

RSTS/E running in the simh PDP emulator on Linux

Keyboard input

Things to note

Comments

<ctrl j> line feed. Honestly perhaps there is, but...I don't see much difference in just using <Enter>

Contents of pdp.ini [three lines]

```
set cpu 1m
att r10 r10.minsys
boot r10
```

The following demo was done inside of the extracted "rsts-built.tar.gz" directory
I found "rsts-built.tar.gz" somewhere on the internet

```
***** Start of RSTS/E demo [actual console I/O] *****
bill@bill-desktop ~/Downloads/Computers/Emulators/PDP/rsts-built $ pdp11 [uses pdp11.ini if exists]
```

```
PDP-11 simulator V3.8-1
Disabling CR
Disabling RK
Disabling HK
Disabling TM
```

```
Device DP23: does not interrupt - device disabled.
Device DP26: does not interrupt - device disabled.
Device DP27: does not interrupt - device disabled.
Device DP30: does not interrupt - device disabled.
```

RSTS V7.0-07 llama (DL0)

Option: **START**

You currently have: JOB MAX = 20, SWAP MAX = 31K.

JOB MAX or SWAP MAX changes? **N**

Any memory allocation changes? **N**

You currently have crash dump enabled.

Crash dump? **N**

DD-MMM-YY? **01-JAN-85**

12:00 PM? **0:0**

```
DK0: disabled - no RK: controller
DK1: disabled - no RK: controller
DK2: disabled - no RK: controller
DK3: disabled - no RK: controller
DK4: disabled - no RK: controller
DK5: disabled - no RK: controller
DK6: disabled - no RK: controller
DK7: disabled - no RK: controller
MT0: disabled - no TM: controller
MT1: disabled - no TM: controller
MT2: disabled - no TM: controller
MT3: disabled - no TM: controller
MT4: disabled - no TM: controller
MT5: disabled - no TM: controller
MT6: disabled - no TM: controller
MT7: disabled - no TM: controller
DX2: disabled - no RX1: controller
DX3: disabled - no RX1: controller
DX4: disabled - no RX2: controller
DX5: disabled - no RX2: controller
DX6: disabled - no RX3: controller
DX7: disabled - no RX3: controller
```

22 devices disabled

INIT V7.0-07A RSTS V7.0-07 llama

Command File Name? <Ctrl j>

[***** System Startup begins *****]

DETACHING...

^C

HELLO 1/2

Password:

Job 1 is detached under this account

Job number to attach to?

1 other user is logged in under this account

Ready

RUN \$UTILTY

UTILTY V7.0-07E RSTS V7.0-07 llama

#ADD SWAPFILE 0 DL0:SWAP0

#ADD RT11

#ADD RSX

?Can't find file or account - in ADD

#ADD RMS11

?Can't find file or account - in ADD

#ADD BP2COM

?Can't find file or account - in ADD

#ADD BASIC2

?Can't find file or account - in ADD

#ADD BASIC

?Name or account now exists - in ADD

#ADD BAS4F

?Can't find file or account - in ADD

#ADD TECO

#EXIT

Ready

BYE/F

ATTACHING TO JOB 1

DETACHING...

^C

HELLO 1/2

Password:

Job 1 is detached under this account

Job number to attach to?

1 other user is logged in under this account

Ready

```
RUN $TTYSET
TTYSET V7.0-07B      RSTS V7.0-07 llama
Terminal characteristics program
? EXIT
```

Ready

BYE/F

ATTACHING TO JOB 1
DETACHING...

^C
HELLO 1/2
Password:
Job 1 is detached under this account
Job number to attach to?
1 other user is logged in under this account

