

RSTS/E Maintenance Notebook

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software

RSTS/E Maintenance Notebook

Order Number: AA-L997E-TC

August 1990

This notebook is a working document that contains published articles on software problems, programming notes, documentation corrections, and optional feature patches. System Managers should keep this document current by incorporating articles published each month in the *RSTS/E Software Dispatch*.

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Software Version: RSTS/E Version 10.0

Digital Equipment Corporation

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Preface

The *RSTS/E Maintenance Notebook* is a guide for documentation corrections, published software problems and solutions, and programming notes. Subordinate software information is also included. The *RSTS/E Software Dispatch Review* and the *RSTS/E Software Dispatch* are designed so that their articles may be merged into the Maintenance Notebook.

The *RSTS/E Software Dispatch Review* contains articles published for optional layered software supported on RSTS/E V10.0. In general, this is a composite of all optional layered software articles previously published for RSTS/E that still apply to the product when run on RSTS/E V10.0.

The *RSTS/E Software Dispatch* contains articles for RSTS/E and its layered software. It is published monthly and distributed to customers who have purchased a software service contract from Digital. (Contact your local Digital office for more information on how to obtain a software service contract if you do not already have one.)

Each month, take apart the *RSTS/E Software Dispatch* and merge the new articles by sequence number into your maintenance notebook.

All published articles are summarized in the Cumulative Index at the end of this notebook. This index is updated as necessary in the *RSTS/E Software Dispatch*.

1 Using the RSTS/E V10.0 Maintenance Notebook

When you receive the *RSTS/E Software Dispatch*, take it apart and merge the new articles by sequence number into your notebook. If an article replaces an existing article, discard the replaced article. Each article addresses a single topic; its title gives the symptom or a one-line problem description and appears at the top of each page. For example:

Seq. No. 4.1.4 F

Default to NOEXTEND Mode — BASIC-PLUS Feature Patch

System components and subcomponents are listed in Section 2. The list is updated periodically as products become available or obsolete. Articles for each subcomponent are assigned a sequencing number which uniquely identifies the article within that component and subcomponent category. As each new article is published for a subcomponent, it is assigned the next higher sequence number. The entire number is defined as the *component.subcomponent.issue* number (for example, 4.1.4 shown in the upper right corner of the sample heading). Replacement articles are identified as such.

Each article's sequence number is followed by a letter which identifies the type of article as follows:

- **M = Mandatory**

These articles describe problems corrected by a replacement module. In some cases, these articles also include a patching procedure you can follow to correct a problem. You are required to install replacement modules or apply patches described in a "M" article unless told otherwise.

- **F = Feature**

Feature articles include patches that extend or configure nonstandard capabilities into the product. These functions are treated as a supported part of the product for the duration of the current release.

- **R = Restriction**

These articles discuss areas that will not be patched in the current release because they require major modifications or because they are not consistent with the design of the product. Restrictions, except those described as permanent, are reviewed and modified when possible as part of the normal release cycle.

- **N = Note**

Articles designated as "N" provide explanatory information that supplements the documentation set and provides more detailed information about a program or package. They also provide procedural information to make it easier to use a program or package.

2 Component.Subcomponent Assignments

The component.subcomponent numbers outlined below appear on articles to be filed following the Cumulative Index in this notebook.

RSTS/E MONITOR

0.0	RSTS/E V10.0 General Notes
0.1	System Notes
0.2	System Management Guidelines
1.0	Initialization
1.1	INIT.SYS Program Patches
1.2	INIT.SYS Program Notes
1.3	INIT.SYS Restrictions
2.0	System Installation and Update
2.1	Installation/Update Notes
2.2	Installation/Update .COM files
2.3	Installation/Update Restrictions
3.0	Executive
3.1	Monitor Patches
3.2	Monitor Notes
3.3	Monitor Restrictions
3.4	Terminal Service Patches
3.5	Terminal Service Notes
3.6	Terminal Service Restrictions
3.7	File Processor Patches
3.8	File Processor Notes
3.9	File Processor Restrictions
3.10	Device Driver Patches
3.11	Device Driver Notes
3.12	Device Driver Restrictions
3.13	FMS Monitor Patches
3.14	FMS Monitor Notes
3.15	FMS Monitor Restrictions
4.0	BASIC-PLUS
4.1	BASIC-PLUS Patches
4.2	BASIC-PLUS Notes
4.3	BASIC-PLUS Restrictions
4.4	Programming Hints
4.5	Math Packages
4.6	Matrix Functions

4.7 PRINT-USING
4.8 Record I/O
4.9 Virtual Core
4.10 String Arithmetic
4.11 Optional BASIC-PLUS Features

5.0 (Reserved)

6.0 System Files
6.1 System Files Notes
6.2 System Files Restrictions

7.0 DECnet/E Monitor Package V4.1
7.1 DECnet/E Monitor Patches
7.2 Package Notes
7.3 Package Restrictions

RSTS/E UTILITIES

8.0 Help Package (HELP\$)
8.1 Package Notes
8.2 Package Restrictions

9.0 TECO Package (TECO\$)
9.1 Package Notes
9.2 Package Restrictions

10.0 System Library (\$)
10.1 Library Notes
10.2 Library Restrictions

11.0 Auxillary Library (AUXLIB\$)
11.1 Package Notes
11.2 Package Restrictions

12.0 Error Logging Package (ERROR\$)
12.1 Package Notes
12.2 Package Restrictions

13.0 RESTOR Package (RESTOR\$)
13.1 Package Notes
13.2 Package Restrictions

14.0	Operator Services and Spooling Package (OPSER\$)
14.1	Package Notes
14.2	Package Restrictions
15.0	Print/Batch Services Package (PBS\$)
15.1	Package Notes
15.2	Package Restrictions
16.0	Unsupported Package (UNSUPP\$)
16.1	Package Notes
16.2	Package Restrictions
17.0	Layered Product Update Package (UPDATE\$)
17.1	Package Notes
17.2	Package Restrictions
18.0	Device Test Package (TEST\$)
18.1	Package Notes
18.2	Package Restrictions
19.0	Operator/Message Services Package (OMS\$)
19.1	Package Notes
19.2	Package Restrictions
20.0	CUSP Source Package (SOURCE\$)
20.1	Package Notes
20.2	Package Restrictions
21.0	SORT/MERGE V3.0 (SORT\$)
21.1	Package Notes
21.2	Package Restrictions
22.0	RMS-11 V2.0 (RMS\$)
22.1	Package Notes
22.2	Package Restrictions
23.0	EDT V3.0 (EDT\$)
23.1	Package Notes
23.2	Package Restrictions
24.0	(Reserved)
25.0	(Reserved)

RSTS/E DOCUMENTATION

26.0	Documentation	
26.1	RSTS/E Documentation Directory	AA-2642H-TC
26.2	RSTS/E V10.0 Release Notes	AA-5246H-TC
26.3	RSTS/E V10.0 Maintenance Notebook	AA-L997E-TC
26.4	RSTS/E System Installation and Update Guide	AA-2669K-TC
26.5	RSTS/E System Manager's Guide	AA-2762H-TC
26.6	RSTS/E System User's Guide	AA-EZ12B-TC
26.7	RSTS/E Guide to Writing Command Procedures	AA-CF03A-TC
26.8	RSTS/E Utilities Reference Manual	AA-EZ11A-TC
26.9	Introduction to the EDT Editor	AA-K443A-TC
26.10	PDP-11 SORT/MERGE User's Guide	AA-CI67B-TC
26.11	RSTS/E RUNOFF User's Guide	AA-3337B-TC
26.12	EDT Editor Manual	AA-M476A-TK
26.13	RSTS/E Task Builder Reference Manual	AA-5072D-TC
26.14	RSTS/E Programmer's Utilities Manual	AA-D749A-TC
	RSTS/E Programmer's Utilities Manual Update 1	AD-D749A-T1
	RSTS/E Programmer's Utilities Manual Update 2	AD-D749A-T2
26.15	RSTS/E RT11 Utilities Manual	AA-M213A-TC
26.16	PDP-11 TECO User's Guide	AA-K420B-TC
26.17	BASIC-PLUS Language Manual	AA-2623D-TC
26.18	RSTS/E Programming Manual	AA-EZ09B-TC
26.19	RSTS/E System Directives Manual	AA-EZ10B-TC
26.20	IAS/RXS-11 ODT Reference Manual	AA-M507A-TC
26.21	PDP-11 MACRO-11 Language Reference Manual	AA-KX10A-TC
	PDP-11 MACRO-11 Language Reference Manual Update	AD-KX108A-T1
26.22	RSTS/E RMS-11 MACRO Programmer's Guide	AA-P507A-TC
26.23	RSTS/E RMS-11: An Introduction	AA-P508A-TC
26.24	RSTS/E RMS-11 User's Guide	AA-P510A-TC
26.25	RSTS/E RMS-11 Utilities Manual	AA-P509A-TC
26.26	RSTS/E Quick Reference Guide	AA-EZ13C-TC
26.27	Introduction to BASIC	AA-0155B-TK
26.28	EDT Quick Reference Guide	AA-M477A-TK
26.29	RSTS/E V10.0 Internals and Data Structures Manual	AA-PB60A-TC

RUN-TIME SYSTEMS SUPPORT

27.0	DCL Run-time System and Utilities
27.1	Package Notes
27.2	Package Restrictions
28.0	RSX-11 Emulator and Utilities
28.1	Package Notes
28.2	Package Restrictions
29.0	RT-11 Emulator and Utilities
29.1	Package Notes
29.2	Package Restrictions
30.0	(Reserved)

OPTIONAL SOFTWARE

31.0	DECnet/E Utilities V4.1 (DECNET\$)	
31.1	Package Notes	
31.2	Package Restrictions	
32.0	DECnet/E V4.1 Documentation	
32.1	DECnet/E V4.1 Release Notes	AA-M269D-TC
32.2	DECnet/E V4.1 System Manager's Guide	AA-H505D-TC
32.3	DECnet/E V4.0 Network Programming in BASIC-PLUS and BASIC-PLUS-2	
32.4	DECnet/E V4.0 Network Programming in MACRO	
32.5	DECnet/E V4.0 Network Programming in FORTRAN	
32.6	DECnet/E V4.0 Network Programming in COBOL	
32.7	DECnet/E V4.0 Guide to User Utilities	AA-H504C-TC
32.8	DECnet/E V4.0 Network Installation and Update Guide	AA-K714C-TC
33.0	PDP-11 C V1.0	
33.1	Package Notes	
33.2	Package Restrictions	
34.0	WPS-PLUS/RSTS V1.1	
34.1	Package Notes	
34.2	Package Restrictions	
35.0	(Reserved)	
36.0	DECmail-11 V3.1	

36.1	Package Notes
36.2	Package Restrictions
37.0	(Reserved)
to	
44.0	
45.0	DECdx/RSTS V1.0
45.1	Package Notes
45.2	Package Restrictions
46.0	(Reserved)
47.0	(Reserved)
48.0	BASIC-PLUS-2 V2.6
48.1	Package Notes
48.2	Package Restrictions
49.0	DATATRIEVE-11 V3.3A
49.1	Package Notes
49.2	Package Restrictions
50.0	(Reserved)
to	
54.0	
55.0	FORTRAN IV V2.8
55.1	Package Notes
55.2	Package Restrictions
56.0	COBOL-81 V3.0
56.1	Package Notes
56.2	Package Restrictions
57.0	FORTRAN-77 V5.4
57.1	Package Notes
57.2	Package Restrictions
58.0	PDP-11 Symbolic Debugger V2.1
58.1	Package Notes
58.2	Package Restrictions
59.0	(Reserved)

60.0	(Reserved)
61.0	(Reserved)
62.0	PLXY-11 V1.3
62.1	Package Notes
62.2	Package Restrictions
63.0	(Reserved)
to	
67.0	
68.0	MENU-11 V2.0
68.1	Package Notes
68.2	Package Restrictions
69.0	(Reserved)
to	
72.0	
73.0	DIBOL V6.1
73.1	Package Notes
73.2	Package Restrictions
74.0	(Reserved)
to	
89.0	
90.0	User Assigned Components - For Development Use
90.1	Package Notes
90.2	Package Restrictions
91.0	User Assigned Components - For User Use
to	
99.0	

3 Software Performance Reports

Each new installation is provided with Software Performance Report (SPR) forms. The SPR form allows you to suggest enhancements to, or report problems with Digital software or documentation. When you discover a problem, complete an SPR and mail it to the local SPR Center (see the inside back cover of the SPR form).

Responses will be sent to the name and address appearing on the form. You can obtain additional SPR forms by writing to the local SPR Center.

SPR response service is provided at no charge for one year after installation and may be continued by subscription thereafter.

3.1 Software Performance Report Guidelines

These guidelines for RSTS/E SPR completion ensure that adequate information is included to prevent delays in processing.

For all types of actual or suspected software problems, include the following with the SPR:

- A complete description of the problem
- The CPU type
- The system disk type
- The amount and type of memory
- A log file showing the error and the steps you followed to cause it
- If possible, a simple program or procedure which can be used to reproduce the problem
- Any additional information which you may think is relevant

For problems associated with the RSTS/E monitor or crash analysis package (ANALYS), also include:

- The crash dump printed by ANALYS (which includes annotations, a listing of the symbol table, and a list of all installed patches)
- A machine readable copy (preferably a backup on 9-track or TK50 magnetic tape) of your monitor and CRASH.SYS file

When submitting an SPR concerning a Digital-supplied utility (CUSP), also include:

- The name of the CUSP
- A RUN of the CUSP which displays the header line, version number, and the occurring problem, if possible
- A listing of the account(s), and the account(s) attributes, in which the problem occurs
- A complete listing of the CUSP (preferably on magnetic tape) if your installation has made any nonstandard changes

- Listings of all relevant input and output files
- A log file showing the problem

NOTE

No SPR, monitor or CUSP, will be considered unless ALL relevant Mandatory patches published to date have been applied. Before submitting an SPR, you should review the relevant section(s) of the Maintenance Notebook to ensure that all Mandatory updates and patches to the program or package have been installed.

4 Procedures for Updating RSTS/E Software

This section briefly describes the update procedures to be used for maintenance of RSTS/E V10.0. The procedures to be followed for updating the monitor and system programs when installing a new RSTS/E system are described in the *RSTS/E System Installation and Update Guide*. The procedures for updating the software as part of normal system maintenance are described in the *RSTS/E System Manager's Guide*.

Most corrections to RSTS/E software are done by replacing the affected components with updated versions distributed on the next release of RSTS/E. These replacement modules are automatically installed as part of the RSTS/E installation and update process.

In cases where a critical problem is discovered, Digital publishes an article in the *RSTS/E Software Dispatch* describing the problem and suggesting possible workarounds until the module is replaced in the next V10 update release. If no reasonable work-arounds are available, a patching procedure may be included in the article so you can correct the defective module. Step-by-step instructions on how to apply the patch are included.

Unless otherwise stated, Mandatory patches published in the *RSTS/E Software Dispatch* should be installed as soon as possible. Since not all Mandatory patches apply to every installation, patches to unused or optional components will fail when you attempt to apply them. In such cases, the patch article describes how the patch will fail if it does not apply to your system.

Be sure to file and maintain all *RSTS/E Software Dispatch* articles, even for unused components. Your site may choose at some future time to install additional components; these components will then have to be brought up to the latest support level.

Some *RSTS/E Software Dispatch* articles include Feature patches, allowing you to modify a component to enable an optional feature of that component. These Feature patches are optional and not required to keep a component at its current support level. However, if you encounter problems in a component containing optional features, you must report which Feature patches have been installed when submitting a Software Performance Report (SPR).

4.1 Monitor Patching

Normally, problems discovered in a RSTS/E monitor are corrected by replacing the defective component during the installation and update procedure. You must rebuild your system's monitor each time you receive a new RSTS/E update to install any corrections made to the monitor components.

If it should become necessary for you to apply a patch to your system's monitor, the *RSTS/E Software Dispatch* article describing the problem will also explain how to apply the patch. Normally, changes to the RSTS/E monitor are made using the off-line PATCH option of INIT.SYS or the on-line program \$ONLPAT.SAV. General descriptions of these patching tools and how to use them are included in the *RSTS/E System Installation and Update Guide* and the *RSTS/E System Manager's Guide*.

The patching article includes specific instructions on how to apply the patch. The expected dialogue is shown in the article as it should appear when you install the patch. If any deviation occurs, you should immediately do the following:

1. Halt the patching process
2. Restore any changes already made to their former values
3. Determine where the discrepancy occurred

4.2 Commonly Used System Program (CUSP) Module Replacement

Like the monitor, corrections to individual RSTS/E programs are made by replacing the defective module with a replacement from the V10.0 Installation Kit. These replacement modules are automatically installed whenever you install or update the package containing the replacement program. For example, if a replacement module for the HELP.TSK program is included on a RSTS/E installation kit, then that module will replace the copy of HELP.TSK on your system whenever you install or update the HELP package.

All replacement modules for bundled software will automatically be applied whenever you install or update your RSTS/E software.

4.3 Installation Kits

RSTS/E Installation Kits contain the minimal software necessary to create a RSTS/E system, as well as replacement modules and/or patches for software supported under RSTS/E V10.0. The RSTS/E V10.0 Installation Kit contains all patches published in the *RSTS/E V10.0 Maintenance Notebook* and in the *RSTS/E V10.0 Software Dispatch Review*. Each subsequent RSTS/E Installation Kit will contain all of the components from the previous installation kit, plus any new modules and/or patches published in the *RSTS/E Software Dispatch*. Thus, you only need the most recent RSTS/E installation kit to update your system to the current revision level.

Note that in some cases, patches previously published in the *RSTS/E Software Dispatch* will become obsolete, since the correction provided by the patch is included in the replacement module itself. In such cases, a new Dispatch article is published to supersede the previous patch article.

The Cumulative Index published in the *RSTS/E Software Dispatch* indicates which installation kit first contained a patch or module replacement.

Procedures for using the installation kit to update standard RSTS/E software can be found in the *RSTS/E System Installation and Update Guide*. Procedures for updating optional layered software are usually found in the appropriate installation manual for the product.

4.4 Patches and Replacement Modules for Optional Layered Products

The RSTS/E V10.0 Installation Kit also contains patches and replacement modules for optional layered products. To install layered product patches or replacement modules, you must first transfer all of the patches, replacement modules, and command files for that product to a patch account (PATCH\$ by default) on your system. This step is required for both disk and tape installation kits.

To transfer layered product update components from the RSTS/E installation kit to the PATCH\$ account, perform either of these steps:

- During the installation procedure, type YES to the prompt:
Do you want to transfer the layered product update components from the
Installation kit ?
- Invoke the DCL copy update command procedure by typing the DCL command line:
\$ @[0,1]COPYUP *package_name*
where *package_name* is the name of the layered product you want to update.

5 Software Product Descriptions and Option Bulletins

Periodically, new or revised Software Product Description (SPD) bulletins appear in the *RSTS/E Software Dispatch* for various software products marketed by Digital. This section of the notebook provides a convenient place to file these SPDs for future reference.

5.1 Software Product Descriptions

The Software Product Description (SPD) is the document that describes a software product. Every SPD has a unique number, for example *SPD 13.1.20*. This number appears on the first page of the SPD bulletin, at the far right hand side of the Product Name.

Note that the last part of the SPD number is the revision level, with 0 being assigned for original issues of SPDs.

5.2 Option Bulletins

Periodically, new or revised Option Bulletins appear in the *RSTS/E Software Dispatch* for various products marketed by Digital. This section of the notebook provides a convenient place to file these bulletins. There is no filing scheme for option bulletins.

6 RSTS/E V10.0 Articles

This section is the repository for all RSTS/E articles. It includes problem solutions, optional feature patches, documentation errata, programming hints, and tips for better operation of RSTS/E.

Anyone who installs a RSTS/E system (whether online under time sharing or as the initial version of the system) should become familiar with these articles. This should be a continuing process of education as subsections are added and updated.

RSTS/E V10.0 Component Summary

RSTS/E V10.0

RSTS/E V10.0 General Notes

System Notes

This article will be used to provide an updated list of all software components included with RSTS/E V10.0. Appendix C of the *RSTS/E System Installation and Update Guide* contains a current list of these software components. If the list changes, this article will be superseded to contain the current list.

Neither Appendix C of the *RSTS/E System Installation and Update Guide* nor this article includes optional layered product components or temporary modules created during installation. Modules belonging to an optional package included with RSTS/E will only be present if you choose to install that package on your system.

Listed with each module is its standard protection code and its expected location on your system. Note that file protection codes play a critical role in the overall security of your system. You should not change the protection code of any file included with RSTS/E unless directed to do so. Changing a file's protection code to a different value may compromise security or cause the program to fail in unpredictable ways.

