 2.01	23.0 2 384 2.01	26.0 2 384 2.01	11.0 1 384 2.01	17.0 2 384 2.01	132001
132301	13.0 2 384 2.01	22.0 2 384 2.01	29.0 2 384 2.01	22.0 2 384 2.01	28.0 2 384 2.01	15.0 1 384 2.01	17.0 2 384 2.01	132301
133001	15.0 2 384 2.01	24.0 2 384 2.01	27.0 2 384 2.01	23.0 2 384 2.01	29.0 2 384 2.01	18.0 1 384 2.01	17.0 2 384 2.01	133001
133301	12.0 2 384 2.01	28.0 2 384 2.01	26.0 2 384 2.01	18.0 2 384 2.01	28.0 2 384 2.01	16.0 1 384 2.01	17.0 2 384 2.01	133301
134001	15.0 2 384 2.01	33.0 2 384 2.01	25.0 2 384 2.01	21.0 2 384 2.01	30.0 2 384 2.01	19.0 1 384 2.01	11.0 2 384 2.01	134001
134301	17.0 2 384 2.01	31.0 2 384 2.01	28.0 2 384 2.01	20.0 2 384 2.01	33.0 2 384 2.01	19.0 1 384 2.01	11.0 2 384 2.01	134301
135001	16.0 2 384 2.01	26.0 2 384 2.01	20.0 2 384 2.01	21.0 2 384 2.01	27.0 2 384 2.01	23.0 1 384 2.01	13.0 2 384 2.01	135001
135301	15.0 2 384 2.01	29.						

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Multics availability for last week to 11/01/75 2359.0

Time	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Time
100001	14.0 2 384 2.01	17.0 2 384 2.01	30.0 1 256 2.01	30.0 1 256 2.01	24.0 2 384 2.01	16.0 2 384 2.01	9.0 2 384 2.01	00001
100001	14.0 2 384 2.01	15.0 2 384 2.01	31.0 1 256 2.01	28.0 1 256 2.01	20.0 2 384 2.01	14.0 2 384 2.01	9.0 2 384 2.01	00001
100301	14.0 2 384 2.01	15.0 2 384 2.01	30.0 1 256 2.01	26.0 1 256 2.01	17.0 2 384 2.01	14.0 2 384 2.01	10.0 2 384 2.01	000301
100301	10.0 2 384 2.01	15.0 2 384 2.01	26.0 1 256 2.01	22.0 1 256 2.01	17.0 2 384 2.01	13.0 2 384 2.01	12.0 2 384 2.01	000301
101001	9.0 2 384 2.01	14.0 2 384 2.01	24.0 1 256 2.01	18.0 1 256 2.01	16.0 2 384 2.01	13.0 2 384 2.01	11.0 2 384 2.01	001001
101001	8.0 2 384 2.01	12.0 2 384 2.01	25.0 1 256 2.01	16.0 1 256 2.01	15.0 2 384 2.01	8.0 2 384 2.01	9.0 2 384 2.01	001001
101301	9.0 2 384 2.01	11.0 2 384 2.01	23.0 1 256 2.01	16.0 1 256 2.01	15.0 2 384 2.01	8.0 2 384 2.01	9.0 2 384 2.01	001301
101301	9.0 2 384 2.01	12.0 2 384 2.01	20.0 1 256 2.01	15.0 1 256 2.01	14.0 2 384 2.01	9.0 2 384 2.01	10.0 2 384 2.01	001301
102001	10.0 2 384 2.01	13.0 2 384 2.01	20.0 1 256 2.01	14.0 1 256 2.01	13.0 2 384 2.01	9.0 2 384 2.01	9.0 2 384 2.01	002001
102001	11.0 2 384 2.01	14.0 2 384 2.01	18.0 1 256 2.01	15.0 1 256 2.01	11.0 2 384 2.01	9.0 2 384 2.01	9.0 2 384 2.01	002001
102301	10.0 2 384 2.01	9.0 2 384 2.01	16.0 1 256 2.01	16.0 1 256 2.01	10.0 2 384 2.01	9.0 2 384 2.01	9.0 2 384 2.01	002301