Ready

```
RUN $UTILITY
UTILITY V7.0-07E      RSTS V7.0-07 llama
#CCL ATT-ACH=$LOGIN.*;PRIV 30000
#CCL ATP-K=$ATPK.*;PRIV 30000
#CCL BCK-=$RMSBCK.TSK;0
#CCL BPC-REF=$BPCCREF.*;30000
#CCL BYE-=$LOGOUT.*;PRIV 0
#CCL CNV-=$RMSCNV.TSK;0
#CCL CRE-ATE=$EDIT.*;30000
#CCL DEF-=$RMSDEF.TSK;0
#CCL DFN-=$RMSDFN.TSK;0
#CCL DES-=$RMSDES.TSK;0
#CCL DIS-MOUNT=$UMOUNT.*;PRIV 30000
#CCL DI-RECTORY=$DIRECT.*;PRIV 30000
#CCL DSP-=$RMSDSP.TSK;0
#CCL EDT-=$EDT.TSK;0
#CCL ED-IT=$EDIT.*;30000
#CCL FIT-=$FIT.*;PRIV 30000
#CCL HELLO-=$LOGIN.*;PRIV 0
#CCL HELP-=$HELP.*;PRIV 30000
#CCL IFL-=$RMSIFL.TSK;0
#CCL LBR-=$LBR.TSK;0
```

```
#CCL LIBR-=$LIBR.SAV;8208
#CCL LIN-K=$LINK.SAV;8208
#CCL LOG-IN=$LOGIN.*;PRIV 0
#CCL MACR-O=$MACRO.SAV;8216
#CCL MAC-=$MAC.TSK;0
#CCL MAK-E=$TECO.TEC;0
#CCL MOU-NT=$UMOUNT.*;PRIV 30000
#CCL MU-NG=$TECO.TEC;0
#CCL PAT-=$PAT.TSK;0
#CCL PIP-=$PIP.SAV;8208
#CCL PL-EASE=$PLEASE.*;PRIV 30000
#CCL QU-EUE=$QUE.*;PRIV 30000
#CCL RST-=$RMSRST.TSK;PRIV 0
#CCL SE-T=$TTYSET.*;PRIV 30000
#CCL SRT-=$SORT.TSK;0
#CCL SU-BMIT=$QUE.*;PRIV 30000
#CCL SW-ITCH=$SWITCH.*;PRIV 30000
#CCL SY-STAT=$SYSTAT.*;PRIV 30000
#CCL TE-CO=$TECO.TEC;0
#CCL TKB-=$TKB.TSK;0
#CCL TY-PE=$TYPE.TEC;8
#CCL UT-ILTY=$UTILTY.*;30000
#EXIT
```

Ready

BYE/F

ATTACHING TO JOB 1
DETACHING...

^C
HELLO 1/2
Password:
Job 1 is detached under this account
Job number to attach to?
1 other user is logged in under this account

Ready

```
RUN SY:(1,2)UTILTY
UTILTY V7.0-07E          RSTS V7.0-07 llama
#REMOVE LOGICAL LB
#ADD LOGICAL SY:(1,1)LB
#EXIT
```

Ready

BYE/F

ATTACHING TO JOB 1
RUN SY:(1,2)ERRINT
100
NO

Ready

ERRINT V7.0-07 RSTS V7.0-07 llama
ERRLOG File is 5% Full
Change Size to < 100 >?
Utilize Crash File Output (Yes/No) <No>?
Detaching . . .

[***** System Startup Ends *****]

HELLO 1,2
Password: *****
Job 1 is detached under this account
Job number to attach to? <ctrl j>
1 other user is logged in under this account

WELCOME TO RSTS/E V7.0 TIME SHARING RSTS/E message appears only if you use ",," in account
above instead of "/"

!*****
!*****
!
! DEMO
! RSTS/E TREATS "!" AS COMMENTS EVEN OUTSIDE A PROGRAM
! RSTS/E'S PROGRAMMING LANGUAGE IS BASIC-PLUS
! CREATE A SIMPLE BASIC-PLUS PROGRAM AND USE A FEW
! COMMANDS.
!
!*****
!*****

PRINT 5*6.7
33.5

Ready

DIR PROG99

?No such file as PROG99.??? on SY:[1,2]

Ready

! CREATE A NEW PROGRAM
NEW PROG99

Ready

! TYPE IN PROGRAM

```
05 EXTEND
10 I=1
20 E=10 ! LOOP COUNTER
30 PRINT I
40 I=I+1
50 IF I>E GOTO 70
60 GOTO 30
70 END
```

RUN

PROG99 02:56 AM 01-Jan-85

```
1
2
3
4
5
6
7
8
9
10
```

Ready

! SAVE TO DISK

SAVE

Ready

DIR PROG99

Name	.Ext	Size	Prot	Date	SY:[1,2]
PROG99.BAS		1	< 60>	01-Jan-85	

Total of 1 block in 1 file in SY:[1,2]

Ready

! CAN'T LIST BECAUSE "DIR" REPLACED SOURCE

LIST

NONAME 02:56 AM 01-Jan-85

Ready

OLD PROG99

Ready

! ADD A STOP

25 STOP

LIST

PROG99 02:56 AM 01-Jan-85

```
05 EXTEND
10 I=1
20 E=10 ! LOOP COUNTER
25 STOP
30 PRINT I
40 I=I+1
50 IF I>E GOTO 70
60 GOTO 30
70 END
```