Announcing New Hardware Support for RA92 Disks

RSTS/E V10.0

General Notes

System Notes

RA92 disk drives are now available for use on PDP-11 systems. RA92 disks are high-performance 1.5 gigabyte (GB) drives. They feature static dual porting like other Digital Storage Architecture (DSA) family disks. They use the same form factor as the existing RA90 disk drive. Two RA92 drives fit in a 10.5-inch high portion of a standard rack (using physical space equivalent to one RA81). Up to six drives can be configured in the RA92-C/F/H/J cabinet. Up to eight drives can be configured in the SA800 storage array. Up to six RA92 drives can be configured with up to eight RA70 drives in the SA850 storage array cabinet (for a total of over 10 GB in a single 60-inch high cabinet). The RA92-NA is a single drive to add to existing SA6xx or SA8xx storage array cabinets. The drives connect to Q-bus systems using the KDA50 controller and to UNIBUS systems using the UDA50 controller.

Configuration Data

RA92 disks are initialized with a cluster size of 64. On systems that have many small files, RA92 disks are recommended for use as auxiliary storage, rather than as the system disk. For this reason, the SA850 is an ideal configuration using the RA70 as the system disk, and the RA92 as a private disk.

PDP-11s support a maximum of two UDA50/KDA50 type controllers. Each controller can be configured with a maximum of four drives. These drives can consist of any combination of RA60, RA70, RA80, RA81, RA82, RA90, or RA92 drives.

Where multiple systems are configured, larger numbers of drives can be configured to share the same storage array cabinet, while being cabled to different systems.



Announcing New Hardware Support for DECserver 90L

RSTS/E V10.0

General Notes

System Notes

The DECserver 90L is Digital's newest terminal server. Through it, you can connect up to eight terminals or printers to your Ethernet network. The DECserver 90L is **not** downline loaded; therefore, it can be configured in mixed networks or networks that contain only RSTS/E systems. The server can be mounted in the new DEChub 90 distribution system providing a maximum of 64 terminal ports.

The DECserver 90L has a maximum terminal speed of 38.4K bytes per second and supports one session per terminal port. The DECserver 90L can be used for terminals or printers but cannot be used for modem connections. It also offers security capabilities through the use of password protection.

The DECserver 90L provides the ideal terminal server for RSTS/E sites upgrading from hardwired terminals to an Ethernet Local Area Network (LAN), since only one session at a time can be used. With its read-only memory (ROM) based microcode (no downline loading), it is also the ideal terminal server for sites with only RSTS/E systems.

INIT Can Fail During Some RQDX Controller Accesses — Mandatory Patch

RSTS/E V10.0
Initialization
INIT.SYS Program Patches

Problem

During some accesses of disks on RQDX controllers, INIT can hang or abort with an unexpected trap through vector 4. This can occur during the DSKINT option, during rebuilding of a disk, or after a power failure.

Solution

The following patching procedure corrects the problem. This problem will be corrected in a future release.

Procedure

1. This is a required patch to the RSTS/E INIT.SYS Program. Since patching the distribution medium is not recommended, the patch must be installed every time the COPY option is used to copy INIT.SYS from the distribution medium. Any copy of the *patched* INIT.SYS will propagate the fix.
2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? INIT.SYS
```

3. This patch can also be installed using ONLPAT, the online patching program:

```
RUN $ONLPAT
Command File Name? <CR>          (RETURN for manual patch installation)
File to patch? INIT.SYS
File found in account [0,1]
```

4. The patch is as follows:

```
Base address? PATCH
Offset address? 4
  Base   Offset  Old      New?
045352  000004  103003  ? 103005
045352  000006  004737  ? 10046
045352  000010  005226  ? 4737
045352  000012  000261  ? GETCLK
045352  000014  000207  ? 12600
045352  000016  000000  ? 261
045352  000020  000000  ? 207
045352  000022  ??????  ? ^Z   (CTRL/Z for new offset)
Offset address? ^Z                (CTRL/Z for new base)
```

Seq. No. 1.1.1 M

```
Base address? $$0101
Offset address? 0
  Base  Offset  Old      New?
152034 000000 ?????? ? Q!1
152034 000002 ?????? ? ^C  (up-arrow/C to exit;CTRL/C for INIT)
```

Unnecessary Error Message When Booting 800 BPI Tape on TM02

RSTS/E V10.0
Initialization
INIT.SYS Notes

An unnecessary error message prints when an 800 BPI magnetic tape on a TE16 subsystem that uses a TM02 formatter is booted from the *Option:* prompt of INIT.SYS. For example:

MMO Error	MTCS1	MTWC	MTFC	MTCS2	MTDS	MTER	MTTC
	144270	000000	001007	000100	154640	102100	102300

The error message you receive may be different.

This message prints as a result of the density autosizing process that occurs on TM02 formatters and does not indicate an actual hardware error.

First TMSCP Drive on System Must Be Unit 0 — INIT.SYS Restriction

RSTS/E V10.0

Initialization

INIT.SYS Restrictions

If your system contains only one TMSCP tape drive (TU81 or TK50), it must be designated unit 0. If you have two drives and unit 0 does not work, you must make the working drive unit 0 and either disconnect the non-working drive or use the HARDWR DISABLE option of INIT.SYS to disable it.

The controller number must also match the drive number. For example:

- Valid:

Name	Address	Vector	Comments
MU0:	174500	P350	TU81 Units: 0(TU81)
MU1:	160504	P354	TK50 Units: 1(TK50)

- Invalid:

Name	Address	Vector	Comments
MU0:	174500	P350	TU81 Units: 1(TU81)
MU1:	160504	P354	TK50 Units: 0(TK50)

MT/MM Tapes Must Be Booted From Unit 0 — INIT.SYS Restriction

RSTS/E V10.0

Initialization

INIT.SYS Restrictions

Magnetic tape distributions of RSTS or any bootable recovery tapes of RSTS must be booted from unit zero. This problem affects MM and MT drives.

Installation Flag Files

RSTS/E V10.0

System Installation and Update

Installation/Update Notes

Flag files are files of zero length that are used by the Installation Procedure as status indicators. The flag files used in V10.0 are:

1. The file VER00L.SYS in account [1,2]
2. Any file with a filetype of .00L

These flag files should not be deleted. Doing so may cause certain layered product installations and updates to fail.

RSTS/E Version 10.0 Installation Procedure Restrictions

*RSTS/E V10.0
System Installation and Update
Installation/Update Restrictions*

Problem

The following restrictions exist in the RSTS/E Version 10.0 installation procedure:

1. During installation, if you answer **NO** to any of the "Do you want to proceed" prompts, when you do *proceed*, the installation will assume that the installation kit is on the device that was used to originally install RSTS/E on your system. It will override the device you may have already specified to the installation procedure.

If you know that you will be answering **NO** to any of the "Do you want to proceed" prompts, then ensure that the installation kit is on the device used to originally install RSTS/E on your system. This device will be the default for the "Installation device" prompt.

2. If you are installing the SORT/MERGE package to a target disk, that is, a disk other than the system disk, the system logical LB: will be assigned to the target disk. The logical will be reassigned back to its original assignment after SORT/MERGE is installed, but it can cause problems for the other users on the system during the installation. Also, if the installation is aborted, then the logical may not be reassigned back to its original assignment.

If you are going to install the SORT/MERGE package to a target disk, inform your users that the system logical LB: will not be available. After the installation is complete, ensure that the logical is assigned to its original assignment.

Cannot Mount Disks at the Beginning of the Installation Procedure

*RSTS/E V10.0
System Installation and Update
Installation/Update Restrictions*

Problem

When you update an earlier version of RSTS/E to RSTS/E Version 10.0, the installation procedure prompts you, "Are you ready to proceed?". Previously, you could have answered "NO" to this prompt to allow you to issue the DCL MOUNT command to mount auxiliary disks before continuing the installation.

In Version 10.0, the disk MOUNT function has been moved from the DIGITAL Command Language (DCL) run-time system (DCL.RTS) to the DCLAUX.TSK program.

As a result of this change, you can no longer mount disks after answering "NO" to the first "Are you ready to proceed?" prompt, because the DCLAUX program has not yet been restored at this point in the installation. Instead, you must wait until the required _SY:[1,2] components (including DCLAUX) have been restored. It will be restored after the first "Are you ready to proceed?" prompt. This means that you will be allowed to mount auxiliary disks at the next "Are you ready to proceed?" prompt, which is after the Monitor section.

Once your system has been updated to RSTS/E Version 10.0, this problem will not occur. This restriction will be lifted in a future release of RSTS/E.

Monitor Installation on Target Disk Uses System Disk for Template

RSTS/E V10.0

System Installation and Update

Installation/Update Restrictions

Problem

If you install a monitor on a target disk, the default for the "Template monitor" prompt will be the currently installed monitor on the system disk, instead of a monitor on the target disk.

Solution

If you do not want to use that monitor for the template, then type a question mark (?) and press <RETURN> to display a list of the monitors on the target disk. Then, enter the name of the monitor you wish to use as the template monitor.

Online Monitor Installation Fails if Prebuilt Monitor Chosen

*RSTS/E V10.0
System Installation and Update
Installation / Update Restrictions*

Problem

If you specify "SY:" as the RSTS/E distribution device to the installation procedure to perform an online monitor installation, the installation procedure allows you to choose the prebuilt monitor or to build your own monitor. If you choose the prebuilt monitor, the installation procedure aborts. The prebuilt monitor is only available when you install from the RSTS/E distribution kit.

Solution

This problem is a restriction for RSTS/E Version 10.0. If you want to install the prebuilt monitor, you must use your RSTS/E distribution kit. This problem will be fixed in a future release.

DEASSIGN SYS Call Can Crash System - Mandatory Patch

*RSTS/E V10.0
Executive
Monitor Patches*

Problem

The DEASSIGN SYS call, when issued without parameters, causes the command recall buffer to be corrupted in such a way that recalling a command line can crash the system. In addition, it does not deassign some logicals as expected. Since this SYS call is used by the LOGIN program, the crash can occur shortly after issuing a LOGIN command from a logged-in account.

Solution

The following patching procedure corrects this problem. This problem will be corrected in a future release.

Procedure

1. This is a required patch to the RSTS/E Version 10.0 executives. It must be installed in all target monitor save image libraries (SILs).
2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? <CR>          (RETURN for installed monitor SIL)
```

3. This patch can be installed using ONLPAT, the online patching program. Note, however, that if the patch is applied on line to the installed monitor SIL, it will not take effect until the system is rebooted.

```
RUN $ONLPAT
Command File Name? <CR>      (RETURN for patch installation)
File to patch? <CR>          (RETURN for installed monitor SIL)
File found in account [0,1]
```

4. The patch is as follows:

```
Module name? EMT
Base address? CAL@OVR
Offset address? 3540
  Base   Offset  Old      New?
?????? 003540 012701  ? 137
?????? 003542 000010  ? EMTPAT@OVR
?????? 003544 000401  ? ^Z   (CTRL/Z for new offset)
Offset address? ^Z          (CTRL/Z for new base)
Base address? EMTPAT@OVR
Offset address? 0
  Base   Offset  Old      New?
?????? 000000 000000  ? 12701
?????? 000002 000000  ? 10
?????? 000004 000000  ? 5726
?????? 000006 000000  ? 207
```

Seq. No. 3.1.1 M

```
?????? 000010 000000 ? 5764
?????? 000012 000000 ? 30
?????? 000014 000000 ? 1004
?????? 000016 000000 ? 12716
?????? 000020 000000 ? CLRLOG@OVR-76
?????? 000022 000000 ? 12746
?????? 000024 000000 ? CLRLOG@OVR
?????? 000026 000000 ? 207
?????? 000030 ?????? ? ^Z (CTRL/Z for new offset)
Offset address? ^Z (CTRL/Z for new base)
Base address? FSS@OVR
Offset address? 6056
Base Offset Old New?
?????? 006056 005764 ? 4737
?????? 006060 000030 ? EMTFAT@OVR+10
?????? 006062 001352 ? ^Z (CTRL/Z for new offset)
Offset address? ^Z (CTRL/Z for new base)
Base address? ^Z (CTRL/Z for new module)
Module name? RSTS
Base address? $$0301
Offset address? 0
Base Offset Old New?
?????? 000000 ?????? ? Q!1
?????? 000002 ?????? ? ^C (up-arrow/C to exit;CTRL/C for INIT)
```

Protection Violation Error When Issuing the .RTS Directive — Mandatory Patch

*RSTS/E V10.0
Executive
Monitor Patches*

Problem

Applications that issue the .RTS directive to transfer control to another run-time system while preserving the job context may fail with a "?Protection violation" error. The call fails to account for the size of the job header region when checking to see if the job size has exceeded the maximum size allowed by the run-time system to which you are transferring control.

Solution

The following patching procedure corrects this problem. It will be corrected in a future release.

Procedure

1. This is a required patch to the RSTS/E Version 10.0 executive. It must be installed in all target monitor save image libraries (SILs).

2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? <CR>          RETURN for installed monitor SIL
```

3. This patch can be installed using ONLPAT, the online patching program. Note, however, that if the patch is applied on line to the installed monitor SIL, it will not take effect until the system is rebooted.

```
RUN $ONLPAT
Command File Name? <CR>      RETURN for patch installation
File to patch? <CR>          RETURN for installed monitor SIL
File found in account [0,1]
```

4. The patch is as follows:

```
Module name? EMT
Base address? CAL@OVR
Offset address? 256
  Base  Offset  Old      New?
?????? 000256 126163 ? 240
?????? 000260 000024 ? 120263
?????? 000262 000034 ? ^Z   CTRL/Z for new offset
Offset address? ^Z           CTRL/Z for new base
Base address? ^Z             CTRL/Z for new module
Module name? RSTS
Base address? $$0301
Offset address? 0
  Base  Offset  Old      New?
?????? 000000 ?????? ? Q!2
?????? 000002 ?????? ? ^C   up-arrow/C to exit;CTRL/C for INIT
```


Run-Time System May Become Permanent — Mandatory Patch

*RSTS/E V10.0
Executive
Monitor Patches*

Problem

During the Create a Job system function call, the job's header area is copied to the new job. This copy is done by swapping the header out to disk. If the new job changes run-time systems while it is being swapped back into memory, the incorrect run-time system usage values will be incremented and decremented. This may result in the run-time system becoming permanently locked into memory.

Solution

The following patching procedure corrects this problem. It will be corrected in a future release.

Procedure

1. This is a required patch to the RSTS/E Version 10.0 executive. It must be installed in all target monitor save image libraries (SILs).

2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? <CR>          RETURN for installed monitor SIL
```

3. This patch can be installed using ONLPAT, the online patching program. Note, however, that if the patch is applied on line to the installed monitor SIL, it will not take effect until the system is rebooted.

```
RUN $ONLPAT
Command File Name? <CR>     RETURN for patch installation
File to patch? <CR>        RETURN for installed monitor SIL
File found in account [0,1]
```

4. The patch is as follows:

```
Module name? RSTS
Base address? SWRTS
Offset address? 42
  Base  Offset  Old      New?
?????? 000042 001001 ? 4737
?????? 000044 110000 ? PATCH
?????? 000046 060063 ? ^Z   CTRL/Z for new offset
Offset address? ^Z         CTRL/Z for new base
Base address? PATCH
Offset address? 0
```


Seq. No. 3.1.3 M

Base	Offset	Old	New?	
??????	000000	000000	? 1404	
??????	000002	000000	? 122761	
??????	000004	000000	? 34	
??????	000006	000000	? 25	
??????	000010	000000	? 1001	
??????	000012	000000	? 110000	
??????	000014	000000	? 207	
??????	000016	000000	? ^Z	CTRL/Z for new offset
Offset address?	^Z			CTRL/Z for new base
Base address?	\$\$0301			
Offset address?	0			
Base	Offset	Old	New?	
??????	000000	??????	? Q!4	
??????	000002	??????	? ^C	up-arrow/C to exit;CTRL/C for INIT



DCL Log File Corruption on Full Disk — Monitor Restriction

RSTS/E V10.0

Executive

Monitor Restrictions

If the disk on which a DCL or Batch log file is being written becomes full, no more data is written to the log file. As space on the disk becomes available, the resultant log file may contain one or two blocks of random data.

Changing Special LOGIN Terminal — Terminal Service Feature Patch

RSTS/E V10.0

Executive

Terminal Service Patches

The number of jobs that can log in to a RSTS/E system is limited by the swapping space available, the JOB MAX set at system startup time, and the login setting (set by the SET SYSTEM/[NO]LOGINS command). However, the console terminal (KB0:) is a special terminal, and can log in regardless of the login setting, provided that swapping space and JOB MAX permit.

With the following patch, one or two special keyboards can be selected, or this feature can be disabled entirely.

Procedure

1. This is a feature patch to the RSTS/E V10.0 monitor. It may be installed in any target monitor SIL.
2. Decide which terminals should be allowed to log in regardless of the login setting, and use those numbers as m and n in the patch in step 5. If you want to allow only one terminal, use its number as m and use -1 in place of n . If you want to disable this feature, use -1 in place of both m and n . Be sure you include the decimal point after the new value of m or n so that it is interpreted as a decimal number.
3. The patch described in Step 5 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? <CR>      (RETURN for installed monitor SIL)
```

4. This patch can be installed manually using ONLPAT, the online patching program:

```
RUN $ONLPAT
Command File Name? <CR> (RETURN for manual installation)
File to patch? <CR>     (RETURN for installed monitor SIL)
File found in account [0,1]
```

This feature patch is contained in the file PA0304.001 as part of the UPDATE package. To transfer this file to the UPDATE\$ account, select the package name UPDATE during the system installation or update procedure. ¹

¹ The patch file for this patch requires manual editing to include installation specific parameters before it can be successfully installed.

5. The patch is as follows:

```
Module name? KIN
Base address? ..CTZ.@OVR
Offset address? 0
  Base   Offset  Old      New?
?????? 000000 000000 ? m.*2 (or -1, from step 2)
?????? 000002 001407 ? ^Z   (CTRL/Z for new offset)
Offset address? ^Z (CTRL/Z for new base)
Base address? ..CTY.@OVR
Offset address? 0
  Base   Offset  Old      New?
?????? 000000 177777 ? n.*2 (or -1, from step 2)
?????? 000002 001404 ? ^Z   (CTRL/Z for new offset)
Offset address? ^Z (CTRL/Z for new base)
Base address? ^Z   (CTRL/Z for new module)
Module name? RSTS
Base address? $$0304
Offset address? 0
  Base   Offset  Old      New?
?????? 000000 ?????? ? Q!1
?????? 000002 ?????? ? ^C   (up-arrow/C to exit; CTRL/C for INIT)
```


Input Escape Sequence Handling — Terminal Service Feature Patch

RSTS/E V10.0
Executive
Terminal Service Patches

RSTS/E allows multiple character incoming escape sequences. The *RSTS/E Programming Manual* fully describes the escape sequence handling.

One of the multicharacter escape sequences is ESCape followed by "P", followed by one modifier character. On the VT52 terminal, the upper left-hand key on the auxiliary keypad (usually blue) generates ESC P. When the VT100 terminal is operating in VT52 mode, the upper left-hand key on the auxiliary keypad (usually labeled "PF1") generates ESC P. If the terminal user types this key and then any other graphic key, the whole sequence is gathered by the terminal service and delivered to the application program. None of the sequence is echoed. Thus, the blue key can be considered a "function" key to be followed by some function code character.

On the other hand, some existing applications using the VT52 may expect this key to generate a stand-alone escape sequence with no required (or desired) modifier character. You may install the following patch to change the terminal service so that the ESCape, "P" sequence does not expect a modifier character. Note that this patch affects *all* terminals on the system.

Procedure

1. This is a feature patch to the RSTS/E monitor. It may be installed in any target monitor SIL.

2. The patch described in Step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? <CR>      (RETURN for installed monitor SIL)
```

3. This patch can be installed manually using ONLPAT, the on-line patching program:

```
RUN $ONLPAT
Command File Name? <CR> (RETURN for manual installation)
File to patch? <CR>      (RETURN for installed monitor SIL)
File found in account [0,1]
```

This feature patch is contained in the file PA0304.002 as part of the UPDATE package. To transfer this file to the UPDATE\$ account, select the package name UPDATE during the system installation or update procedure.