102301	10.0 2 384 2.01	9.0 2 384 2.01	16.0 1 256 2.01	15.0 1 256 2.01	11.0 2 384 2.01	8.0 2 384 2.01	8.0 2 384 2.01	002301
103001	10.0 2 384 2.01	10.0 2 384 2.01	16.0 1 256 2.01	14.0 1 256 2.01	12.0 2 384 2.01	7.0 2 384 2.01	8.0 2 384 2.01	003001
103001	8.0 2 384 2.01	9.0 2 384 2.01	14.0 1 256 2.01	14.0 1 256 2.01	11.0 2 384 2.01	7.0 2 384 2.01	8.0 2 384 2.01	003001
103301	8.0 2 384 2.01	7.0 2 384 2.01	13.0 1 256 2.01	12.0 1 256 2.01	11.0 2 384 2.01	8.0 2 384 2.01	9.0 2 384 2.01	003301
103301	8.0 2 384 2.01	7.0 2 384 2.01	13.0 1 256 2.01	10.0 1 256 2.01	11.0 2 384 2.01	8.0 2 384 2.01	8.0 2 384 2.01	003301
104001	8.0 2 384 2.01	7.0 2 384 2.01	13.0 1 256 2.01	11.0 1 256 2.01	10.0 2 384 2.01	8.0 2 384 2.01	8.0 2 384 2.01	004001
104001	7.0 2 384 2.01	8.0 2 384 2.01	11.0 1 256 2.01	10.0 1 256 2.01	10.0 2 384 2.01	7.0 2 384 2.01	7.0 2 384 2.01	004001
104301	7.0 2 384 2.01	8.0 2 384 2.01	11.0 1 256 2.01	9.0 1 256 2.01	10.0 2 384 2.01	8.0 2 384 2.01	7.0 2 384 2.01	004301
104301	6.0 2 384 2.01	7.0 2 384 2.01	11.0 1 256 2.01	10.0 1 256 2.01	9.0 2 384 2.01	7.0 2 384 2.01	7.0 2 384 2.01	004301
105001	6.0 2 384 2.01	7.0 2 384 2.01	9.0 1 256 2.01	8.0 1 256 2.01	9.0 2 384 2.01	8.0 2 384 2.01	6.0 2 384 2.01	005001
105001	6.0 2 384 2.01	8.0 2 384 2.01	10.0 1 256 2.01	9.0 1 256 2.01	10.0 2 384 2.01	8.0 2 384 2.01	6.0 2 384 2.01	005001
105301	6.0 2 384 2.01	7.0 2 384 2.01	9.0 1 256 2.01	9.0 1 256 2.01	8.0 2 384 2.01	8.0 2 384 2.01	7.0 2 384 2.01	005301
105301	6.0 2 384 2.01	7.0 2 384 2.01	9.0 1 256 2.01	8.0 1 256 2.01	8.0 2 384 2.01	8.0 2 384 2.01	7.0 2 384 2.01	005301
106001	7.0 2 384 2.01	8.0 2 384 2.01	9.0 1 256 2.01	8.0 1 256 2.01	8.0 2 384 2.01	8.0 2 384 2.01	7.0 2 384 2.01	006001
106001	7.0 2 384 2.01	7.0 2 384 2.01	7.0 1 256 2.01	8.0 1 256 2.01	8.0 2 384 2.01	8.0 2 384 2.01	7.0 2 384 2.01	006001
106301	7.0 2 384 2.01	7.0 2 384 2.01	7.0 1 256 2.01	7.0 1 256 2.01	0.0 1 384 2.01	7.0 2 384 2.01	7.0 2 384 2.01	006301
106301	7.0 2 384 2.01	6.0 2 384 2.01	6.0 1 256 2.01	6.0 1 256 2.01	shutdown	0.0 1 384 2.01	7.0 2 384 2.01	006301
107001	7.0 2 384 2.01	6.0 2 384 2.01	7.0 1 256 2.01	7.0 1 256 2.01	shutdown	shutdown	7.0 2 384 2.01	007001
107001	7.0 2 384 2.01	7.0 2 384 2.01	9.0 1 256 2.01	shutdown	shutdown	shutdown	7.0 2 384 2.01	007001
107301	7.0 2 384 2.01	7.0 2 384 2.01	10.0 1 256 2.01	shutdown	shutdown	shutdown	7.0 2 384 2.01	007301
107301	7.0 2 384 2.01	6.0 2 384 2.01	8.0 1 256 2.01	shutdown	shutdown	shutdown	7.0 2 384 2.01	007301