Ready

RUN

PROG99 02:56 AM 01-Jan-85
Stop at line 25

Ready

PRINT E ! LOOK AT VARIABLE

10

Ready

E=20 ! CHANGE VARIABLE

Ready

CONT ! RESUME EXECUTION

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

Ready

EXIT !CLEAR MEMORY

Ready

LIST

NONAME 02:56 AM 01-Jan-85

Ready

**! THE FOLLOWING LOADS AND RUNS THE SOURCE VERSION (.BAS)
! BECAUSE NO COMPILED VERSION EXISTS**

RUN PROG99

1
2
3
4
5
6
7
8
9
10

Ready

LIST

```
PROG99 02:56 AM      01-Jan-85
05 EXTEND
10 I=1
20 E=10 ! LOOP COUNTER
30 PRINT I
40 I=I+1
50 IF I>E GOTO 70
60 GOTO 30
70 END
```

Ready

```
! CREATE A COMPILED ".BAC" PROGRAM
! COMPILED VERSION CAN'T BE ALTERED
COMPILE
```

Ready

```
EXIT      ! CLEAR MEMORY
```

Ready

```
! THE FOLLOWING LOADS AND RUNS THE COMPILED VERSION (.BAC)
```

```
RUN PROG99
```

```
1
2
3
4
5
6
7
8
9
10
```

Ready

```
! CAN'T LIST THE COMPILED VERSION
```

```
LIST
```

```
PROG99 02:56 AM      01-Jan-85
?Execute only file
```

Ready

```
! DIRECTORY OF SOURCE & COMPILED
```

```
DIR PROG99
```

Name	.Ext	Size	Prot	Date	SY:[1,2]
PROG99.BAS		1	< 60>	01-Jan-85	
PROG99.BAC		7C	<124>	01-Jan-85	

Total of 8 blocks in 2 files in SY:[1,2]

Ready

```
!REMOVE SOURCE FROM DISK
```

```
UNSAVE PROG99.BAS
```

Ready

```
!REMOVE COMPILED FROM DISK
```

```
UNSAVE PROG99.BAC
```

Ready

DIR PROG99

?No such file as PROG99.??? on SY:[1,2]

Ready

SYS/S

RSTS V7.0-07 llama status at 01-Jan-85, 12:00 PM Up: 57

Job	Who	Where	What	Size	State	Run-Time	Pri/RB	RTS
1	[SELF]	Det	ERRCPY	5/31K	SR	3.5	0/6	BASIC
2	[SELF]	KB0	SYSTAT	11/31K	RN Lck	0.0	-8/6	BASIC

Ready

SYS/C

Memory allocation table:

Start	End	Length	Permanent	Temporary
0K	-	32K (33K)	MONITOR	
33K	-	48K (16K)	BASIC	RTS
49K	-	123K (75K)	(User)	
124K	-	*** END ***		

Ready

SYS/D

Disk Structure:

Disk	Open	Free	Cluster	Errors	Name	Comments
DL0	3	5374	2	0	SYSTEM	Pub, DLW

Ready

BYE

Confirm: Y

Saved all disk files; 2376 blocks in use

Job 2 User 1,2 logged off KB0 at 01-Jan-85 12:00 PM

1 other user still logged in under this account

System RSTS V7.0-07 llama

Run time was 0 seconds

Elapsed time was 0 minutes

Good morning

HELLO 1,2

Password: *****

Job 1 is detached under this account

Job number to attach to? <ctrl j>

1 other user is logged in under this account

WELCOME TO RSTS/E V7.0 TIME SHARING

BYE/F

I1/2

Password:

Job 1 is detached under this account

Job number to attach to?

1 other user is logged in under this account

No RSTS/E message here if you use "/" in account above instead of ","

Ready

RUN \$SSHUTUP

SHUTUP V7.0-07A RSTS V7.0-07 llama

12:03 AM 01-Jan-85 ##### Set-up Dialogue Phase #####

Type 'ESC'('ALT') to any query to backup one (1) step

'OPSER' not running

Minutes until system shutdown (0-99) <5>? 0

12:03 AM 01-Jan-85 ##### Warning Message Phase #####
Further LOGINs are now disabled

12:03 AM 01-Jan-85 ##### Initial Job Killing Phase #####

12:03 AM 01-Jan-85 ##### 'ERRCPY' Shutdown Phase #####

12:03 AM 01-Jan-85 ##### Remove RTS/RES LIB Phase #####

12:03 AM 01-Jan-85 ##### SWAP File Removal Phase #####

12:03 AM 01-Jan-85 ##### Disk DISMOUNT Phase #####

12:03 AM 01-Jan-85 ##### Final Shutdown Phase #####

Please wait for system to re-boot itself

Device DP23: does not interrupt - device disabled.

Device DP26: does not interrupt - device disabled.

Device DP27: does not interrupt - device disabled.

Device DP30: does not interrupt - device disabled.

RSTS V7.0-07 llama (DL0)

Option: <Ctrl e> Return to simulator

Simulation stopped, PC: 010362 (BEQ 10350)

sim> quit

Goodbye

bill@bill-desktop ~/Downloads/Computers/Emulators/PDP/rsts-built \$