4. The patch is as follows:

```
Module name? KIN
Base address? ..ESCP@OVR
Offset address? 0
  Base   Offset  Old      New?
?????? 000000 050001 ? Q&177400
?????? 000002 ?????? ? ^Z (CTRL/Z for new offset)
Offset address? ^Z (CTRL/Z for new base)
Base address? ^Z (CTRL/Z for new module)
Module name? RSTS
Base address? $$0304
Offset address? 0
  Base   Offset  Old      New?
?????? 000000 ?????? ? Q!2
?????? 000002 ?????? ? ^C (up-arrow/C to exit; CTRL/C for INIT)
```

Host-Initiated LAT Connections May Crash System - Mandatory Patch

RSTS/E V10.0

Executive

Terminal Service Patches

Problem

An attempt to establish a LAT connection from your RSTS/E system (a Host-Initiated Connection) to a busy port on a terminal server may crash the system.

Solution

The following patch procedure corrects the problem.

Procedure

1. This is a required patch to the RSTS/E Version 10.0 executive. It must be installed in all target monitor save image libraries (SILs).
2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? <CR>          (RETURN for installed monitor SIL)
```

3. This patch can be installed using ONLPAT, the online patching program. Note, however, that if the patch is applied on line to the installed monitor SIL, it will not take effect until the system is rebooted.

```
RUN $ONLPAT
Command File Name? <CR>      (RETURN for patch installation)
File to patch? <CR>          (RETURN for installed monitor SIL)
File found in account [0,1]
```

4. The patch is as follows:

```
Module name? LAT
Base address? LATAPP@OVR
Offset address? 2200
  Base   Offset  Old      New?
?????? 002200  077067  ? 77072
?????? 002202  000137  ? ^Z   (CTRL/Z for new offset)
Offset address? ^Z          (CTRL/Z for new base)
Base address? ^Z            (CTRL/Z for new module)
Module name? RSTS
Base address? $$0304
Offset address? 0
  Base   Offset  Old      New?
?????? 000000  ??????  ? Q!4
?????? 000002  ??????  ? ^C   (up-arrow/C to exit;CTRL/C for INIT)
```


Three Problems in Terminal Service — Mandatory Patch

RSTS/E V10.0

Executive

Terminal Service Patches

Problem

Three problems were discovered in terminal service for Version 10.0. They are as follows:

1. If a terminal is closed while output is being sent to the terminal, and is then reopened before the output completes, some terminal attributes may be lost after the OPEN occurs. The terminal attributes that may be lost include the terminal open modes, private delimiters, and terminal characteristics.

For example, if output is sent to the terminal, followed by a CLOSE, then the terminal is opened in transparent controls mode, it is possible that the mode will be lost before a read from the terminal takes place. Furthermore, the setting of one or more private delimiters or terminal characteristics after the OPEN can be lost, because of the buffered output continuing to be sent to the terminal after the OPEN occurs.

2. Under certain conditions, command line editing and command recall through the use of the arrow and functions keys can become disabled at the DIGITAL Command Language (DCL) level, even though the terminal characteristics indicate these features are enabled. The function keys (for example, F12), and the arrow keys cause an escape sequence to be displayed on the screen instead of performing their line editing and command recall functions.
3. On certain central processing units (CPUs), commands entered at the RSX keyboard monitor are treated as "program input" for purposes of command line recall, instead of "keyboard monitor" commands. As a result, switching to another keyboard monitor from RSX will cause any saved RSX commands to be erased. Levels of command line recall are described in the *RSTS/E Version 10.0 System User's Guide*, page 1-14.

Solution

The following patching procedure corrects these problems. They will be corrected in a future release.

Procedure

1. This is a required patch to the RSTS/E Version 10.0 executive. It must be installed in all target monitor save image libraries (SILs).
2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? <CR>                (RETURN for installed monitor SIL)
```

Seq. No. 3.4.4 M

3. This patch can be installed using ONLPAT, the online patching program. Note, however, that if the patch is applied on line to the installed monitor SIL, it will not take effect until the system is rebooted.

```
RUN $ONLPAT
Command File Name? <CR>          (RETURN for patch installation)
File to patch? <CR>             (RETURN for installed monitor SIL)
File found in account [0,1]
```

4. The patch to correct these problems is as follows:

```
Module name? KBD
Base address? KBDVRM@OVR
Offset address? 2620
  Base   Offset  Old      New?
120242  002620  000200  ? 204
120242  002622  000040  ? ^Z      (CTRL/Z for new offset)
Offset address? 3650
  Base   Offset  Old      New?
120242  003650  026761  ? <CR>    (no change; verify only)
120242  003652  ??????  ? Q-2
120242  003654  ??????  ? ^Z      (CTRL/Z for new offset)
Offset address? 3754
  Base   Offset  Old      New?
120242  003754  016402  ? 4737
120242  003756  000022  ? KBDPAT@OVR+76
120242  003760  042702  ? ^Z      (CTRL/Z for new offset)
Offset address? ^Z              (CTRL/Z for new base)
Base address? KBDPAT@OVR
Offset address? 76
  Base   Offset  Old      New?
120000  000076  000000  ? 16402
120000  000100  000000  ? 22
120000  000102  000000  ? 42761
120000  000104  000000  ? 2200
120000  000106  000000  ? 10
120000  000110  000000  ? 207
120000  000112  ??????  ? ^Z      (CTRL/Z for new offset)
Offset address? ^Z              (CTRL/Z for new base)
Base address? ^Z                (CTRL/Z for new module)
Module name? RSTS
Base address? $$0304
Offset address? 0
  Base   Offset  Old      New?
??????  000000  ??????  ? Q!10
??????  000002  ??????  ? ^C      (Up-arrow/C to exit; CTRL/C for INIT)
```

Problem with TECO Mode — Mandatory Patch

RSTS/E V10.0
Executive
Terminal Service Corrections

Problem

When you type command strings at a terminal, TECO considers certain ASCII characters to have special meaning. Most of the special characters are immediate action commands that cause TECO to perform a specified function immediately instead of waiting for the double ESCAPE that terminates a command string. Immediate action commands can be entered at any point in a command string, even in the middle of a command or text argument. A list of immediate action commands can be found in Table 4-1 of the *PDP-11 TECO User's Guide*.

The immediate action commands that begin with the Ctrl/G character do not function as expected in Version 10.0. In order for the commands to be recognized by TECO, you must press a delimiter such as the Return key.

Solution

The following patching procedure corrects this problem.

NOTE

TECO is an unsupported component of the RSTS/E Distribution Kit.

Procedure

1. This is a required patch to the RSTS/E Version 10.0 executive. It must be installed in all target monitor save image libraries (SILs).
2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? <CR>          RETURN for installed monitor SIL
```

3. This patch can be installed using ONLPAT, the online patching program. Note, however, that if the patch is applied on line to the installed monitor SIL, it will not take effect until the system is rebooted.

```
RUN $ONLPAT
Command File Name? <CR>     RETURN for patch installation
File to patch? <CR>        RETURN for installed monitor SIL
File found in account [0,1]
```

4. The patch is as follows:

```
Module name? KIN
Base address? TERINC@OVR
Offset address? 1630
```

```

Base   Offset  Old      New?
121306 001630 004767  ? 137
121306 001632 002064  ? TERINC@OVR+2136
121306 001634 000261  ? ^Z   CTRL/Z for new offset
Offset address? ^Z   CTRL/Z for new base
Base address? ^Z     CTRL/Z for new module
Module name? KBD
Base address? KBDVRM@OVR
Offset address? 2334
Base   Offset  Old      New?
120242 002334 004737  ? <CR> no change; verify only
120242 002336 145002  ? KBDPAT@OVR+112
120242 002340 001144  ? ^Z   CTRL/Z for new offset
Offset address? ^Z   CTRL/Z for new base
Base address? KBDPAT@OVR
Offset address? 112
Base   Offset  Old      New?
120000 000112 000000  ? 4737
120000 000114 000000  ? TTISGL@OVR
120000 000116 000000  ? BNE+2
120000 000120 000000  ? 105761
120000 000122 000000  ? 32
120000 000124 000000  ? 207
120000 000126 000000  ? ^Z   CTRL/Z for new offset
Offset address? ^Z   CTRL/Z for new base
Base address? ^Z     CTRL/Z for new module
Module name? RSTS
Base address? $$0304
Offset address? 0
Base   Offset  Old      New?
?????? 000000  ??????  ? Q!20
?????? 000002  ??????  ? ^C   up-arrow/C to exit;CTRL/C for INIT

```


Inappropriate Character Echoing — Mandatory Patch

*RSTS/E V10.0
Executive
Terminal Service Corrections*

***** Supersedes June 1991 RSTS/E Software Dispatch Seq. No. 3.4.6 M*****

Problem

When the error “?Keyboard wait exhausted” (ERR=15%) is returned to a program, character echoing sometimes behaves inappropriately. Characters can be echoed more than once on the terminal, often with the whole command redisplayed when a new character is typed. This behavior makes it nearly impossible to distinguish what is truly on the command line. In other situations, character echoing can stop altogether.

The behavior depends on how the program deals with error 15. If the program resumes to do some processing, character echoing may stop. If the program issues another read request, the duplicate character echoing may result.

The behavior described above can also differ depending on the /[NO]ANSI and the /SCOPE terminal characteristic settings.

Some known examples of failures are:

- After a full logout on a hardwired terminal that is permanently set to /SCOPE, if you type ahead while the logout information is printed, then hit another character after a few seconds, characters will be displayed twice.
- If the unsupported ATPK program is run interactively (ATPK LOGFIL=KB:), character echoing will stop after a few seconds until a delimiter or the DELETE key is hit.
- Any user program that traps error 15, and reissues a read request, may see either characters echoed more than once, or perhaps no echoing of characters at all.

NOTE

This patch supersedes June 1991 Article 3.4.6 M, which could result in the system either crashing or hanging. This would only occur after a job which had detached continued running and exited a program. The patch procedure detailed in step 4b removes the June 1991 patch and fixes the problem.

Solution

The following patching procedure corrects this problem. It will be corrected in a future release.

NOTE

This solution results in a minor restriction involving the displaying of the command line after a “?Keyboard wait exhausted” error occurs. After this error is generated, if at the next prompt the user types either CTRL/R or CTRL/T, or if a broadcast to the terminal occurs, the command line (if any) may not be positioned correctly on the screen when it is redisplayed. This

could cause difficulty editing a command line. This condition is only a problem at the interactive level, and may be cleared by hitting any delimiter such as RETURN or CTRL/C.

Procedure

1. This is a required patch to the RSTS/E Version 10.0 executive. It must be installed in all target monitor save image libraries (SILs).

2. The patch described in step 4 below can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? <CR>          RETURN for installed monitor SIL
```

3. This patch can be installed using ONLPAT, the online patching program. Note, however, that if the patch is applied on line to the installed monitor SIL, it will not take effect until the system is rebooted.

```
RUN $ONLPAT
Command File Name? <CR>      RETURN for patch installation
File to patch? <CR>         RETURN for installed monitor SIL
File found in account [0,1]
```

4. This patch supersedes a previously published patch. If you did not install the June 1991 Article 3.4.6 M, apply the patch described in step 4a; otherwise, install the patch described in step 4b.

- a. Apply this patch only if you *did not* install the June 1991 Article 3.4.6 M:

```
Module name? DSK
Base address? TIM
Offset address? 242
Base   Offset  Old      New?
?????? 000242  142761 ? 407
?????? 000244  000040 ? ^Z    CTRL/Z for new offset
Offset address? ^Z    CTRL/Z for new base
Base address? ^Z     CTRL/Z for new module
Module name? RSTS
Base address? $$0304
Offset address? 0
Base   Offset  Old      New?
?????? 000000  ?????? ? Q!40
?????? 000002  ?????? ? ^C    up-arrow/C to exit;CTRL/C for INIT
```

- b. Apply this patch only if you *did* install the June 1991 Article 3.4.6 M:

```
Module name? DSK
Base address? TIM
Offset address? 242
Base   Offset  Old      New?
?????? 000242  152761 ? 407
?????? 000244  000040 ? <CR>  no change; verify only
?????? 000246  000105 ? 104
?????? 000250  000404 ? 152761
?????? 000252  000100 ? ^Z    CTRL/Z for new offset
Offset address? ^Z    CTRL/Z for new base
Base address? ^Z     CTRL/Z for new module
Module name? KBD
Base address? KBDVRM@OVR
Offset address? 2666
Base   Offset  Old      New?
?????? 002666  042761 ? 142761
?????? 002670  020040 ? 40
?????? 002672  000104 ? ^Z    CTRL/Z for new offset
```



```

Offset address? ^Z
Base address? ^Z
Module name? KIN
Base address? TERINC@OVR
Offset address? 4304
  Base   Offset  Old      New?
?????? 004304  042761  ? 142761
?????? 004306  020040  ? 40
?????? 004310  000104  ? ^Z
Offset address? ^Z
Base address? ^Z
Module name? TERCLS
Base address? TERCLS@OVR
Offset address? 1246
  Base   Offset  Old      New?
?????? 001246  012361  ? 112361
?????? 001250  000044  ? <CR>
?????? 001252  112323  ? 112361
?????? 001254  042713  ? 45
?????? 001256  020100  ? 112361
?????? 001260  000240  ? 103
?????? 001262  042761  ? ^Z
Offset address? ^Z
Base address? ^Z
Module name? GEN
Base address? SCH@OVR
Offset address? 3542
  Base   Offset  Old      New?
?????? 003542  004737  ? 016704
?????? 003544  120000  ? 052544
?????? 003546  105064  ? ^Z
Offset address? ^Z
Base address? GENPAT@OVR
Offset address? 0
  Base   Offset  Old      New?
120000  000000  011204  ? 0
120000  000002  132764  ? 0
120000  000004  000040  ? 0
120000  000006  000105  ? 0
120000  000010  001410  ? 0
120000  000012  042764  ? 0
120000  000014  020040  ? 0
120000  000016  000104  ? 0
120000  000020  152764  ? 0
120000  000022  000100  ? 0
120000  000024  000104  ? 0
120000  000026  105064  ? 0
120000  000030  000106  ? 0
120000  000032  013704  ? 0
120000  000034  001016  ? 0
120000  000036  000207  ? 0
120000  000040  ??????  ? ^C

```

CTRL/Z for new base
CTRL/Z for new module

CTRL/Z for new offset
CTRL/Z for new base
CTRL/Z for new module

no change; verify only

CTRL/Z for new offset
CTRL/Z for new base
CTRL/Z for new module

CTRL/Z for new offset
CTRL/Z for new base

up-arrow/C to exit;CTRL/C for INIT

Private Delimiters Cause Problems with Command Recall — Mandatory Patch

RSTS/E V10.0

Executive

Terminal Service Corrections

Problem

Setting a private delimiter character (or mask) causes improper behavior when recalling commands. The most severe problems occur when you set the RETURN character (ASCII 13) as a private delimiter. For example, if you issue the Digital Command Language (DCL) command *SET TERMINAL/DELIMITER=13*, the following may result:

- A system crash. If you leave DCL then recall a command upon returning, or if you issue the DCL RECALL command with a text or index parameter, the system may crash.
- A disjointed RECALL/ALL display. The display may contain extraneous characters, may contain commands that you did not type at that level, or may loop continuously, forcing you to hit CTRL/C to exit the loop.

Another problem may result from setting any character other than RETURN as a private delimiter. When recalling a command, the monitor processes each character of the command. If the command contains a private delimiter, the delimiter will cause the monitor to send the partial command to the program or run-time system, satisfying the read. The monitor will then continue to send the rest of the characters of the recalled command.

This may result in undesirable behavior.

For example, suppose you issue the DCL command *SET TERMINAL/DELIMITER="E"*, which makes "E" a private delimiter. If you then hit the up arrow (to recall the SET TERMINAL command), the monitor will recall the "S", and upon encountering the private delimiter "E", will execute S as a command. The monitor will continue to send characters to your terminal, executing the command every time an "E" is encountered, until the last character of the *SET TERMINAL* command is processed.

Solution

The following patching procedure corrects these problems. They will be corrected in a future release.

The monitor will now recall a command either to the end of the command, or until the first private delimiter is encountered. In the example, the monitor will stop sending characters to your terminal as soon as it sees the private delimiter (*E*), displaying but not executing the command *S*. All characters following the delimiter in the recalled command will be ignored. They can be recalled later, once the private delimiter is removed.

NOTE

Digital recommends that you do not use private delimiters at the DCL level, since if not properly used, could cause the unexpected execution of a command before you have a chance to complete it.

Procedure

1. This is a required patch to the RSTS/E Version 10.0 executive. It must be installed in all target monitor save image libraries (SILs).

2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? <CR>          RETURN for installed monitor SIL
```

3. This patch can be installed using ONLPAT, the online patching program. Note, however, that if the patch is applied on line to the installed monitor SIL, it will not take effect until the system is rebooted.

```
RUN $ONLPAT
Command File Name? <CR>      RETURN for patch installation
File to patch? <CR>         RETURN for installed monitor SIL
File found in account [0,1]
```

4. The patch is as follows:

```
Module name? KBD
Base address? TERREC@OVR
Offset address? 762
  Base  Offset  Old      New?
131634 000762 010446  ? 4437
131634 000764 010546  ? KBDPAT@OVR+126
131634 000766 013777  ? ^Z   CTRL/Z for new offset
Offset address? 1036
  Base  Offset  Old      New?
131634 001036 120227  ? 4737
131634 001040 000015  ? CHKDLM@OVR
131634 001042 001463  ? 103436
131634 001044 004737  ? 120227
131634 001046 144526  ? 15
131634 001050 103433  ? 1460
131634 001052 012704  ? ^Z   CTRL/Z for new offset
Offset address? ^Z          CTRL/Z for new base
Base address? KBDPAT@OVR
Offset address? 126
  Base  Offset  Old      New?
120000 000126 000000  ? 4737
120000 000130 000000  ? CHKDLM@OVR
120000 000132 000000  ? 103403
120000 000134 000000  ? 10546
120000 000136 000000  ? 137
120000 000140 000000  ? TERREC@OVR+766
120000 000142 000000  ? 5726
120000 000144 000000  ? 137
120000 000146 000000  ? TERREC@OVR+1016
120000 000150 ??????  ? ^Z   CTRL/Z for new offset
Offset address? ^Z          CTRL/Z for new base
Base address? ^Z           CTRL/Z for new module
Module name? RSTS
Base address? $$0304
Offset address? 0
  Base  Offset  Old      New?
?????? 000000 ??????  ? Q!100
?????? 000002 ??????  ? ^C   up-arrow/C to exit;CTRL/C for INIT
```


Characters Lost When Data Error Received — Mandatory Patch

RSTS/E V10.0

Executive

Terminal Service Corrections

Problem

It is possible that some characters could be lost if a program issues a series of conditional reads to check for the presence of a complete command line.

This problem will only occur when an escape sequence is entered while a conditional sleep is occurring. Furthermore, this problem will only occur if the conditional sleep is immediately followed by a conditional read which results in a “?Data error on device” error because the escape sequence was not completely processed by the monitor at the time of the read.

Solution

The following patching procedure corrects this problem. It will be corrected in a future release.

Procedure

1. This is a required patch to the RSTS/E Version 10.0 executive. It must be installed in all target monitor save image libraries (SILs).

2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? <CR>          RETURN for installed monitor SIL
```

3. This patch can be installed using ONLPAT, the online patching program. Note, however, that if the patch is applied on line to the installed monitor SIL, it will not take effect until the system is rebooted.

```
RUN $ONLPAT
Command File Name? <CR>      RETURN for patch installation
File to patch? <CR>         RETURN for installed monitor SIL
File found in account [0,1]
```

4. The patch is as follows:

```
Module name? KBD
Base address? KBDVRM@OVR
Offset address? 10532
  Base   Offset  Old      New?
120242  010532  122702  ? 402
120242  010534  000200  ? ^Z      CTRL/Z for new offset
Offset address? ^Z          CTRL/Z for new base
Base address? ^Z            CTRL/Z for new module
Module name? RSTS
Base address? $$0304
Offset address? 0
  Base   Offset  Old      New?
??????  000000  ??????  ? Q!200
??????  000002  ??????  ? ^C      up-arrow/C to exit;CTRL/C for INIT
```


Command Recall May Crash System — Mandatory Patch

RSTS/E V10.0
Executive
Terminal Service Corrections

***** Supersedes July 1991 RSTS/E V10.0 Software Dispatch Seq. No. 3.4.9 *****

Problem

Under certain rare circumstances, recalling a command may crash the system or result in a corrupted RECALL/ALL display. This problem can only occur if command line recall is used after detaching and reattaching to a job on which command line recall is not currently available.

NOTE

This patch supersedes July 1991 Article 3.4.9M. The original patch results in the incorrect behavior of command line recall while in the BASIC-PLUS runtime system: when recalling lines longer than 90 characters, only a portion of the previous command was recalled. The enclosed patch corrects this behavior.