108001	7.0 2 384 2.01	0.0 1 384 2.01	426	shutdown	shutdown	shutdown	7.0 2 384 2.01	008001
108001	7.0 2 384 2.01	shutdown	shutdown	shutdown	shutdown	shutdown	7.0 2 384 2.01	008001
108301	7.0 2 384 2.01	41.0 1 256 2.01	shutdown	shutdown	shutdown	shutdown	8.0 2 384 2.01	008301
108301	0.0 1 384 2.01	41.0 1 256 2.01	shutdown	shutdown	shutdown	shutdown	10.0 2 384 2.01	008301
109001	shutdown	40.0 1 256 2.01	shutdown	shutdown	shutdown	shutdown	11.0 2 384 2.01	009001
109001	shutdown	33.0 1 256 2.01	shutdown	shutdown	shutdown	29.0 2 384 2.01	12.0 2 384 2.01	009001
109301	shutdown	0.0 1 256 2.01	shutdown	shutdown	shutdown	36.0 2 384 2.01	12.0 2 384 2.01	009301
109301	shutdown	shutdown	shutdown	shutdown	shutdown	49.0 2 384 2.01	11.0 2 384 2.01	009301
110001	shutdown	20.0 2 384 2.01	shutdown	shutdown	shutdown	57.0 2 384 2.01	11.0 2 384 2.01	010001
110001	shutdown	27.0 2 384 2.01	shutdown	35.0 2 384 2.01	31.0 2 384 2.01	56.0 2 384 2.01	12.0 2 384 2.01	010001
110301	shutdown	33.0 2 384 2.01	shutdown	51.0 2 384 2.01	50.0 2 384 2.01	61.0 2 384 2.01	13.0 2 384 2.01	010301
110301	shutdown	47.0 2 384 2.01	15.0 2 256 2.01	59.0 2 384 2.01	60.0 2 384 2.01	58.0 2 384 2.01	14.0 2 384 2.01	010301
111001	shutdown	50.0 2 384 2.01	52.0 2 256 2.01	64.0 2 384 2.01	71.0 2 384 2.01	61.0 2 384 2.01	13.0 2 384 2.01	011001
111001	shutdown	63.0 2 384 2.01	54.0 2 256 2.01	70.0 2 384 2.01	60.0 2 384 2.01	55.0 2 384 2.01	13.0 2 384 2.01	011001
111301	shutdown	69.0 2 384 2.01	55.0 2 256 2.01	75.0 2 384 2.01	55.0 2 384 2.01	52.0 2 384 2.01	17.0 2 384 2.01	011301
111301	10.0 2 384 2.01	67.0 2 384 2.01	55.0 2 256 2.01	78.0 2 384 2.01	57.0 2 384 2.01	50.0 2 384 2.01	15.0 2 384 2.01	011301
112001	13.0 2 384 2.01	68.0 2 384 2.01	50.0 2 256 2.01	72.0 2 384 2.01	53.0 2 384 2.01	47.0 2 384 2.01	15.0 2 384 2.01	012001
112001	17.0 2 384 2.01	423	49.0 2 256 2.01	72.0 2 384 2.01	56.0 2 384 2.01	49.0 2 384 2.01	15.0 2 384 2.01	012001
112301	19.0 2 384 2.01	423	49.0 2 256 2.01	67.0 2 384 2.01	57.0 2 384 2.01	49.0 2 384 2.01	16.0 2 384 2.01	012301
112301	20.0 2 384 2.01	423	50.0 2 256 2.01	58.0 2 384 2.01	63.0 2 384 2.01	50.0 2 384 2.01	15.0 2 384 2.01	012301
113001	17.0 2 384 2.01	22.0 2 384 2.01	48.0 2 256 2.01	58.0 2 384 2.01	65.0 2 384 2.01	45.0 2 384 2.01	16.0 2 384 2.01	013001
113001	17.0 2 384 2.01	424	47.0 2 256 2.01	59.0 2 384 2.01	55.0 2 384 2.01	46.0 2 384 2.01	15.0 2 384 2.01	013001
113301	20.0 2 384 2.01	424	53.0 2 256 2.01	55.0 2 384 2.01	56.0 2 384 2.01	53.0 2 384 2.01	15.0 2 384 2.01	013301