Solution

The following patching procedure corrects this problem. This procedure applies whether or not patch 3.4.9M is already installed. This problem will be corrected in RSTS/E Version 10.1 and later.

Procedure

1. This is a required patch to the RSTS/E Version 10.0 executive. It must be installed in all target monitor save image libraries (SILs).
2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:


```
Option: PATCH
File to patch? <CR>          RETURN for installed monitor SIL
```
3. This patch can be installed using ONLPAT, the online patching program. Note, however, that if the patch is applied on line to the installed monitor SIL, it will not take effect until the system is rebooted.

```
RUN $ONLPAT
Command File Name? <CR>      RETURN for patch installation
File to patch? <CR>          RETURN for installed monitor SIL
File found in account [0,1]
```



4. The patch is as follows:

```

Module name? KBD
Base address? KBDVRM@OVR
Offset address? 2672
  Base   Offset  Old      New?
?????? 002672  000104  ? <CR>  no change; verify only
?????? 002674  ??????  ? 105061
?????? 002676  ??????  ? 106
?????? 002700  012737  ? ^Z    CTRL/Z for new offset
Offset address? ^Z          CTRL/Z for new base
Base address? TERREC@OVR
Offset address? 2
  Base   Offset  Old      New?
?????? 000002  004537  ? 4737
?????? 000004  ??????  ? KBDPAT@OVR+202
?????? 000006  ??????  ? 240
?????? 000010  ??????  ? 240
?????? 000012  103772  ? ^Z    CTRL/Z for new offset
Offset address? ^Z          CTRL/Z for new base
Base address? KBDPAT@OVR
Offset address? 202
  Base   Offset  Old      New?
?????? 000202  000000  ? 4537
?????? 000204  000000  ? CALLM@OVR
?????? 000206  000000  ? RECOK@OVR
?????? 000210  000000  ? KINAP5@OVR
?????? 000212  000000  ? 103003
?????? 000214  000000  ? 4737
?????? 000216  000000  ? TERREC@OVR+2424
?????? 000220  000000  ? 261
?????? 000222  000000  ? 207
?????? 000224  ??????  ? ^Z    CTRL/Z for new offset
Offset address? ^Z          CTRL/Z for new base
Base address? ^Z          CTRL/Z for new module
Module name? RSTS
Base address? $$0304
Offset address? 0
  Base   Offset  Old      New?
?????? 000000  ??????  ? Q!400
?????? 000002  ??????  ? ^C    up-arrow/C to exit;CTRL/C for INIT

```


Forced Characters Echoed Even Under NOECHO — Mandatory Patch

RSTS/E V10.0

Executive

Terminal Service Corrections

Problem

As a result of the new Version 10.0 "Echo on Read" feature, characters are not echoed unless a read is outstanding. A problem occurs if you force to a terminal on which echoing is disabled with the intention that the forced characters are not to be displayed. If echoing is re-enabled on the terminal before a read is posted, the characters *will* be displayed. This is not the desired effect.

Solution

The following patching procedure corrects this problem. Note, however, that only the first command forced to the terminal will honor the current state of echoing. Any characters entered after a delimiter are placed in a special "type ahead" buffer and are not processed or displayed until a subsequent read takes place.

This problem will be corrected in a future release.

Procedure

1. This is a required patch to the RSTS/E Version 10.0 executive. It must be installed in all target monitor save image libraries (SILs).
2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:


```
Option: PATCH
File to patch? <CR>                RETURN for installed monitor SIL
```
3. This patch can be installed using ONLPAT, the online patching program. Note, however, that if the patch is applied on line to the installed monitor SIL, it will not take effect until the system is rebooted.

```
RUN $ONLPAT
Command File Name? <CR>            RETURN for patch installation
File to patch? <CR>                RETURN for installed monitor SIL
File found in account [0,1]
```

4. The patch is as follows:

```
Module name? KBD
Base address? KBDVRM@OVR
Offset address? 5710
  Base   Offset  Old      New?
?????? 005710  132761  ? 4737
?????? 005712  004000  ? KBDPAT@OVR+160
?????? 005714  000001  ? 401
?????? 005716  001262  ? ^Z      CTRL/Z for new offset
Offset address? ^Z      CTRL/Z for new base
Base address? KBDPAT@OVR
Offset address? 160
  Base   Offset  Old      New?
120000  000160  000000  ? 132761
120000  000162  000000  ? 4000
120000  000164  000000  ? 1
120000  000166  000000  ? 1401
120000  000170  000000  ? 104412
120000  000172  000000  ? 152761
120000  000174  000000  ? 40
120000  000176  000000  ? 104
120000  000200  000000  ? 207
120000  000202  ??????  ? ^Z      CTRL/Z for new offset
Offset address? ^Z      CTRL/Z for new base
Base address? ^Z      CTRL/Z for new module
Module name? RSTS
Base address? $$0304
Offset address? 0
  Base   Offset  Old      New?
?????? 000000  ??????  ? Q!1000
?????? 000002  ??????  ? ^C      up-arrow/C to exit;CTRL/C for INIT
```


Problem Processing Escape Sequences as Type Ahead — Mandatory Patch

RSTS/E V10.0

Executive

Terminal Service Corrections

Problem

With echo on read, characters typed while a sleep occurs will be placed into a special "type ahead" buffer. A sleep statement is terminated whenever a delimiter is typed on the terminal. The delimiter is placed into the type ahead buffer, and the job is made runnable.

The escape character (ASCII 27) is a standard delimiter on RSTS/E. Thus, an escape character or an escape sequence will cause a sleeping job to wake up. When an escape sequence is allowed, it is the *end* of the escape sequence that terminates a sleep. In Version 10.0, when an escape sequence is entered, the escape *character* wakes up the job, rather than the last character of the escape sequence.

This behavior can cause problems in applications that issue conditional reads before the entire escape sequence has been processed. A conditional read will result in a "?Data error on device" error if there is not a complete line waiting to be read. This should not happen if a sleep just awoke as the result of a line typed at the terminal.

NOTE

Sleeps can also awake because of events outside the control of your program. Examples of such an event are the setting of the system time or the reception of a message for message receivers. The unexpected awakening of your program can be avoided by using a WAIT statement and trapping for "?Keyboard wait exhausted" errors, as opposed to SLEEPS and trapping for "?Data error on device" errors.

Solution

The following patching procedure corrects this problem. It will be corrected in a future release.

Procedure

1. This is a required patch to the RSTS/E Version 10.0 executive. It must be installed in all target monitor save image libraries (SILs).
2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

Option: PATCH

File to patch? <CR>

RETURN for installed monitor SIL

3. This patch can be installed using ONLPAT, the online patching program. Note, however, that if the patch is applied on line to the installed monitor SIL, it will not take effect until the system is rebooted.

```
RUN $ONLPAT
Command File Name? <CR>          RETURN for patch installation
File to patch? <CR>             RETURN for installed monitor SIL
File found in account [0,1]
```

4. The patch is as follows:

```
Module name? KIN
Base address? TERINC@OVR
Offset address? 1244
  Base   Offset  Old      New?
?????? 001244  120227  ? 4737
?????? 001246  000015  ? KINPAT@OVR+74
?????? 001250  001405  ? ^Z      CTRL/Z for new offset
Offset address? ^Z                CTRL/Z for new base
Base address? KINPAT@OVR
Offset address? 74
  Base   Offset  Old      New?
120000  000074  000000  ? 120227
120000  000076  000000  ? 15
120000  000100  000000  ? BEQ+22
120000  000102  000000  ? 120227
120000  000104  000000  ? 33
120000  000106  000000  ? BNE+10
120000  000110  000000  ? 4537
120000  000112  000000  ? TERINC@OVR+4100
120000  000114  000000  ? BR+13
120000  000116  000000  ? 112761
120000  000120  000000  ? 200
120000  000122  000000  ? 41
120000  000124  000000  ? 5726
120000  000126  000000  ? 207
120000  000130  000000  ? 105761
120000  000132  000000  ? 41
120000  000134  000000  ? BEQ+2
120000  000136  000000  ? 4537
120000  000140  000000  ? TERINC@OVR+1342
120000  000142  000000  ? 5727
120000  000144  000000  ? 264
120000  000146  000000  ? 207
120000  000150  ??????  ? ^Z      CTRL/Z for new offset
Offset address? ^Z                CTRL/Z for new base
Base address? ^Z                  CTRL/Z for new module
Module name? RSTS
Base address? $$0304
Offset address? 0
  Base   Offset  Old      New?
?????? 000000  ??????  ? Q!2000
?????? 000002  ??????  ? ^C      up-arrow/C to exit;CTRL/C for INIT
```

Host-Initiated Connections to Some Servers May Fail — Mandatory Patch

RSTS/E V10.0

Executive

Terminal Service Corrections

Problem

RSTS/E does not allow host-initiated connections to terminal servers, such as the DECserver 90L, that use the LAT Version 5.2 protocol. This problem is only seen when attempting to access a printer or modem device connected to a server running the Version 5.2 protocol. Users logging into the RSTS/E system from these servers will not experience this problem.

Issuing a SHOW SERVER command at your terminal server's Local> prompt will display the version of the LAT protocol used by that server.

Solution

The following patching procedure corrects the above problem. It will be corrected in a future release.

Procedure

1. This is a required patch to the RSTS/E Version 10.0 executives. It must be installed in all target monitor save image libraries (SILs).
2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? <CR>          RETURN for installed monitor SIL
```

3. This patch can be installed using ONLPAT, the online patching program. Note, however, that if the patch is applied on line to the installed monitor SIL, it will not take effect until the system is rebooted.

```
RUN $ONLPAT
Command File Name? <CR>     RETURN for patch installation
File to patch? <CR>        RETURN for installed monitor SIL
File found in account [0,1]
```

4. The patch is as follows:

```
Module name? LAT
Base address? LATAPP@OVR
Offset address? 1634
Base   Offset  Old      New?
?????? 001634  001016  ? 101016
?????? 001636  105761  ? ^Z   CTRL/Z for new offset
Offset address? ^Z          CTRL/Z for new base
Base address? ^Z           CTRL/Z for new module
Module name? RSTS
Base address? $$0304
Offset address? 0
```



Base	Offset	Old	New?
??????	000000	??????	? Q!4000
??????	000002	??????	? ^C up-arrow/C to exit;CTRL/C for INIT

Problem with Echo Control Mode — Mandatory Patch

RSTS/E V10.0

Executive

Terminal Service Corrections

Problem

Occasionally, programs written to use echo control mode receive an INUSE error (ERR=3). This causes the program to either behave improperly or abort.

For example, DECword (or a similar word processing utility) sometimes aborts with a fatal error during program startup.

Solution

The following patching procedure corrects this problem. It will be corrected in a future release.

Procedure

1. This is a required patch to the RSTS/E Version 10.0 executive. It must be installed in all target monitor save image libraries (SILs).

2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? <CR>          RETURN for installed monitor SIL
```

3. This patch can be installed using ONLPAT, the online patching program. Note, however, that if the patch is applied on line to the installed monitor SIL, it will not take effect until the system is rebooted.

```
RUN $ONLPAT
Command File Name? <CR>     RETURN for patch installation
File to patch? <CR>        RETURN for installed monitor SIL
File found in account [0,1]
```

4. The patch is as follows:

```
Module name? KBD
Base address? KBDVRM@OVR
Offset address? 3404
  Base  Offset  Old      New?
?????? 003404 001004 ? 240
?????? 003406 026161 ? ^Z   CTRL/Z for new offset
Offset address? ^Z         CTRL/Z for new base
Base address? ^Z           CTRL/Z for new module
Module name? RSTS
Base address? $$0304
Offset address? 0
  Base  Offset  Old      New?
?????? 000000 ?????? ? Q!10000
?????? 000002 ?????? ? ^C   up-arrow/C to exit;CTRL/C for INIT
```


Modem Support on RSTS/E

RSTS/E V10.0

Executive

Terminal Service Notes

Notes on the DF224 Scholar Modem

When using the DF224 Scholar Modem on a RSTS/E system, RSTS requires that the Modem Response option be set to abbreviated. Failing to set the response option to abbreviated may cause speed select problems with modems connected to a terminal line which is set to auto-baud.

RSTS also suggests that the Input Character Echo option be disabled when using the DF224 autodial feature. Disabling this feature will prevent text intended for the modem (i.e., the telephone number) from being echoed back to the program.

The state of both these features can be altered by either changing a switch setting on the switch pack located internally on the module, or through the soft select menu. If you alter the state of these features by using the menu, then the settings will revert back to their default state if the unit is powered down. Therefore, RSTS recommends that the states be changed by changing the internal switch settings. To do this, you must set switch S1 to the OFF position to disable Input Character Echo, and switch S3 to the OFF position to set the Modem Response to abbreviated. Please refer to page A-3 of the *Scholar 2400 Modem Owner's Manual* (EK-DF224-OM-PRE) for a diagram of the switchpack and its factory default settings.

Some DF224 modem may send "garbage" characters to the terminal just prior to sending the disconnect message after the remote modem drops carrier. This is the way the modem operates and is *not* a problem with RSTS/E.

NOTE

RSTS/E will only support Scholar Modems of revision level B1 or later. Determining the revision level of your modem can be done by looking for a small white sticker on the underside of the enclosure. This sticker should read "C.S. REV. B1 ECO". Older versions of the DF224 have also shown over-speed problems which resulted in intermittent loss of characters. This problem was corrected in revision level B1.

Please also note that the *DF224 Owner's Manual* states that the Scholar Modem is capable of transmitting data at 600 baud. The Scholar Modem at revision level B1 does *not* support 600 baud.

Notes on the DF112 Modem

The DF112-AA modem is a replacement for the DF03. It provides full-duplex asynchronous mode for terminal data communication and synchronous mode for network data communication. The DF112 has auto dial capability and operates at both 300 and 1200 baud.

When the DF112 is connected to a DZ11 interface, the BUSY jumper or switch on the EIA distribution panel must be disconnected for the line on which the modem is connected. Interfaces other than the DZ11 do not require any special setup for dial-in communications.

Using Autodial (Dial-out) Features

RSTS/E requires that a modem be active before allowing communication with it. RSTS/E detects activity by monitoring the presence of certain modem control signals. Supported modems will assert these signals if the host system asserts the Data Terminal Ready (DTR) signal. On RSTS/E, a program that wants to do this should execute the Hang Up a Dataset SYS call (F0=-9) on the keyboard to which the modem is connected prior to dialing. For example:

```
10  S$=SYS (CHR$ (6%) +CHR$ (-9%) +CHR$ (45%) +CHR$ (-1%))
      !Set DTR on KB45:
20  OPEN 'KB45:' AS FILE #1%      !Open the keyboard
```

NOTE

It is important that the SYS call to set DTR be called prior to opening the terminal. This call causes necessary parameters in the keyboard DDB to be reset.

Once DTR is established, the phone number can be passed to the modem and communication can begin. Please refer to the owner's manual that accompanied your modem for any programming considerations.

RSTS/E follows strict modem control rules on the DH11 interface with the DM11-BB option, and on DHV11/DHU11-type interfaces. In particular, RSTS/E will not allow data to be sent to a modem controlled keyboard unless the "Clear To Send" (CTS) signal has been asserted by the terminal device. Many modems do not normally assert this signal until a call has been *received*, and may therefore require special setup or a nonstandard RS232 cable to work as a dial-out modem on RSTS/E.

- *DF03 Modem*

To allow the data to be sent to the DF03, the CTS signal must be tied high in the DF03 modem. This can be done by turning S2-10 (jumper W30) on, as described on page 5-15 of the *DF03 Modem Family User Guide* (EK-ODF03-UG-002), or page 6-6 of the *DF03 Modem User Guide* (EK-ODF03-UG-001).

- *DF112 Modem*

Unlike the DF03 modem, the DF112 does not have a switch pack setting to assert the CTS signal. Therefore, the signal must be set high by connecting pin 5 to pin 4 within the cable connector which plugs into the modem.

NOTE

RSTS/E does *not* support auto dial capability on the DH11 interface for the DF112 modem. Unlike the DHV11/DHU11 type interface, attempting to set the CTS signal high by tying to an existing signal will cause that signal to go low. The DF112 *can* be used on DH11 interfaces for dial-in purposes only.

- *DF224 Scholar Modem*

The DF224 Scholar Modem automatically raises CTS when the DTR signal is raised by the host. Therefore, other than disabling the Input Character Echo option and the abbreviated modem response option described above, no other changes are required.

Unexpected Abort From Captive Command File Will Not Hang Up Dialup Line

RSTS/E V10.0

Executive

Terminal Service Notes

To terminate a connection on a dialup line, the Terminal Driver deasserts the DTR (Data Terminal Ready) modem control signal, which causes the modem to disconnect from the telephone line. This is normally handled by the LOGOUT system utility. However, if you access the system from a captive account over a dialup line and the command procedure you are running aborts abnormally (without using LOGOUT), DTR will not be deasserted and thus the connection will not be terminated.

A workaround to this is to trap all possible errors within the command procedure and exit by using the LOGOUT command.

Attaching to a Detached Job May Crash System - Mandatory Patch

RSTS/E V10.0

Executive

File Processor Patches

Problem

An attempt to attach to a detached job that originated from a LAT connection may crash the system.

Solution

The following patch procedure corrects the problem.

Procedure

1. This is a required patch to the RSTS/E Version 10.0 executive. It must be installed in all target monitor save image libraries (SILs).
2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? <CR>          (RETURN for installed monitor SIL)
```

3. This patch can be installed using ONLPAT, the online patching program. Note, however, if the patch is applied on line to the installed monitor SIL, it will take effect immediately unless you installed the overlay file. If you installed the overlay file, then you must remove and reinstall the file for the patch to take effect. (See step 5.)

```
RUN $ONLPAT
Command File Name? <CR>      (RETURN for patch installation)
File to patch? <CR>         (RETURN for installed monitor SIL)
File found in account [0,1]
```

4. The patch is as follows:

```
Module name? OVR
Base address? LOG3
Offset address? 410
  Base   Offset  Old      New?
??????? 000410  016146  ? 10546
??????? 000412  000006  ? 5005
??????? 000414  014302  ? ^Z   (CTRL/Z for new offset)
Offset address? 426
  Base   Offset  Old      New?
??????? 000426  012661  ? 12605
??????? 000430  000006  ? 240
??????? 000432  016502  ? ^Z   (CTRL/Z for new offset)
Offset address? 750
  Base   Offset  Old      New?
??????? 000750  105261  ? 4767
??????? 000752  000006  ? 760-754
??????? 000754  077014  ? ^Z   (CTRL/Z for new offset)
```

Seq. No. 3.7.1 M

```
Offset address? 760
  Base  Offset  Old      New?
?????? 000760 000000  ? 5705
?????? 000762 000000  ? BEQ+2
?????? 000764 000000  ? 105261
?????? 000766 000000  ? 6
?????? 000770 000000  ? 207
?????? 000772 ??????  ? ^Z      (CTRL/Z for new offset)
Offset address? ^Z      (CTRL/Z for new base)
Base address? LOG3SI
Offset address? 0
  Base  Offset  Old      New?
?????? 000000 000760  ? 772
?????? 000002 ??????  ? ^Z      (CTRL/Z for new offset)
Offset address? ^Z      (CTRL/Z for new base)
Base address? ^Z      (CTRL/Z for new module)
Module name? RSTS
Base address? $$0307
Offset address? 0
  Base  Offset  Old      New?
?????? 000000 ??????  ? Q!1
?????? 000002 ??????  ? ^C      (up-arrow/C to exit;CTRL/C for INIT)
```

5. If you used the \$ INSTALL/OVERLAY command, then you must issue the following commands for the patch to take effect:

```
$ REMOVE/OVERLAY<CR>
$ INSTALL/OVERLAY filespec<CR>
```


Dynamic Region Creation Can Crash System — Mandatory Patch

*RSTS/E V10.0
Executive
File Processor Patches*

Problem

Use of the UU.RTS directive to create a dynamic region can cause a memory corruption that will, at some later time, cause the system to crash.

Solution

The following patching procedure corrects the problem. This problem will also be corrected in a future release.

Procedure

1. This is a required patch to the RSTS/E Version 10.0 executives. It must be installed in all target monitor save image libraries (SILs).
2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? <CR>          (RETURN for installed monitor SIL)
```

3. This patch can be installed using ONLPAT, the online patching program. Note, however, that if the patch is applied on line to the installed monitor SIL, it will take effect immediately (see step 5).

```
RUN $ONLPAT
Command File Name? <CR>      (RETURN for patch installation)
File to patch? <CR>          (RETURN for installed monitor SIL)
File found in account [0,1]
```

4. The patch is as follows:

```
Module name? OVR
Base address? RTS1
Offset address? 440
  Base   Offset  Old      New?
?????? 000440  016246  ? 42762
?????? 000442  000006  ? 174000
?????? 000444  042726  ? 6
?????? 000446  174000  ? 240
?????? 000450  001005  ? ^C   (up-arrow/C to exit;CTRL/C for INIT)
```

Seq. No. 3.7.2 M

```
File to patch?                               (same as step 2/3 above)
Module name? OVR
Base address? RTS6
Offset address? 156
  Base   Offset  Old      New?
?????? 000156 005767 ? 5737
?????? 000160 ?????? ? TYPCRE
?????? 000162 001431 ? ^Z      (CTRL/Z for new offset)
Offset address? 200
  Base   Offset  Old      New?
?????? 000200 003422 ? 4767
?????? 000202 110562 ? 524
?????? 000204 000006 ? 240
?????? 000206 032762 ? ^Z      (CTRL/Z for new offset)
Offset address? 730
  Base   Offset  Old      New?
?????? 000730 000000 ? BLE+3
?????? 000732 000000 ? 10562
?????? 000734 000000 ? 6
?????? 000736 000000 ? 207
?????? 000740 000000 ? 5126
?????? 000742 000000 ? 207
?????? 000744 000000 ? ^Z      (CTRL/Z for new offset)
Offset address? ^Z                          (CTRL/Z for new base)
Base address? RTS6SI
Offset address? 0
  Base   Offset  Old      New?
?????? 000000 000730 ? 744
?????? 000002 ?????? ? ^Z      (CTRL/Z for new offset)
Offset address? ^Z                          (CTRL/Z for new base)
Base address? ^Z                            (CTRL/Z for new module)
Module name? RSTS
Base address? $$0307
Offset address? 0
  Base   Offset  Old      New?
?????? 000000 ?????? ? Q!2
?????? 000002 ?????? ? ^C      (up-arrow/C to exit;CTRL/C for INIT)
```

5. If you used the \$ INSTALL/OVERLAY command, then you must issue the following commands for the patch to take effect:

```
$ REMOVE/OVERLAY<CR>
$ INSTALL/OVERLAY filespec<CR>
```

Previous System Logical Assignment Not Replaced — Mandatory Patch

RSTS/E V10.0

Executive

File Processor Patches

Problem

The previous system logical assignment is not replaced when you have two disks with identical Pack IDs mounted and you attempt to reassign to the second disk a system logical which has been assigned to the disk that was mounted first.

Solution

The following patching procedure corrects this problem. However, this patch will introduce a slight incompatibility with current and previous releases of RSTS/E. Currently, when you use the ASSIGN/SYSTEM command to assign a system logical of 9 characters or less to a mounted disk that does not have a name in the NAME field of a SHOW DISK list, the logical is placed in the disk logical list. Issuing a subsequent SHOW DISK will display the assigned logical in the NAME field for that device. If you dismount the disk, the logical will go away. With the installation of this patch, the logical is always placed in the system logical list. The logical will not appear in a SHOW DISK list and will not go away when the disk is dismounted. The logical can only be removed from the list by issuing the DEASSIGN/SYSTEM command. Note, however, that specifying a logical on the MOUNT command will continue to work as it always has and is removed when the disk is dismounted.

This problem will be corrected in a future release.

Procedure

1. This is a required patch to the RSTS/E Version 10.0 executive. It must be installed in all target monitor save image libraries (SILs).
2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
```

```
File to patch? <CR>
```

```
RETURN for installed monitor SIL
```

3. This patch can be installed using ONLPAT, the online patching program. Note, however, that this patch will take effect immediately (see step 5).

```
RUN $ONLPAT
```

```
Command File Name? <CR>
```

```
RETURN for patch installation
```

```
File to patch? <CR>
```

```
RETURN for installed monitor SIL
```

```
File found in account [0,1]
```

4. The patch is as follows:

```
Module name? OVR
Base address? SLN0
Offset address? 402
  Base   Offset  Old      New?
?????? 000402 001425 ? BR+25
?????? 000404 004537 ? ^Z   CTRL/Z for new offset
Offset address? ^Z   CTRL/Z for new base
Base address? ^Z    CTRL/Z for new module
Module name? RSTS
Base address? $$0307
Offset address? 0
  Base   Offset  Old      New?
?????? 000000 ??????? ? Q!4
?????? 000002 ??????? ? ^C   up-arrow/C to exit;CTRL/C for INIT
```

5. If you have used the \$ *INSTALL/OVERLAY* command or the \$ *LOAD/OVERLAY=xxx* command, then you must issue the following commands for the patch to take effect:

```
$ REMOVE/OVERLAY
$ INSTALL/OVERLAY filespec
$ UNLOAD/OVERLAY=xxxx
$ LOAD/OVERLAY=xxxx
```

Spawned Job May Fail to Execute — Mandatory Patch

RSTS/E V10.0

Executive

File Processor Patches

Problem

Jobs that are created by the "Create a Job" system call may not execute the requested program after they have been logged in. While this problem is dependent on the contents of memory in the job issuing the "Create a Job" sys-call, it is more likely to happen when the spawn is issued from an I & D space program.

Solution

The following patching procedure corrects this problem. It will be corrected in a future release.

Procedure

1. This is a required patch to the RSTS/E Version 10.0 executive. It must be installed in all target monitor save image libraries (SILs).
2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? <CR>          RETURN for installed monitor SIL
```

3. This patch can be installed using ONLPAT, the online patching program. Note, however, that this patch will take effect immediately (see step 5).

```
RUN $ONLPAT
Command File Name? <CR>      RETURN for patch installation
File to patch? <CR>          RETURN for installed monitor SIL
File found in account [0,1]
```

4. The patch is as follows:

```
Module name? OVR
Base address? SLI2
Offset address? 174
  Base   Offset  Old      New?
?????? 000174 116364 ? 12700
?????? 000176 000006 ? 2
?????? 000200 000006 ? 110064
?????? 000202 116300 ? 6
?????? 000204 000006 ? 240
?????? 000206 016364 ? ^Z   CTRL/Z for new offset
Offset address? ^Z          CTRL/Z for new base
Base address? ^Z            CTRL/Z for new module
Module name? RSTS
Base address? $$0307
Offset address? 0
  Base   Offset  Old      New?
?????? 000000 ??????? ? Q!10
?????? 000002 ??????? ? ^C   up-arrow/C to exit;CTRL/C for INIT
```

5. If you have used the `$ INSTALL/OVERLAY` command, then you must issue the following commands for the patch to take effect:

```
$ REMOVE/OVERLAY  
$ INSTALL/OVERLAY filespec
```

Characters May Not Echo When Setting Host to VMS System — Mandatory Patch

RSTS/E V10.0

Executive

File Processor Patches

Problem

After making a network connection to a VMS system, character echoing sometimes stops, especially when entering the EDT editor. Echoing only occurs after two delimiters are entered.

NOTE

Setting host to a VMS system requires the use of DECNET\$:NETUNS.TSK, an unsupported RSTS/E utility.

Solution

The following patching procedure corrects this problem. It will be corrected in a future release.

Procedure

1. This is a required patch to the RSTS/E Version 10.0 executive. It must be installed in all target monitor save image libraries (SILs).

2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? <CR>          RETURN for installed monitor SIL
```

3. This patch can be installed using ONLPAT, the online patching program. Note, however, that this patch will take effect immediately (see step 5).

```
RUN $ONLPAT
Command File Name? <CR>     RETURN for patch installation
File to patch? <CR>        RETURN for installed monitor SIL
File found in account [0,1]
```

4. The patch is as follows:

```
Module name? OVR
Base address? UU00          Letters UU0, Digit 0
Offset address? 466
  Base  Offset  Old      New?
?????? 000466 000207 ? 472
?????? 000470 104456 ? ^Z   CTRL/Z for new offset
Offset address? 654
  Base  Offset  Old      New?
?????? 000654 000000 ? 122761
?????? 000656 000000 ? 2
?????? 000660 000000 ? -34
?????? 000662 000000 ? BNE+11
?????? 000664 000000 ? 62701
?????? 000666 000000 ? 20
?????? 000670 000000 ? 24141
?????? 000672 000000 ? BEQ+5
```

```

?????? 000674 000000 ? 162704
?????? 000676 000000 ? 12
?????? 000700 000000 ? 12124
?????? 000702 000000 ? 12124
?????? 000704 000000 ? 12124
?????? 000706 000000 ? 207
?????? 000710 ?????? ? ^Z      CTRL/Z for new offset
Offset address? ^Z              CTRL/Z for new base
Base address? UU00SI           Letters UUO, Digit 0, Letters SI
Offset address? 0
  Base   Offset Old      New?
?????? 000000 000654 ? 710
?????? 000002 ?????? ? ^Z      CTRL/Z for new offset
Offset address? ^Z            CTRL/Z for new base
Base address? ^Z              CTRL/Z for new module
Module name? RSTS
Base address? $$0307
Offset address? 0
  Base   Offset Old      New?
?????? 000000 ?????? ? Q!20
?????? 000002 ?????? ? ^C      up-arrow/C to exit;CTRL/C for INIT

```

5. If you used the *\$ INSTALL/OVERLAY* command or the *\$ LOAD/OVERLAY=SYSTEM_CALLS* command, then you must issue the following commands for the patch to take effect:

```

$ REMOVE/OVERLAY
$ INSTALL/OVERLAY <filespec>
$ UNLOAD/OVERLAY=SYSTEM_CALLS
$ LOAD/OVERLAY=SYSTEM_CALLS

```


System Hangs After Setting Terminal Width — Mandatory Patch

RSTS/E V10.0

Executive

File Processor Patches

Problem

Under certain circumstances, the system may hang after setting the width of a terminal to a smaller value than its current width. This may happen if the width is changed on a terminal that is currently in a KB read state. The system hang could occur after a broadcast to that terminal or if a command recall key is pressed on that terminal.

Solution

The following patching procedure corrects this problem. It will be corrected in a future release.

Procedure

1. This is a required patch to the RSTS/E Version 10.0 executive. It must be installed in all target monitor save image libraries (SILs).

2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? <CR>          RETURN for installed monitor SIL
```

3. This patch can be installed using ONLPAT, the online patching program. Note, however, that this patch will take effect immediately (see step 5).

```
RUN $ONLPAT
Command File Name? <CR>     RETURN for patch installation
File to patch? <CR>        RETURN for installed monitor SIL
File found in account [0,1]
```

4. The patch is as follows:

```
Module name? OVR
Base address? TRM2
Offset address? 122
  Base   Offset  Old      New?
?????? 000122 116100 ? 5000
?????? 000124 000021 ? 156100
?????? 000126 042700 ? 21
```

```

?????? 000130 177400 ? 160300
?????? 000132 160300 ? 12737
?????? 000134 012737 ? PR5
?????? 000136 034240 ? PS
?????? 000140 177776 ? 110361
?????? 000142 110361 ? 21
?????? 000144 000021 ? 5003
?????? 000146 116103 ? 156103
?????? 000150 000020 ? 20
?????? 000152 042703 ? 160003
?????? 000154 177400 ? 100001
?????? 000156 160003 ? 5003
?????? 000160 100001 ? 110361
?????? 000162 005003 ? 20
?????? 000164 110361 ? 4767
?????? 000166 000020 ? 756-170
?????? 000170 012737 ? ^Z      CTRL/Z for new offset
Offset address? 756
  Base  Offset  Old      New?
?????? 000756 000000 ? 105761
?????? 000760 000000 ? 106
?????? 000762 000000 ? 1405
?????? 000764 000000 ? 160061
?????? 000766 000000 ? 106
?????? 000770 000000 ? 100002
?????? 000772 000000 ? 5061
?????? 000774 000000 ? 106
?????? 000776 000000 ? 207
?????? 001000 ?????? ? ^Z      CTRL/Z for new offset
Offset address? ^Z      CTRL/Z for new base
Base address? TRM2SI
Offset address? 0
?????? 000000 000756 ? 1000
?????? 000002 ?????? ? ^Z      CTRL/Z for new offset
Offset address? ^Z      CTRL/Z for new base
Base address? ^Z      CTRL/Z for new module
Module name? RSTS
Base address? $$0307
Offset address? 0
  Base  Offset  Old      New?
?????? 000000 ?????? ? Q!40
?????? 000002 ?????? ? ^C      up-arrow/C to exit;CTRL/C for INIT

```

5. If you used the \$ *INSTALL/OVERLAY* command, then you must issue the following commands for the patch to take effect:

```

$ REMOVE/OVERLAY
$ INSTALL/OVERLAY <filespec>

```

Additionally, if you issued the \$ *LOAD/OVERLAY=TERMINAL* command, then you must issue the following commands for the patch to take effect:

```

$ UNLOAD/OVERLAY=TERMINAL
$ LOAD/OVERLAY=TERMINAL

```

Job's Private Memory Maximum is Incorrect for Spawned Logged-in Jobs - Mandatory Patch

RSTS/E V10.0
Monitor
File Processor Corrections

Problem

The job's private memory maximum value for a spawned logged-in job is incorrect if the calling job does not have TUNE privilege. The value is 2K larger than it should be. This is only a display problem which is visible when issuing the DCL SHOW USER command. It will not adversely affect system or job performance.

Solution

The patching procedure detailed below corrects the above problem. This problem will be corrected in some future release.

Procedure

1. This is a required patch to the RSTS/E V10.0 executive. It must be installed in all target monitor SILs.
2. The patch described in Step 4 below can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? <CR>                RETURN for installed monitor SIL
```

3. This patch can be installed using ONLPAT, the on-line patching program. Note, however, that this patch will take effect immediately (see step 5 below).

```
RUN $ONLPAT
Command File Name? <CR>            RETURN for patch installation
File to patch? <CR>                RETURN for installed monitor SIL
File found in account [0,1]
```

4. The patch is as follows:

```
Module name? OVR
Base address? SLI1
Offset address? 326
  Base   Offset  Old    New?
?????? 000326 111460 ? 4767
?????? 000330 000020 ? 734-332
?????? 000332 142760 ? ^Z    CTRL/Z for new offset
Offset address? 734
  Base   Offset  Old    New?
?????? 000734 000000 ? 111460
?????? 000736 000000 ? 20
?????? 000740 000000 ? 12705
?????? 000742 000000 ? 1
?????? 000744 000000 ? 207
?????? 000746 ?????? ? ^Z    CTRL/Z for new offset
Offset address? ^Z                CTRL/Z for new base
Base address? SLI1SI
```



```

Offset address? 0
  Base   Offset  Old      New?
?????? 000000 000734  ? 746
?????? 000002 ??????? ? ^Z   CTRL/Z for new offset
Offset address? ^Z   CTRL/Z for new base
Base address? ^Z     CTRL/Z for new module
Module name? RSTS
Base address? $$0307
Offset address? 0
  Base   Offset  Old      New?
?????? 000000 ??????? ? Q!100
?????? 000002 ??????? ? ^C   up-arrow/C to exit;CTRL/C for INIT

```

One of the following two steps will probably be necessary.
Pick the appropriate one:

5. For the patch to take effect, use the following commands to set the new monitor name and reboot the system:

```

$ SET SYSTEM/MONITOR=name
$ RUN $SHUTUP

```

6. If you have used the \$ INSTALL/OVERLAY command, then you must issue the following commands for the patch to take effect:

```

$ REMOVE/OVERLAY
$ INSTALL/OVERLAY filespec

```


POSSIBLE MEMORY CORRUPTION - MANDATORY PATCH

RSTS/E V10.0
Monitor
File Processor Corrections

Problem

When the "Create a Job" system call is used to log a job into a Keyboard Monitor that is less than 3 K-words in size, a timing condition exists that may cause memory to become corrupted. This can result in program failures such as traps to 4 or memory management violations.

Solution

The patching procedure detailed below corrects the above problem. This problem will be corrected in some future release.

Procedure

1. This is a required patch to the RSTS/E V10.0 executive. It must be installed in all target monitor SILs.
2. The patch described in Step 4 below can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? <CR>          RETURN for installed monitor SIL
```

3. This patch can be installed using ONLPAT, the on-line patching program. Note, however, that this patch will take effect immediately (see step 5 below).

```
RUN $ONLPAT
Command File Name? <CR>     RETURN for patch installation
File to patch? <CR>         RETURN for installed monitor SIL
File found in account [0,1]
```

4. The patch is as follows:

```
Module name? OVR
Base address? LOG9
Offset address? 536
  Base   Offset  Old      New?
  ?????? 000536  113700  ? 4767
  ?????? 000540  ??????  ? 212
  ?????? 000542  004537  ? ^Z   CTRL/Z for new offset
Offset address? 754
  Base   Offset  Old      New?
  ?????? 000754  000000  ? 62760
  ?????? 000756  000000  ? 2
  ?????? 000760  000000  ? 60
  ?????? 000762  000000  ? 113700
  ?????? 000764  000000  ? FIJOB
  ?????? 000766  000000  ? 207
  ?????? 000770  ??????  ? ^Z   CTRL/Z for new offset
Offset address? ^Z          CTRL/Z for new base
Base address? LOG9SI
```



```

Offset address? 0
  Base  Offset  Old      New?
?????? 000000 000754  ? 770
?????? 000002 ?????? ? ^Z   CTRL/Z for new offset
Offset address? ^Z   CTRL/Z for new base
Base address? ^Z     CTRL/Z for new module
Module name? RSTS
Base address? $$0307
Offset address? 0
  Base  Offset  Old      New?
?????? 000000 ?????? ? Q!200
?????? 000002 ?????? ? ^C   up-arrow/C to exit;CTRL/C for INIT

```

5. If you have used the \$ INSTALL/OVERLAY command, then you must issue the following commands for the patch to take effect:

```

$ REMOVE/OVERLAY
$ INSTALL/OVERLAY filespec

```



File Utility Directive May Truncate File — Mandatory Patch

RSTS/E V10.0

Executive

File Processor Patches

Problem

When the File Utility sys-call (UU.FUT directive) is used to set the date of last access of a file, the file's size may be truncated.

The PIP program uses the UU.FUT directive to set the date of last access when the /RETAIN qualifier is used. This sometimes causes PIP to truncate the new file.

Solution

The following patching procedure corrects this problem. It will be corrected in a future release.

Procedure

1. This is a required patch to the RSTS/E Version 10.0 executives. It must be installed in all target monitor save image libraries (SILs).

2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? <CR>          RETURN for installed monitor SIL
```

3. This patch can be installed using ONLPAT, the online patching program. Note, however, that this patch will take effect immediately (see step 5).