113301	18.0 2 384 2.01	424	49.0 2 256 2.01	54.0 2 384 2.01	60.0 2 384 2.01	46.0 2 384 2.01	18.0 2 384 2.01	013301
114001	19.0 2 384 2.01	424	51.0 2 256 2.01	54.0 2 384 2.01	56.0 2 384 2.01	47.0 2 384 2.01	15.0 2 384 2.01	014001
114001	21.0 2 384 2.01	10.0 1 384 2.01	53.0 2 256 2.01	49.0 2 384 2.01	59.0 2 384 2.01	55.0 2 384 2.01	18.0 2 384 2.01	014001
114301	23.0 2 384 2.01	44.0 1 384 2.01	50.0 2 256 2.01	63.0 2 384 2.01	62.0 2 384 2.01	53.0 2 384 2.01	15.0 2 384 2.01	014301
114301	25.0 2 384 2.01	52.0 1 384 2.01	50.0 2 256 2.01	60.0 2 384 2.01	64.0 2 384 2.01	57.0 2 384 2.01	16.0 2 384 2.01	014301
115001	27.0 2 384 2.01	55.0 2 384 2.01	50.0 2 256 2.01	55.0 2 384 2.01	62.0 2 384 2.01	63.0 2 384 2.01	18.0 2 384 2.01	015001
115001	30.0 2 384 2.01	59.0 2 384 2.01	51.0 2 256 2.01	63.0 2 384 2.01	65.0 2 384 2.01	62.0 2 384 2.01	19.0 2 384 2.01	015001
115301	32.0 2 384 2.01	64.0 2 384 2.01	50.0 2 256 2.01	65.0 2 384 2.01	67.0 2 384 2.01	66.0 2 384 2.01	19.0 2 384 2.01	015301
115301	33.0 2 384 2.01	67.0 2 384 2.01	50.0 2 256 2.01	72.0 2 384 2.01	74.0 2 384 2.01	63.0 2 384 2.01	19.0 2 384 2.01	015301
116001	33.0 2 384 2.01	68.0 2 384 2.01	crash	74.0 2 384 2.01	64.0 2 384 2.01	58.0 2 384 2.01	19.0 2 384 2.01	016001
116001	31.0 2 384 2.01	81.0 2 384 2.01	crash	80.0 2 384 2.01	75.0 2 384 2.01	61.0 2 384 2.01	21.0 2 384 2.01	016001
116301	30.0 2 384 2.01	79.0 2 384 2.01	crash	78.0 2 384 2.01	68.0 2 384 2.01	55.0 2 384 2.01	24.0 2 384 2.01	016301
116301	28.0 2 384 2.01	74.0 2 384 2.01	crash	80.0 2 384 2.01	66.0 2 384 2.01	49.0 2 384 2.01	24.0 2 384 2.01	016301
117001	27.0 2 384 2.01	77.0 2 384 2.01	49.0 1 256 2.01	76.0 2 384 2.01	63.0 2 384 2.01	42.0 2 384 2.01	25.0 2 384 2.01	017001
117001	28.0 2 384 2.01	75.0 2 384 2.01	51.0 1 256 2.01	72.0 2 384 2.01	54.0 2 384 2.01	36.0 2 384 2.01	24.0 2 384 2.01	017001
117301	23.0 2 384 2.01	75.0 2 384 2.01	48.0 1 256 2.01	73.0 2 384 2.01	39.0 2 384 2.01	26.0 2 384 2.01	21.0 2 384 2.01	017301
117301	23.0 2 384 2.01	71.0 2 384 2.01	48.0 1 256 2.01	63.0 2 384 2.01	34.0 2 384 2.01	30.0 2 384 2.01	17.0 2 384 2.01	017301
118001	21.0 2 384 2.01	425	46.0 1 256 2.01	59.0 2 384 2.01	38.0 2 384 2.01	26.0 2 384 2.01	16.0 2 384 2.01	018001
118001	21.0 2 384 2.01	425	51.0 1 256 2.01	58.0 2 384 2.01	37.0 2 384 2.01	30.0 2 384 2.01	17.0 2 384 2.01	018001
118301	18.0 2 384 2.01	425	36.0 1 256 2.01	53.0 2 384 2.01	33.0 2 384 2.0			