```
RUN $ONLPAT
Command File Name? <CR>      RETURN for patch installation
File to patch? <CR>          RETURN for installed monitor SIL
File found in account [0,1]
```

4. The patch is as follows:

```
Module name? OVR
Base address? FUT1
Offset address? 74
  Base  Offset  Old    New?
?????? 000074 012546 ? 167
?????? 000076 006202 ? 642-100
?????? 000100 131603 ? ^Z   CTRL/Z for new offset
Offset address? 146
  Base  Offset  Old    New?
?????? 000146 010315 ? 4767
?????? 000150 105216 ? 654-152
?????? 000152 012403 ? ^Z   CTRL/Z for new offset
Offset address? 634
```


Base	Offset	Old	New?	
??????	000634	005726	? <CR>	no change; verify only
??????	000636	000207	? 5726	
??????	000640	000000	? 207	
??????	000642	000000	? 10146	
??????	000644	000000	? 12546	
??????	000646	000000	? 6202	
??????	000650	000000	? 167	
??????	000652	000000	? 100-654	
??????	000654	000000	? 10315	
??????	000656	000000	? 105266	
??????	000660	000000	? 2	
??????	000662	000000	? 16603	
??????	000664	000000	? 12	
??????	000666	000000	? 1412	
??????	000670	000000	? 16365	
??????	000672	000000	? 30	
??????	000674	000000	? 2	
??????	000676	000000	? 116303	
??????	000700	000000	? 27	
??????	000702	000000	? 1404	
??????	000704	000000	? 5065	
??????	000706	000000	? 10	
??????	000710	000000	? 110365	
??????	000712	000000	? 12	
??????	000714	000000	? 207	
??????	000716	??????	? ^Z	CTRL/Z for new offset
Offset address? ^Z				CTRL/Z for new base
Base address? FUT1SI				
Offset address? 0				
Base	Offset	Old	New?	
??????	000000	000640	? 716	
??????	000002	??????	? ^Z	CTRL/Z for new offset
Offset address? ^Z				CTRL/Z for new base
Base address? ^Z				CTRL/Z for new module
Module name? RSTS				
Base address? \$\$0307				
Offset address? 0				
Base	Offset	Old	New?	
??????	000000	??????	? Q!400	
??????	000002	??????	? ^C	up-arrow/C to exit;CTRL/C for INIT

5. If you used the \$ *INSTALL/OVERLAY* command, then you must issue the following commands for the patch to take effect:

```
$ REMOVE/OVERLAY
$ INSTALL/OVERLAY filespec
```

Additionally, if you used the \$ *LOAD/OVERLAY* command, then you must issue the following commands for the patch to take effect:

```
$ UNLOAD/OVERLAY=FILE UTILITY
$ LOAD/OVERLAY=FILE_UTILITY
```



Some TMSCP Operations May Retry Forever — Mandatory Patch

RSTS/E V10.0

Executive

Device Driver Corrections

Problem

During some sequences of operations on TMSCP tape drives (TK50 or TU81), or MSCP disk drives (DU type disks), it is possible that the driver retries the operation forever. It appears that the job hangs in an MU, DU, or MTA wait state, and the job cannot be killed.

Solution

The following patching procedure corrects this problem. It will be corrected in a future release.

Procedure

1. This is a required patch to the RSTS/E Version 10.0 executive. It must be installed in all target monitor save image libraries (SILs).

2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? <CR>          RETURN for installed monitor SIL
```

3. This patch can be installed using ONLPAT, the online patching program. Note, however, that if the patch is applied on line to the installed monitor SIL, it will not take effect until the system is rebooted.

```
RUN $ONLPAT
Command File Name? <CR>      RETURN for patch installation
File to patch? <CR>          RETURN for installed monitor SIL
File found in account [0,1]
```

4. The patch is as follows:

```
Module name? MCP
Base address? CPH@OVR
Offset address? 3632
  Base   Offset  Old      New?
?????? 003632 005065 ? 12765
?????? 003634 000000 ? 3
?????? 003636 005065 ? 12
?????? 003640 000020 ? 240
?????? 003642 005065 ? <CR>  no change; verify only
?????? 003644 000006 ? <CR>  no change; verify only
?????? 003646 012765 ? 5015
?????? 003650 000003 ? 5065
?????? 003652 000012 ? 20
?????? 003654 012765 ? ^Z    CTRL/Z for new offset
Offset address? 3732
```



```

Base   Offset  Old   New?
?????? 003732 004767 ? <CR>  no change; verify only
?????? 003734 177674 ? 177704
?????? 003736 013746 ? ^Z    CTRL/Z for new offset
Offset address? ^Z          CTRL/Z for new base
Base address? UQPOR@OVR
Offset address? 776
Base   Offset  Old   New?
?????? 000776 132764 ? 4737
?????? 001000 000100 ? MCPPAT@OVR
?????? 001002 ?????? ? 240
?????? 001004 001020 ? 1005
?????? 001006 062702 ? ^Z    CTRL/Z for new offset
Offset address? ^Z          CTRL/Z for new base
Base address? MCPPAT@OVR
Offset address? 0
Base   Offset  Old   New?
120000 000000 000000 ? 132764
120000 000002 000000 ? 100
120000 000004 000000 ? CMT@OVR+17
120000 000006 000000 ? 1405
120000 000010 000000 ? 12700
120000 000012 000000 ? 3
120000 000014 000000 ? 132764
120000 000016 000000 ? 100
120000 000020 000000 ? CMT@OVR+17
120000 000022 000000 ? 207
120000 000024 ?????? ? ^Z    CTRL/Z for new offset
Offset address? ^Z          CTRL/Z for new base
Base address? ^Z          CTRL/Z for new module
Module name? RSTS
Base address? $$0310
Offset address? 0
Base   Offset  Old   New?
?????? 000000 ?????? ? Q!1
?????? 000002 ?????? ? ^C    up-arrow/C to exit;CTRL/C for INIT

```


DB/DR Driver May Log Errors for Wrong Unit — DRSEEK/DBSEEK Restriction

RSTS/E V10.0

Executive

Device Driver Restrictions

The DB and DR overlapped seek disk drivers (DBSEEK and DRSEEK) may count or log errors for the wrong disk unit if there is heavy DB/DR disk activity and an attempt is made to mount a unit that is spun down or is off line.

Swapping MSCP/TMSCP Unit Numbers May Cause Crash — MSCP/TMSCP Device Driver Restriction

RSTS/E V10.0

Executive

Device Driver Restrictions

On systems having multiple UDA50-A MSCP controllers, a system crash may result if disk unit numbers are swapped between two drives on different UDA50-A controllers during timesharing.

The preferred workaround is to only swap drive numbers between controllers when timesharing is not running. The best method is to shut the system down and swap the unit numbers when the Start timesharing prompt appears. After swapping the unit numbers, reboot the system disk and restart timesharing.

Special PRINT-USING Characters — BASIC-PLUS Feature Patch

RSTS/E V10.0

BASIC-PLUS

BASIC-PLUS Patches

The PRINT-USING option of BASIC-PLUS provides for floating dollar sign, comma insertion every three digits to the left of the decimal point, and printing of the decimal point. The \$ sign is used for the currency symbol in the United States and Canada, but various other symbols are used for other monetary systems. In the United Kingdom it would be useful to float the Pound Sterling symbol (or whatever ASCII character is used to represent that symbol) instead of the \$ sign. In France, a floating Franc symbol (or F) would be generally more useful than the floating \$ sign. The role of the comma and period are also reversed in France (for example, 9,999,999.02 should be printed as 9.999.999,02).

To accommodate these differences in monetary systems, PRINT-USING is coded to allow substitution of any character for the floating currency symbol, the decimal point character, and the every-three-digits character. These three characters are defined by three words in the BASIC-PLUS Run-Time system. System defaults and several suggestions are shown in the following table:

Location	Usage	Default	England	France
..PUCH+0	Floating currency symbol	\$ (044)	& (046)	F (106)
..PUCH+2	Decimal point character	. (056)	. (056)	, (054)
..PUCH+4	Every three digits character	, (054)	, (054)	. (056)

Substitution of different characters, such as those listed under England and France, is done with a simple patch. Any change will affect both the PRINT-USING format string and the output produced. For example, if the suggestions under France were installed, the following PRINT-USING statement would result in the output shown:

```
PRINT USING "FF#.#####,"", 3673298.02, 4545.20
F3.673.298,02
F4.545,20
```

Since any change in this area does render the PRINT-USING documentation slightly incorrect, an appropriate note should be published for users of the system.

Procedure

1. This is a feature patch to the BASIC-PLUS Run-Time system. It may be installed in any BASIC-PLUS Run-Time system configured with Print-Using.
2. Determine the three special characters you want to use for the floating currency symbol, the decimal point character, and the every-three-digits character. The chosen characters can be entered as either:
 - 'x where x is the chosen printable character
 - n where n is the octal value of the chosen character
 - n. where n is the decimal value of the chosen character
3. The patch described in Step 5 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? BASIC.RTS          (BASIC-PLUS run-time system name)
```

4. This patch can be installed manually using ONLPAT, the online patching program:

```
RUN $ONLPAT
Command File Name? <CR>          (RETURN for manual installation)
File to patch? [0,1]BASIC.RTS    (BASIC-PLUS run-time system name)
File found in account [0,1]
```

This feature patch is contained in the file PA0401.001 as part of the UPDATE package. To transfer this file to the UPDATE\$ account, select the package name UPDATE during the system installation or update procedure. ¹

5. The patch is as follows:

```
Base address? ..PUCH
Offset address? 0
Base   Offset  Old      New?
?????? 000000 000044 ? 'f   (currency sign from Step 2)
?????? 000002 000056 ? ',   (decimal point from Step 2)
?????? 000004 000054 ? '.'  ("every three" from Step 2)
?????? 000006 ?????? ? ^C   (up-arrow/C to exit;CTRL/C for INIT)
```

6. If the above patch was installed using ONLPAT, it will take effect the next time the Run-Time system is reloaded. If the Run-Time system has been INSTALLED, execute the following commands:

```
$ UNLOAD/RUNTIME_SYSTEM BASIC          (BASIC-PLUS run-time system name) 2
```

¹ The patch file for this patch requires manual editing to include installation specific parameters before it can be successfully installed.

² The UNLOAD command will not remove the run-time system, but simply instructs the monitor to reload it the next time a job requests it.

Default Scale Factor — BASIC-PLUS Feature Patch

RSTS/E V10.0
BASIC-PLUS
BASIC-PLUS Patches

The BASIC-PLUS default SCALE factor may be modified by utilizing the procedure in this article. A complete description of SCALE factors is included in the *BASIC-PLUS Language Manual*.

Procedure

1. This is a feature patch to the BASIC-PLUS Run-Time system. It may be installed in any BASIC-PLUS Run-Time system configured with the 4-word, scaled math package.
2. Determine the new BASIC-PLUS default SCALE factor. This default SCALE factor must be between 0 and 6 inclusive.
3. The patch described in Step 5 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? BASIC.RTS          (BASIC-PLUS run-time system name)
```

4. This patch can be installed manually using ONLPAT, the on-line patching program:

```
RUN $ONLPAT
Command File Name? <CR>          (RETURN for manual installation)
File to patch? [0,1]BASIC.RTS    (BASIC-PLUS run-time system name)
File found in account [0,1]
```

This feature patch is contained in the file PA0401.002 as part of the UPDATE package. To transfer this file to the UPDATE\$ account, select the package name UPDATE during the system installation or update procedure. ¹

5. The patch is as follows:

```
Base address? ..SCA.
Offset address? 0
Base   Offset   Old      New?
?????? 000000 000000 ? n      (from Step 2)
?????? 000002 ??????? ? ^C    (up-arrow/C to exit; CTRL/C for INIT)
```

6. If the above patch was installed using ONLPAT, it will take effect the next time the run-time system is reloaded. If the run-time system has been INSTALLED, execute the following commands:

```
$ UNLOAD/RUNTIME_SYSTEM BASIC          (BASIC-PLUS run-time system name) 2
```

¹ The patch file for this patch requires manual editing to include installation specific parameters before it can be successfully installed.

² The UNLOAD command will not remove the run-time system, but simply instructs the monitor to reload it the next time a job requests it.

Omitting Scale Factor Warning Message — BASIC-PLUS Feature Patch

RSTS/E V10.0
BASIC-PLUS
BASIC-PLUS Patches

Normally, if a BASIC-PLUS program is compiled with one SCALE factor and then is run under a different job SCALE factor, the %SCALE Factor Interlock warning message is printed and execution proceeds using the program's SCALE factor. It may be desirable to omit the printing of this message.

Procedure

1. This is a feature patch to the BASIC-PLUS run-time system. It may be installed in any BASIC-PLUS run-time system configured with the 4-word, scaled math package.
2. The patch described in Step 4 can be installed using the PATCH option of INT.SYS:

```
Option: PATCH
File to patch? BASIC.RTS          (BASIC-PLUS run-time system name)
```

3. This patch can be installed manually using ONLPAT, the on-line patching program:

```
RUN $ONLPAT
Command File Name? <CR>          (RETURN for manual installation)
File to patch? [0,1]BASIC.RTS    (BASIC-PLUS run-time system name)
File found in account [0,1]
```

This feature patch is contained in the file PA0401.003 as part of the UPDATE package. To transfer this file to the UPDATE\$ account, select the package name UPDATE during the system installation or update procedure.

4. The patch is as follows:

```
Base address? ..SCE.
Offset address? 0
  Base   Offset  Old      New?
?????? 000000 104577 ? 240  (for no warning message)
?????? 000002 000207 ? ^C  (up-arrow/C to exit; CTRL/C for INIT)
```

5. If the above patch was installed using ONLPAT, it will take effect the next time the run-time system is reloaded. If the run-time system has been INSTALLED, execute the following commands:

```
$ UNLOAD/RUNTIME_SYSTEM BASIC          (BASIC-PLUS run-time system name) 1
```

¹ The UNLOAD command will not remove the run-time system, but simply instructs the monitor to reload it the next time a job requests it.

Default to NOEXTEND Mode — BASIC-PLUS Feature Patch

RSTS/E V10.0
BASIC-PLUS
BASIC-PLUS Patches

Normally, BASIC-PLUS defaults to EXTEND mode. To change this default to NOEXTEND mode, apply the patch in this article.

Procedure

1. This is a feature patch to the BASIC-PLUS run-time system. It may be installed in any BASIC-PLUS run-time system.
2. The patch described in Step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? BASIC.RTS      (BASIC-PLUS run-time system name)
```

3. This patch can be installed manually using ONLPAT, the on-line patching program:

```
RUN $ONLPAT
Command File Name? <CR>      (RETURN for manual installation)
File to patch? [0,1]BASIC.RTS (BASIC-PLUS run-time system name)
File found in account [0,1]
```

This feature patch is contained in the file PA0401.004 as part of the UPDATE package. To transfer this file to the UPDATE\$ account, select the package name UPDATE during the system installation or update procedure.

4. The patch is as follows:

```
Base address? ..XTN.
Offset address? 0
Base   Offset  Old      New?
?????? 000000 020000 ? 0
?????? 000002 ??????? ? ^C (up-arrow/C to exit; CTRL/C for INIT)
```

5. If the above patch was installed using ONLPAT, it will take effect the next time the run-time system is reloaded. If the run-time system has been INSTALLED, execute the following commands:

```
$ UNLOAD/RUNTIME_SYSTEM BASIC      (BASIC-PLUS run-time system name) 1
```

¹ The UNLOAD command will not remove the run-time system, but simply instructs the monitor to reload it the next time a job requests it.

Immediate Mode from .BAS File — BASIC-PLUS Feature Patch

RSTS/E V10.0
BASIC-PLUS
BASIC-PLUS Patches

Normally, BASIC-PLUS does not allow immediate-mode commands to appear in the file accessed by the OLD command. This may be desirable in environments where this feature was used in previous versions of BASIC-PLUS. To allow BASIC-PLUS to accept immediate mode commands in files, apply the patch in this article.

Procedure

1. This is a feature patch to the BASIC-PLUS run-time system. It may be installed in any BASIC-PLUS run-time system.

2. The patch described in Step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? BASIC.RTS      (BASIC-PLUS run-time system name)
```

3. This patch can be installed manually using ONLPAT, the on-line patching program:

```
RUN $ONLPAT
Command File Name? <CR>      (RETURN for manual installation)
File to patch? [0,1]BASIC.RTS (BASIC-PLUS run-time system name)
File found in account [0,1]
```

This feature patch is contained in the file PA0401.005 as part of the UPDATE package. To transfer this file to the UPDATE\$ account, select the package name UPDATE during the system installation or update procedure.

4. The patch is as follows:

```
Base address? ..IBAS
Offset address? 0
  Base   Offset  Old      New?
?????? 000000 001401 ? 401
?????? 000002 104767 ? ^C   (up-arrow/C to exit; CTRL/C for INIT)
```

5. If the above patch was installed using ONLPAT, it will take effect the next time the run-time system is reloaded. If the run-time system has been INSTALLED, execute the following commands:

```
$ UNLOAD/RUNTIME_SYSTEM BASIC      (BASIC-PLUS run-time system name) 1
```

¹ The UNLOAD command will not remove the run-time system, but simply instructs the monitor to reload it the next time a job requests it.

Disabling the CCL SYS Call — BASIC-PLUS Feature Patch

RSTS/E V10.0
BASIC-PLUS
BASIC-PLUS Patches

Normally, BASIC-PLUS allows any user to execute any valid CCL command on the system with SYS call 14. However, some installations may choose to disable this feature to discourage users from writing programs that will simulate the features of a standard run-time system. The patch in this article prevents BASIC-PLUS from executing SYS call 14.¹ It will not prevent the use of SYS call 14 from other languages such as BASIC-PLUS-2 or MACRO-11.

Procedure

1. This is a feature patch to the BASIC-PLUS run-time system. It may be installed in any BASIC-PLUS run-time system.
2. The patch described in Step 4 can be installed using the PATCH option of init.sys:

```
Option: PATCH
File to patch? BASIC.RTS      (BASIC-PLUS run-time system name)
```

3. This patch can be installed manually using ONLPAT, the on-line patching program:

```
RUN $ONLPAT
Command File Name? <CR>      (RETURN for manual installation)
File to patch? [0,1]BASIC.RTS (BASIC-PLUS run-time system name)
File found in account [0,1]
```

This feature patch is contained in the file PA0401.006 as part of the UPDATE package. To transfer this file to the UPDATE\$ account, select the package name UPDATE during the system installation or update procedure.

4. The patch is as follows:

```
Base address? ..CCL.
Offset address? 0
Base   Offset   Old       New?
?????? 000000   ?????? ? UUOBAD
?????? 000002   ?????? ? ^C   (up-arrow/C to exit; CTRL/C for INIT)
```

5. If the above patch was installed using ONLPAT, it will take effect the next time the run-time system is reloaded. If the run-time system has been INSTALLED, execute the following commands:

```
$ UNLOAD/RUNTIME_SYSTEM BASIC      (BASIC-PLUS run-time system name)2
```

¹ This patch will disable the execution of the system wide LOGIN.COM file when logging in, if the LOGIN program has been compiled with BASIC-PLUS (.BAC file type).

² The UNLOAD command will not remove the run-time system, but simply instructs the monitor to reload it the next time a job requests it.

DATE% Is Now a Reserved Keyword — Mandatory Patch

RSTS/E V10.0
 BASIC-PLUS
 BASIC-PLUS Patches

Problem

RSTS/E Version 10.0 BASIC-PLUS now reserves the keyword DATE%. Attempting to OLD a BASIC-PLUS program that contains the variable DATE% or the integer array DATE%() under RSTS/E Version 10.0 BASIC-PLUS will result in the error "?Arguments don't match". Already compiled BASIC-PLUS programs that use the keyword DATE% will continue to function as before.

Solution

Because this is an incompatibility with previous versions of BASIC-PLUS, applying the following patch will change the reserved keyword DATE% to D?TE%. Once this patch is applied, programs containing the variable DATE% or the integer array DATE%() can be OLDed without an error.

Procedure

1. This is a required patch to the BASIC-PLUS run-time system. It must be installed in all BASIC-PLUS run-time systems.
2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? BASIC.RTS          (BASIC-PLUS run-time system name)
```

3. This patch can be installed using ONLPAT, the online patching program:

```
RUN $ONLPAT
Command File Name? <CR>          (RETURN for manual patch installation)
File to patch? [0,1]BASIC.RTS    (BASIC-PLUS run-time system name)
File found in account [0,1]
```

4. The patch is as follows:

```
Base address? LA
Offset address? 634
  Base  Offset  Old    New?
?????? 000634 005101 ? 5077
?????? 000636 ??????? ? ^C (up-arrow/C to exit;CTRL/C for INIT)
```

Seq. No. 4.1.7 M

5. If the above patch was installed using ONLPAT, it will take effect the next time the run-time system is reloaded. If the run-time system has been INSTALLED, execute the following command:

```
$ UNLOAD/RUNTIME_SYSTEM BASIC<CR>      (BASIC-PLUS run-time system name)
```

NOTE

The UNLOAD command will not remove the run-time system, but it will instruct the monitor to reload it the next time a job requests it.

RAD% Is Now a Reserved Keyword - BASIC-PLUS Feature Patch

*RSTS/E V10.0
BASIC-PLUS
BASIC-PLUS Patches*

Problem

RSTS/E Version 10.0 BASIC-PLUS now contains a new function RAD%. (See article 4.2.1 N for a description of the new function.) An attempt to OLD a BASIC-PLUS program that contains the variable RAD% or the integer array RAD%() under RSTS/E Version 10.0 BASIC-PLUS will result in the error "?Arguments don't match". Already compiled BASIC-PLUS programs that use the keyword RAD% will continue to function as before.

Solution

Because this is an incompatibility with previous versions of BASIC-PLUS, applying the following patch will change the reserved keyword RAD% to R?D%. Once this patch is applied, programs containing the variable RAD% or the integer array RAD%() can be OLDed without an error.

If you do not have programs that use the variable RAD% or the integer array RAD%(), then do not apply this feature patch.

Procedure

1. This is a feature patch to the BASIC-PLUS run-time system. It can be installed in any BASIC-PLUS run-time system.
2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? BASIC.RTS          (BASIC-PLUS run-time system name)
```

3. This patch can be installed using ONLPAT, the online patching program:

```
RUN $ONLPAT
Command File Name? <CR>          (RETURN for manual patch installation)
File to patch? [0,1]BASIC.RTS    (BASIC-PLUS run-time system name)
File found in account [0,1]
```

4. The patch is as follows:

```
Base address? LA
Offset address? 1742
  Base   Offset  Old      New?
?????? 001742  040504  ? 37504
?????? 001744  ??????  ? ^C    (up-arrow/C to exit;CTRL/C for INIT)
```

5. If the patch was installed using ONLPAT, it will take effect the next time the run-time system is reloaded. If the run-time system has been INSTALLED, execute the following command:

```
$ UNLOAD/RUNTIME BASIC<CR>          (BASIC-PLUS run-time system name)
```

NOTE

The UNLOAD command will not remove the run-time system but will instruct the monitor to reload it the next time a job requests it.

New BASIC-PLUS Function - RAD%

RSTS/E V10.0
BASIC-PLUS
BASIC-PLUS Notes

RSTS/E Version 10.0 BASIC-PLUS contains a new function, RAD%. This function provides the complement of the RAD\$ function, that is, it will convert a 3-character string of RAD-50 characters into its integer equivalence.

Because the *BASIC-PLUS Language Manual* was not updated for RSTS/E Version 10.0, this function is described in this article. Also, the online help for BASIC-PLUS functions does not describe this function.

A related article, 4.1.8 F, describes how to change the reserved keyword RAD% to R?D% to avoid compatibility problems with existing BASIC-PLUS programs, if necessary.

Format:

```
int-exp = RAD%(str-exp)
```

Syntax Rules:

1. RAD% only converts the first three characters of the specified string. The remainder of the string is ignored.
2. The first three characters of the string must be RAD-50 characters. If any of the three characters are not RAD-50 characters, then the error "%Illegal argument" will result. Note that lowercase letters will also generate the "%Illegal argument" error, as they are not considered to be RAD-50 characters. Appendix D of the *RSTS/E Programming Manual* describes the RAD-50 character set.
3. If the string is less than three characters in length, then the function will convert it as a 3-character string with trailing spaces.

Example:

```
PRINT RAD%("ABC")
1683
Ready
```


The BASIC-PLUS Debug Facility

RSTS/E V10.0

BASIC-PLUS

Optional BASIC-PLUS Features

A feature of BASIC-PLUS, the Debug facility, is now available as a supported feature in RSTS/E V10.0.

The Debug commands extend the present BASIC-PLUS immediate-mode debugging commands by allowing you to trace the flow of your program and to set breakpoints. These commands provide a subset of the functions provided by the BASIC-PLUS-2 debugging facility, and are only available as immediate-mode commands. They cannot be used within BASIC-PLUS programs. The commands are used in one of two ways:

- By issuing them between the OLD and RUN of a program and, thereafter, whenever a breakpoint is hit
- By including STOP statements within the program, and then issuing the Debug commands when the first STOP statement is encountered and, thereafter, whenever another STOP statement or breakpoint is hit

Any Debug commands are disabled when:

- A RUN *program-name* command is successfully executed
- A NEW, OLD, or EXIT command is executed
- Any valid CCL command is executed

TRACE/UNTRACE

The TRACE command causes BASIC-PLUS to print the message at line *nnn* (where *nnn* represents a line number) each time that a line number is encountered or the current line number changes.

The UNTRACE command disables any previous invocation of the TRACE command.

BREAK/UNBREAK

The BREAK command allows you to specify that execution should stop any time that a specified line number is encountered. Up to 10 such breakpoints can be set. The BREAK command is of the form:

```
BREAK [ N1, N2, N3 ..., N10 ]
```

where *Nn* represents a line number between 1 and 32767.

When a breakpoint is encountered, BASIC-PLUS prints the message Break at line *nnn* and returns to Ready as though a STOP statement had been executed. At this point you can examine or change the values of variables, execute the DUMP command, or execute any other legal command. Type CONT (continue) to resume execution.

If the **BREAK** command is issued without a line number argument, BASIC-PLUS will **BREAK** each time that a new line is encountered. The **UNBREAK** command is used to disable breakpoints, and is of the form:

```
UNBREAK [ N1, N2, N3, . . . , N10 ]
```

If no line numbers are specified, all breakpoints are disabled.

Understanding Line Numbers in the Debug Facility

This section discusses the actual implementation of the Debug facility in the BASIC-PLUS run-time system, and should help to explain certain anomalies that you may encounter.

The Debug code is entered whenever an internal construct called a statement header is encountered. Statement headers are generated for the following BASIC-PLUS elements:

- Line numbers
- DIMENSION statements
- DATA statements
- FOR statements
- NEXT statements
- DEF statements
- FNEND statements

When a statement header is encountered, BASIC-PLUS first checks to see if the **BREAK** or **TRACE** feature has been requested. If not, program execution continues.

If **BREAK** or **TRACE** has been requested, BASIC-PLUS now compares the current line number with the previously encountered line number. If they are the same, program execution continues.

If a different line number has been encountered, BASIC-PLUS then checks to see if the statement header represents a function definition (**DEF**) statement. If so, program execution continues.

Because of the internal structure of BASIC-PLUS, it is not possible to **BREAK** at a function definition. As you can see from the algorithm used, any attempt to **BREAK** at a function definition is rejected while the program is being executed, rather than when the **BREAK** command is specified.

If the **BREAK** feature has been requested, BASIC-PLUS compares the current line number with the list of breakpoints that have been requested. If the current line number is included in the breakpoint list, BASIC-PLUS prints Break at line nnn, and returns to keyboard monitor (Ready) state.

If the **TRACE** feature has been requested, BASIC-PLUS prints at line nnn and proceeds with execution of the program.

Enabling the Debug Facility

The Debug facility requires approximately 160 (decimal) additional words in the BASIC-PLUS run-time system. In most cases, this means that one or more of the other optional features (String Arithmetic, Print Using, etc.) must be omitted to prevent the BASIC-PLUS run-time system from exceeding 16K words in size.

To enable Debug, answer Y to the Debug ? question during installation or update of BASIC-PLUS.

Note that enabling Debug also enables the DUMP facility, described in Article 4.11.2 N.

The BASIC-PLUS Dump Facility

RSTS/E V10.0

BASIC-PLUS

Optional BASIC-PLUS Features

A feature of BASIC-PLUS, the Dump facility, is now available as a supported feature in RSTS/E V10.0.

The DUMP command provides an extension to the present BASIC-PLUS immediate mode debugging commands by allowing you to take a snap-shot dump of your current job. After dumping your program, you can use the BPDA (BASIC-PLUS Dump Analyzer) program to display the contents of all variables used by the program. In addition, you can continue executing your program after issuing the DUMP command; this allows you to inspect the state of the program at several stages of execution.

The DUMP command is only available as an immediate-mode command (that is, it cannot be used in a BASIC-PLUS program), and has the syntax:

```
DUMP file-specification
```

If no device name is specified, the public disk structure (SY:) is used. If no filename is specified, the current program name is used. If no file type is specified, .PMD is used.

The BASIC-PLUS Dump Analysis Program

After the DUMP command has been issued, you can use the BPDA program to print the contents of each variable that is used in the program, as well as the contents of the buffer of any open files.

The BPDA program asks for an input file name. The default file type is .PMD. There is no default for the file name. Wildcards are illegal.

When BPDA asks for the output file name, responding with <CR> will direct the output to your terminal. If no filename is specified, the input filename is used with the default file type .PDA.

You may also respond to the Input file? query with a command of the form:

```
outfile = infile
```

Security Notes

Access to the Dump facility should be carefully controlled, as it may be used by unscrupulous users to obtain confidential information, such as student grades or payroll information. The following two mechanisms help protect against this:

- Non-privileged users are normally prevented from using the DUMP command on programs that are running from compiled files. This capability may be removed if desired (see article Seq 4.11.3 F).

- Whether or not non-privileged users are allowed to use the DUMP command on programs that are executed from compiled files, they still may not use the DUMP command on a program that uses temporary privileges, since the BASIC-PLUS run-time system clears the program from memory before a non-privileged user returns to keyboard monitor state.

Some installations may find it desirable to generate two versions of the BASIC-PLUS run-time system, one which includes the Debug and Dump facilities, which would be used for development, and another which does not include either facility, which would be used for production. This would prevent the potential problems described above, while providing the Dump facility for development work.

Enabling the Dump Facility

The Dump facility is enabled automatically when the Debug facility is selected during an installation or update of BASIC-PLUS. See Article 4.11.1 N for a description of the Debug facility.

Enabling Dump from Compiled Files for Non-Privileged Users — BASIC-PLUS Feature Patch

RSTS/E V10.0

BASIC-PLUS

Optional BASIC-PLUS Features

Normally, if the Dump facility is enabled (see article Seq 4.11.2 N), BASIC-PLUS will not allow some users to dump programs that are executing from compiled files, even though they may dump programs that are executing from source files. This protection prevents users from dumping programs which may contain confidential information in their variable strings or file buffers. In order to use the DUMP command, the user must have WACNT, WWRITE, SYSIO and RDMEM privileges.

Some installations, however, may want to allow all users to dump all BASIC-PLUS programs to which they have RUN access, regardless of whether the program is compiled.

The following patching procedure will cause BASIC-PLUS to allow all users to dump programs that they are executing. (Note that a program whose protection code includes the 128. bit for temporary privileges is always cleared from a non-privileged user's job space before returning the keyboard monitor (Ready) state. Hence, a nonprivileged user can never dump such a program.)

Procedure

1. This is a feature patch to the BASIC-PLUS run-time system. It may be installed in any BASIC-PLUS run-time system.

2. The patch described in Step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? BASIC.RTS          (BASIC-PLUS run-time system name)
```

3. This patch can be installed manually using ONLPAT, the on-line patching program:

```
RUN $ONLPAT
Command File Name? <CR>          (RETURN for manual installation)
File to patch? [0,1]BASIC.RTS    (BASIC-PLUS run-time system name)
File found in account [0,1]
```

This feature patch is contained in the file PA0411.003 as part of the UPDATE package. To transfer this file to the UPDATE\$ account, select the package name UPDATE during the system installation or update procedure.

4. The patch is as follows:

```
Base address? ..NPD.
Offset address? 0
  Base   Offset  Old      New?
?????? 000000 004767 ? NOP
?????? 000002 ??????? ? NOP
?????? 000004 005046 ? ^C (up-arrow/C to exit; CTRL/C for INIT)
```

5. If the above patch was installed using ONLPAT, it will take effect the next time the run-time system is reloaded. If the run-time system has been INSTALLED, execute the following commands:

```
$ UNLOAD/RUNTIME_SYSTEM BASIC      (BASIC-PLUS run-time system name) 1
```

¹ The UNLOAD command will not remove the run-time system, but simply instructs the monitor to reload it the next time a job requests it.

RESTORE/VERIFY/NOREPLACE Can Enter Infinite Sleep State

RSTS/E V10.0
System File Restrictions
BACKUP.TSK

Problem

If /NOREPLACE and /VERIFY are both specified with either RESTORE or BACKUP/COPY, and there are many files that are "not replaced," then BACKUP can enter an infinite sleep state.

The reason this happens is that whenever a file is not replaced, it is added to a list kept in dynamic memory space, so that the verify operation will know not to do the verify on those files. With a large number of files not replaced, BACKUP eventually runs out of dynamic memory space and sleeps.

The workaround to this problem is to specify either /NOREPLACE or /VERIFY, but not both in any one operation if there are going to be a large number of files "not replaced."

This is a BACKUP restriction for Version 10.0.

BACKUP/IMAGE Fails to Maintain Pack Attributes

RSTS/E V10.0
System Files
System File Restrictions

Problem

There is a problem in BACKUP/IMAGE where, if the /OUT_LABEL and /INITIALIZE qualifiers are used, the program uses the default pack attributes for a BACKUP set rather than the input disk pack attributes. This problem is a restriction for RSTS/E Version 10.0.

You can avoid this problem by not specifying the /OUT_LABEL qualifier on the BACKUP/IMAGE command. However, this will result in the output disk having the same pack label as the input disk. If this is not desirable, you can preinitialize the disk by using the DSKINT Utility or the Digital Command Language (DCL) Initialize Command (INITIALIZE), assigning the pack attributes and label you want instead of using the /OUT_LABEL qualifier.

This restriction may be lifted in some future release of RSTS/E.



BACKUP Can Fail to Back Up Some File Data - Mandatory Patch

RSTS/E V10.0
System Files
BACKUP.TSK

Problem

Under certain conditions involving system loading, BACKUP can fail to back up some file data. Failure indications are:

- "?Some file data may be missing..."
- Errors during a BACKUP/DIRECTORY or RESTORE
- Verification errors during a verify pass

Solution

The following patching procedure corrects this problem. This problem will be corrected in a future release.

Procedure

1. This is a required patch to [0,1]BACKUP.TSK.
2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? BACKUP.TSK/N
```

3. This patch can be installed using ONLPAT, the online patching program:

```
RUN $ONLPAT
Command File Name? <CR>          (RETURN for patch installation)
File to patch? [0,1]BACKUP.TSK/N
File found in account [0,1]
```

4. The patch is as follows:

```
Base address? 74:10512
Offset address? 1340
  Base   Offset  Old      New?
010512  001340  012767  ? 137
010512  001342  001000  ? 41156
010512  001344  003700  ? 240
010512  001346  012746  ? ^Z   (CTRL/Z for new offset)
Offset address? 2506
  Base   Offset  Old      New?
010512  002506  004767  ? 13700
010512  002510  001660  ? 41204
010512  002512  012701  ? ^Z   (CTRL/Z for new offset)
Offset address? ^Z               (CTRL/Z for new base)
Base address? 3:0
Offset address? 41156
  Base   Offset  Old      New?
000000  041156  000000  ? 12701
```

Seq. No. 6.3.1 M

```
000000 041160 000000 ? 34
000000 041162 000000 ? 4737
000000 041164 000000 ? 105060
000000 041166 000000 ? 12737
000000 041170 000000 ? 1000
000000 041172 000000 ? 105734
000000 041174 000000 ? 10037
000000 041176 000000 ? 41204
000000 041200 000000 ? 137
000000 041202 000000 ? 102034
000000 041204 000000 ? -1
000000 041206 000000 ? ^C      (up-arrow/C to exit;CTRL/C for INIT)
```

BACKUP/INITIALIZE Can Exit with Error — Mandatory Patch

RSTS/E V10.0
System File Corrections
BACKUP.TSK

Problem

If the /INITIALIZE qualifier is specified with any of the BACKUP commands (BACKUP, RESTORE, BACKUP/COPY, BACKUP/IMAGE), and if the disk to be initialized has a large number of bad blocks, then BACKUP can exit with the following error after you respond with a "Y" to the prompt "Proceed (Y or N)?:

```
?Unexpected error 31 in BCKSUB at 62404
```

Solution

The following patching procedure corrects this problem. It will be corrected in a future release.

Procedure

1. This is a required patch to [0,1]BACKUP.TSK.
2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? BACKUP.TSK/N
```

3. This patch can be installed using ONLPAT, the online patching program:

```
RUN $ONLPAT
Command File Name? <CR>          (RETURN for patch installation)
File to patch? [0,1]BACKUP.TSK/N
File found in account [0,1]
```

4. The patch is as follows:

```
Base address? 45:5060
Offset address? 14014
  Base   Offset  Old      New?
005060  014014  063767  ? 4737
005060  014016  000444  ? 41206
005060  014020  005200  ? 240
005060  014022  000732  ? ^Z      (CTRL/Z for new offset)
Offset address? ^Z      (CTRL/Z for new base)
Base address? 3:0
Offset address? 41206
  Base   Offset  Old      New?
000000  041206  000000  ? 63737
000000  041210  000000  ? 444
000000  041212  000000  ? 67636
000000  041214  000000  ? 23727
000000  041216  000000  ? 67636
000000  041220  000000  ? 1000
000000  041222  000000  ? 2402
```

Seq. No. 6.3.2 M

```
000000 041224 000000 ? 4737
000000 041226 000000 ? 63034
000000 041230 000000 ? 207
000000 041232 ?????? ? ^C (up-arrow/C to exit;CTRL/C for INIT)
```


BACKUP/VERIFY=ONLY Rewinds Before Execution — Mandatory Patch

*RSTS/E V10.0
System File Corrections
BACKUP.TSK*

Problem

BACKUP/VERIFY=ONLY always rewinds the tape before executing the verify. That means that the /VERIFY=ONLY qualifier cannot be used to verify multiple backup sets on a tape without rewinding the tape between each verify operation.

Solution

The following patching procedure corrects this problem. It will be corrected in a future release.

Procedure

1. This is a required patch to [0,1]BACKUP.TSK.
2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? [0,1]BACKUP.TSK/N
```

3. This patch can be installed using ONLPAT, the online patching program.

```
$ RUN $ONLPAT
Command file name? <CR>          RETURN for patch installation
File to patch? [0,1]BACKUP.TSK/N
File found in account [0,1]
```

4. The patch is as follows:

```
Base address? 3:0
Offset address? 41232
  Base  Offset  Old      New?
000000 041232 000000  ? 32737
000000 041234 000000  ? 4000
000000 041236 000000  ? 3734
000000 041240 000000  ? 1003
000000 041242 000000  ? 52737
000000 041244 000000  ? 4
000000 041246 000000  ? 3732
000000 041250 000000  ? 207
000000 041252 ?????? ? ^Z   CTRL/Z for new offset
Offset address? ^Z           CTRL/Z for new base
Base address? 122:0
Offset address? 62
  Base  Offset  Old      New?
000000 000062 052767  ? 4737
000000 000064 000004  ? 41232
000000 000066 104746  ? 240
000000 000070 ?????? ? ^C   up-arrow/C to exit; CTRL/C for INIT
```


BACKUP/BUFFER_SIZE=OPTIMUM May Not Select the Optimum Buffer Size — Mandatory Patch

RSTS/E V10.0
System File Corrections
BACKUP.TSK

Problem

When running the backup utility (BACKUP), if you specify /BUFFER_SIZE=OPTIMUM, BACKUP will set a buffer size that ensures the most efficient use of memory to produce the fastest BACKUP operation.

If you do not specify a buffer size but you do specify an MU: or MS: (streaming) tape for input or output, then BACKUP will automatically use the /BUFFER_SIZE=OPTIMUM qualifier to ensure that the tape device can transfer data fast enough to maintain streaming.

The *optimum* buffer size prior to Version 10.0 was 55K words, which was appropriate for a default block size of 2048 and a maximum block size of 7680.

For Version 10.0 and later, the maximum block size is 28672, and the default block size is 28672 for disk and 16384 for tape. This means that an optimum buffer size of 55K words is no longer adequate.

Solution

The following patching procedure increases the optimum buffer size to 85K words. This problem will be corrected in a future release.

Procedure

1. This is a required patch to [0,1]BACKUP.TSK.
2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? [0,1]BACKUP.TSK/N
```

3. This patch can be installed using ONLPAT, the online patching program.

```
$ RUN $ONLPAT
Command file name? <CR>          RETURN for patch installation
File to patch? [0,1]BACKUP.TSK/N
File found in account [0,1]
```

4. The patch is as follows:

```
Base address? 145:17326
Offset address? 3452
  Base  Offset  Old      New?
017326 003452 000067  ? 125
017326 003454 125243  ? ^C  up-arrow/C to exit; CTRL/C for INIT
```


BACKUP May Sleep Indefinitely — Mandatory Patch

RSTS/E V10.0
System Files
System File Corrections

Problem

A race condition exists in BACKUP where it sometimes sleeps indefinitely after attempting to write the remaining pending output to tape.

Solution

The following patching procedure corrects this problem. It will be corrected in Version 10.1 and later.

Procedure

1. This is a required patch to [0,1]BACKUP.TSK
2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? [0,1]BACKUP.TSK/N
```

3. This patch can be installed using ONLPAT, the online patching program.

```
$RUN $ONLPAT
Command file name? <CR>          RETURN for patch installation
File to patch? [0,1]BACKUP.TSK/N
File found in account [0,1]
```

4. The patch is as follows:

```
Base address? 74:0
Offset address? 224
  Base  Offset  Old      New?
000000  000224  004767  ? 4737
000000  000226  007404  ? 41252
000000  000230  004767  ? ^Z    CTRL/Z for new offset
Offset address? 326
  Base  Offset  Old      New?
000000  000326  000545  ? 543
000000  000330  104377  ? ^Z    CTRL/Z for new offset
Offset address? ^Z          CTRL/Z for new base
Base address? 3:0
Offset address? 41252
  Base  Offset  Old      New?
000000  041252  000000  ? 12746
000000  041254  000000  ? 543
000000  041256  000000  ? 104377
000000  041260  000000  ? 4737
000000  041262  000000  ? 77610
000000  041264  000000  ? 12746
000000  041266  000000  ? 545
000000  041270  000000  ? 104377
000000  041272  000000  ? 207
000000  041274  ??????  ? ^C    up-arrow/C to exit; CTRL/C for INIT
```


PIP Sometimes Loops When Copying Files Into Themselves — PIP.SAV Restriction

RSTS/E V10.0

System Library (\$)

Library Restrictions

When using PIP to copy files into themselves (that is, when the target files are the same as the source files) on a system disk initialized as New Files Last (NFL) and you specify that disk's device name differently on the input and output side of the command line, PIP will continue copying files in an endless loop; it will not properly detect the last file in the directory. Under such circumstances, you must type Ctrl/C to terminate the operation.

For example, if your system disk is `_DU1:` and you issue the following command, PIP will loop endlessly copying files:

```
$ PIP _SY:[1,2]=_DU1:[1,2]*.* /LOG
```

To prevent this, do not specify a device name for the system disk, or specify identical device names on both the input and output side of the PIP command line, for example:

```
$ PIP [1,2]=_DU1:[1,2]*.* /LOG
$ PIP _DU1:[1,2]=_DU1:[1,2]*.* /LOG
$ PIP _SY:[1,2]=_SY:[1,2]*.* /LOG
```


LOGIN May Not Always Execute Your Group and User LOGIN.COM

*RSTS/E V10.0
System Library (\$)
Library Restrictions*

Problem

If your job currently does not have WACNT or GACNT privileges and you use the Digital Command Language (DCL) LOGIN command to log into another account, the group and user LOGIN.COM will only be executed if you entered the password correctly the first time LOGIN so prompts you. If you receive an "?Invalid entry - try again" error and then supply a correct PPN and password, the group and user LOGIN.COM may not be executed.

NOTE

Any account in which the user is expected to remain in LOGIN.COM should have the CAPTIVE account attribute set.

The workaround is to issue the DCL LOGIN command again, without any parameters, when you have logged into the other account.

This is a restriction for RSTS/E Version 10.0. It may be fixed in a future release of RSTS/E.

LOGIN May Not Always Execute Your Group and User LOGIN.COM — Mandatory Patch

*RSTS/E V10.0
System Library (\$)
Library Corrections*

Problem

If your job currently does not have WACNT or GACNT privileges and you use the Digital Command Language (DCL) LOGIN command to log into another account, the group and user LOGIN.COM will only be executed if you entered the password correctly the first time LOGIN prompts you for it. If you receive an "?Invalid entry - try again" error and then supply a correct PPN and password, the account's group and user LOGIN.COM may not be executed.

NOTE

Any account in which the user is expected to remain in LOGIN.COM should have the CAPTIVE account attribute set.

Solution

The correction to this problem is to modify the system-wide [0,1]LOGIN.COM file. Using an editor, change the line that currently reads:

```
$_IF P6.EQS."" THEN _GOSUB O
```

to read:

```
$_IF P6.EQ.0 THEN _GOSUB O
```

This article replaces the May 1991 Software Dispatch Article Seq. No. 10.2.2 R. This problem will be corrected in a future release.

ODT Displays Large Addresses Incorrectly — ODT.TSK Restriction

RSTS/E V10.0
Auxiliary Library (AUXLIB\$)
Package Restrictions

ODT.TSK will not display addresses greater than 177777(8) correctly. It accesses the correct location and displays the *contents* of the address correctly. It is only the display of the address itself that is incorrect.

ANALYS Incorrectly Shows Virtual Disk As Locked Out — ANALYS Restriction

*RSTS/E V10.0
Error Logging Package (ERROR\$)
Package Restrictions*

In the monitor dump section of the ANALYS report, the virtual disk area of the Memory Layout is incorrectly shown as locked out.

Notes on the Use of Serial Printers

RSTS/E V10.0

Operator Services and Spooling Package (OPSER\$)

Package Notes

See Article 15.1.1 for information about using serial printers. Although it is a Print/Batch Services (PBS) article, it is applicable to OPSER as well.

Notes on the Use of Serial Printers

RSTS/E V10.0

Print/ Batch Services Package (PBS\$)

Package Notes

During a power down and power up sequence, some serial terminals may send spurious characters to the host processor. The ASCII code of these characters appears to be random, but they occasionally take on the value of control characters (for example, Ctrl/C). Since the program printing on the terminal may not expect input of any kind from the terminal, these spurious characters may result in unexpected errors; for example, a Ctrl/C may cause the program to exit, and a Ctrl/O will cause all further output to be discarded without printing.

There is no way for the software to protect against all possible spurious inputs. RSTS/E is able to protect against all spurious input except Ctrl/S (XON) and Ctrl/Q (XOFF) via the MODE 32% option on the OPEN statement. However, spurious XON/XOFF characters can still cause loss of synchronization between the host system and the terminal. The only way to prevent this problem is to ensure that any serial terminal used as a printer is never powered off or powered on while it is ALLOCATED or OPENed.

Another problem concerns loss of data when the printer is powered off. Most serial printers contain an internal buffer which is used to hold characters which have been received from the host processor but which have not yet been printed. When the printer goes OFFLINE (either because the ONLINE/OFFLINE switch is placed in the OFFLINE position, or because some exception condition, such as a paper jam, has been detected) this buffer may still contain some unprinted data. If the printer is placed back ONLINE, printing will resume with no loss of data. If, however, the terminal is turned off, the buffer is cleared and any data in the buffer is lost. The only protection against this loss is to ensure that the printer is not powered off while it is printing.

In summary, DIGITAL recommends that any serial printer to be used under RSTS/E time-sharing be powered on before system start-up and that it remain on whenever it is in use. If the terminal is powered off, loss of data and unexpected errors may result.

Another kind of problem has been encountered when spooling to the LA180S serial printer. This problem concerns the manner in which the terminal device handles printed lines that are longer than the width of the terminal. When a line is printed on the LA180S, the device prints characters until it gets to the physical right margin. At that point, the logic of the terminal inhibits further printing until a carriage return character moves the print head back from the margin. When a CR is encountered in such a situation, the LA180S also generates a line-feed, causing spacing to a new line. Since most print lines are terminated by a CR/LF sequence, however, the second LF will, again, cause spacing to a new line, leaving one line blank. Thus, printing a line which is longer than the width of the LA180S (for example, longer than 132 characters) will cause a blank line on the printed output.

When performing normal print operations under RSTS/E, the user will not ordinarily encounter this problem. The RSTS/E Terminal Service ordinarily keeps track of the characters printed on the terminal and explicitly issues a CR/LF sequence to the terminal when the print head reaches the right margin (as defined by the /WIDTH qualifier in a SET TERMINAL command). Thus, lines printed to that terminal which are longer than the width of

the terminal result in printing of all characters, but on multiple lines. The only programs which will have trouble are those which need to keep track of vertical position on the page (for example, the line printer spooler) and, therefore, invoke the special MODE (Mode 4%) to inhibit the automatic CR/LF by terminal service. Files printed by such programs will have blank lines after each line which was longer than the terminal width. There is no practical software remedy for this problem.

Changing Printer Forms May Disable PBS Print Servers

RSTS/E V10.0

Print/Batch Services Package (PBS\$)

Package Corrections

Problem

If a print entry is in a FORMS_WAIT state, and you change an assigned print server's form to match that of the entry, PBS changes the entry's status to READY, indicating that the entry can be started. The entry is then started on the server. However, in certain cases, PBS does *not* change the entry's status to STARTED. The entry remains in a READY state, even though it started printing. Several errors can occur as a result, the most common of which are as follows:

1. If you delete the entry while it is printing, PBS deletes the entry from its queue, but does not notify the server to terminate printing. The job will continue printing to completion.
2. If another print server is available with the entry's form, the entry may be started on that server too. The same job will be printed twice, on two different printers.

If any errors occur, the print server that last processed the entry becomes disabled and cannot process any more print jobs. Furthermore, if you attempt to shut PBS down, PBS responds with the message, "Print/Batch Services will stop after completing 1 job," even though no jobs are started. You must manually remove the PBS job and restart PBS to clear these conditions.

Solution

The following patching procedure corrects this problem. Note that the patch will take effect the next time PBS is started. The problem will be corrected in RSTS/E Version 10.1.

Procedure

1. This is a required patch to PBS.TSK. The patching procedures for both versions ("RMS Resident Library" and "No RMS Resident Library") of PBS.TSK follow. The version running on your system is determined at installation time.
2. Shut down PBS.


```
$STOP/QUEUE/MANAGER
```
3. This patch must be installed using ONLPAT, the online patching program:


```
RUN $ONLPAT
Command File Name? <CR>          RETURN for patch installation
File to patch? PBS$:PBS.TSK
```


4. Apply the patch as follows:

a. For the "RMS Resident Library" version, use this patch:

```

Base address? 31:3222
Offset address? 15562
  Base   Offset  Old      New?
003222  015562  112763  ? 4737
003222  015564  000000  ? 52136
003222  015566  000020  ? 103017
003222  015570  004737  ? 112763
003222  015572  052136  ? 5
003222  015574  103012  ? 20
003222  015576  010546  ? ^Z      CTRL/Z for new offset
Offset address? 15622
  Base   Offset  Old      New?
003222  015622  010100  ? 4737
003222  015624  022760  ? 2442
003222  015626  000003  ? 4737
003222  015630  000014  ? 2502
003222  015632  001325  ? ^Z      CTRL/Z for new offset
Offset address? ^Z      CTRL/Z for new base
Base address? 2:2442
Offset address? 0
  Base   Offset  Old      New?
002442  000000  000000  ? 10246
002442  000002  000000  ? 10102
002442  000004  000000  ? 10046
002442  000006  000000  ? 10346
002442  000010  000000  ? 16300
002442  000012  000000  ? 20
002442  000014  000000  ? 5001
002442  000016  000000  ? 12703
002442  000020  000000  ? 5
002442  000022  000000  ? 4737
002442  000024  000000  ? 50210
002442  000026  000000  ? 12603
002442  000030  000000  ? 12600
002442  000032  000000  ? 12602
002442  000034  000000  ? 62716
002442  000036  000000  ? 4
002442  000040  000000  ? 105063
002442  000042  000000  ? 20
002442  000044  000000  ? 10100
002442  000046  000000  ? 22760
002442  000050  000000  ? 3
002442  000052  000000  ? 14
002442  000054  000000  ? 207
002442  000056  ??????  ? ^C      up-arrow/C to exit
    
```



b. For the "No RMS Resident Library" version, use this patch:

```

Base address? 31:3152
Offset address? 15562
  Base Offset  Old      New?
003152 015562 112763 ? 4737
003152 015564 000000 ? 52252
003152 015566 000020 ? 103017
003152 015570 004737 ? 112763
003152 015572 052252 ? 5
003152 015574 103012 ? 20
003152 015576 010546 ? ^Z      CTRL/Z for new offset
Offset address? 15622
  Base Offset  Old      New?
003152 015622 010100 ? 4737
003152 015624 022760 ? 2442
003152 015626 000003 ? 4737
003152 015630 000014 ? 2502
003222 015632 001325 ? ^Z      CTRL/Z for new offset
Offset address? ^Z      CTRL/Z for new base
Base address? 2:2442
Offset address? 0
  Base Offset  Old      New?
002442 000000 000000 ? 10246
002442 000002 000000 ? 10102
002442 000004 000000 ? 10046
002442 000006 000000 ? 10346
002442 000010 000000 ? 16300
002442 000012 000000 ? 20
002442 000014 000000 ? 5001
002442 000016 000000 ? 12703
002442 000020 000000 ? 5
002442 000022 000000 ? 4737
002442 000024 000000 ? 50324
002442 000026 000000 ? 12603
002442 000030 000000 ? 12600
002442 000032 000000 ? 12602
002442 000034 000000 ? 62716
002442 000036 000000 ? 4
002442 000040 000000 ? 105063
002442 000042 000000 ? 20
002442 000044 000000 ? 10100
002442 000046 000000 ? 22760
002442 000050 000000 ? 3
002442 000052 000000 ? 14
002442 000054 000000 ? 207
002442 000056 ?????? ? ^C      up-arrow/C to exit

```

5. Restart PBS.

```
$START/QUEUE/MANAGER
```


RMS-11 Does Not Correctly Handle Underscores — RMS Restriction

RSTS/E V10.0

RMS-11 V2.0 (RMS\$)

Package Restrictions

RMS-11 Access Methods does not correctly handle a file specification which contains an underscore in front of the device name. RMS-11 ignores the underscore.

RMS-11 May Incorrectly Report Error on Remote Access of Indexed File — RMS Restriction

RSTS/E V10.0

RMS-11 V2.0 (RMS\$)

Package Restrictions

Keyed access on a remote indexed file will incorrectly report a Record Not Found error when the target record's key size is described as zero on a key whose datatype is non-string. This is documented as a correct way to pass a nonstring key, but currently works correctly only for local operations.

Attributes Are Lost When RMS File Is Copied to DOS Format Tape

RSTS/E V10.0

DCL Run-time System and Utilities

Package Notes

Because the DOS magnetic tape format does not provide a way to store RMS attribute information, RMS files that are copied to DOS magtape will lose their attributes and may be rendered unusable. The COPY command will not issue a warning when this happens.

To store RMS files on magnetic tape, use one of the following methods, all of which will retain RMS attributes:

- Use ANSI format instead of DOS
- Use the BACKUP utility
- Use RMSBCK, the RMS-11 backup utility

Exclamation Marks in BROADCAST Commands

RSTS/E V10.0
DCL Run-time System and Utilities
Package Notes

Exclamation marks in continuation lines cannot be used with the BROADCAST command.

MOUNT Command With /OVERRIDE Qualifier — DCL Restriction

RSTS/E V10.0
DCL Run-time System and Utilities
Package Restrictions

When issuing a MOUNT command with the /OVERRIDE qualifier and without a pack label, the logical name, if specified, must not have a colon (:) appended.

Use a command of the following format:

```
MOUNT DU1:/OVERRIDE/PRIVATE MYDISK
```

Do not use:

```
MOUNT DU1:/OVERRIDE/PRIVATE MYDISK:
```


Creating Global Symbols in Nested Command Files Can Cause an Unexpected Error — Mandatory Patch

RSTS/E V10.0

DCL Run-time System and Utilities

DCL Package Corrections

Problem

When a nested command procedure creates global symbols and exits, returning to the previous command procedure, the symbol table may become too large to fit in memory. When this happens, Digital Command Language (DCL) displays the fatal error:

```
??Program failure in DCL
??Not enough available memory
```

DCL is then left in an unpredictable state, and the job must be removed.

Solution

The following patching procedure corrects this problem. The correct action is for DCL to abort the command procedure and display the error message:

```
??Symbol table full
```

Procedure

1. This is a required patch to the DCL run-time system. It must be installed in all DCL run-time systems.
2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? DCL.RTS
```

3. This patch can be installed using ONLPAT, the online patching program:

```
RUN $ONLPAT
Command File Name? <CR>                RETURN for patch installation
File to patch? [0,1]DCL.RTS
File found in account [0,1]
```

4. The patch is as follows:

```

Base address? DCLCFP
Offset address? 14640
  Base  Offset  Old      New?
102674 014640 012746  ? 22705
102674 014642 000020  ? 4
102674 014644 010546  ? 1406
102674 014646 004567  ? 12746
102674 014650 151140  ? 20
102674 014652 121112  ? 10546
102674 014654 022705  ? 4537
102674 014656 000002  ? $$CAL2
102674 014660 001402  ? CLSPFB
102674 014662 005745  ? 5305
102674 014664 000765  ? 77513
102674 014666 042767  ? ^Z      CTRL/Z for new offset
Offset address? ^Z      CTRL/Z for new base
Base address? DCLSYM
Offset address? 6422
  Base  Offset  Old      New?
160036 006422 004737  ? <CR>   no change; verify only
160036 006424 045212  ? PATCH
160036 006426 110467  ? ^Z      CTRL/Z for new offset
Offset address? ^Z      CTRL/Z for new base
Base address? PATCH
Offset address? 0
  Base  Offset  Old      New?
101576 000000 000000  ? 105737
101576 000002 000000  ? FIRQB
101576 000004 000000  ? 1412
101576 000006 000000  ? 4737
101576 000010 000000  ? QCKSTP
101576 000012 000000  ? 5037
101576 000014 000000  ? LCAPTR
101576 000016 000000  ? 12700
101576 000020 000000  ? STFL.E
101576 000022 000000  ? 5726
101576 000024 000000  ? 105037
101576 000026 000000  ? CMDLVL
101576 000030 000000  ? 261
101576 000032 000000  ? 207
101576 000034 000000  ? ^C      Up-arrow C to exit;Ctrl/C for INIT

```

5. For this patch to take effect, execute the following command:

```
$ UNLOAD/RUNTIME DCL
```

NOTE

The UNLOAD command will not remove the run-time system, but simply instructs the monitor to reload it the next time a job requests it.

Using F\$SEARCH Can Cause an Unexpected Error — Mandatory Patch

RSTS/E V10.0
DCL Run-time System and Utilities
DCL Package Corrections

Problem

When no free channels are available and a command procedure issues the F\$SEARCH function, Digital Command Language (DCL) displays the following error message, followed by a register dump.

```
??Program failure in DCL
??Odd address trap
```

DCL may be left in an unpredictable state and the job may need to be removed.

Solution

The following patching procedure corrects this above problem. The correct action for DCL to take is to display the following error message at the command line containing the F\$SEARCH:

```
?No channels available
```

Procedure

1. This is a required patch to the DCL run-time system. It must be installed in all DCL run-time systems.
2. The patch described in step 4 can be installed using the PATCH option of INIT.SYS:

```
Option: PATCH
File to patch? DCL.RTS
```

3. This patch can be installed using ONLPAT, the online patching program:

```
RUN $ONLPAT
Command File Name? <CR>          RETURN for patch installation
File to patch? [0,1]DCL.RTS
File found in account [0,1]
```

4. The patch is as follows:

```
Base address? DCLFUN
Offset address? 6540
  Base  Offset  Old      New?
147350 006540 010146 ? 10446
147350 006542 010405 ? 10146
147350 006544 004737 ? <CR>  no change; verify only
147350 006546 121206 ? <CR>  no change; verify only
147350 006550 012603 ? <CR>  no change; verify only
147350 006552 103750 ? 103002
147350 006554 010467 ? 5026
147350 006556 032376 ? 746
147350 006560 074405 ? 10437
147350 006562 050567 ? PFBCHN
147350 006564 032372 ? 74416
147350 006566 016705 ? 52637
147350 006570 024366 ? F$SCHN
147350 006572 010165 ? ^C      up-arrow/C to exit;CTRL/C for INIT
```

5. To make this patch take effect, execute the following command:

```
$ UNLOAD/RUNTIME DCL
```

NOTE

The UNLOAD command will not remove the run-time system, but simply instructs the monitor to reload it the next time a job requests it.

Using the RSX-11 CRF Utility

RSTS/E V10.0
RSX-11 Emulator and Utilities
Package Notes

The RSX-11 utility CRF.TSK is included on the RSTS distribution kit as an unsupported utility. It is installed in the system library ([1,2]) account with other components in the RSX-11 package.

This program will create cross-reference listings from the binary cross reference (.CRF) files optionally produced by the RSX-11 task builder (TKB) and RSX-11 MACRO assembler (MAC). The cross reference file created by MAC lists page and line number references to data items and routines, whereas the cross reference file created by TKB lists the names of the object modules which reference these items. The following are examples of these two types of output:

MACRO Assembler output:

```

CRF          CREATED BY MACRO  ON 15-JUN-85 AT 06:02      PAGE 1
SYMBOL CROSS REFERENCE                                CREF  07.065
SYMBOL  VALUE          REFERENCES
CR      = 000015       #4-180
FF      = 000014       #4-180
HT      = 000011       #4-180
LF      = 000012       #4-180
L$$IST = *****     1-1      1-2      2-53      4-182
RSTS    = 000001       #4-39
R$$11M = 000000       #4-38
SPA     = 000040       #4-180
VT      = 000013       #4-180
V1145   = *****     4-157
$$$$VER = 034066       #3-2      #5-1

```

Task Builder output:

```

CRF          CREATED BY TKB    ON 15-JUN-85 AT 06:23      PAGE 1
GLOBAL CROSS REFERENCE                                CREF  07.065
SYMBOL  VALUE          REFERENCES...
A.BTTN  000002         # DIRSYM
A.DFUI  000102         CRFIN  # FCSGBL
A.LULU  000002         # DIRSYM
A.LUNA  000004         # DIRSYM
A.LUNU  000006         # DIRSYM
A.TRBA  000002         # DIRSYM
BADDIR  000001         # ERR      FIP
BADNAM  000002         # ERR      FIP

```

The first step is to cause MAC or TKB to create a binary cross-reference file, which is used by the CRF utility to produce the cross-reference listing. To request that MAC or TKB produce this file, specify the /CR switch in the command line to these programs. For MAC the switch is included with the listing file specification and for TKB it is included with the map file specification. For example:

```

$ RUN $MAC
MAC>TEST, TEST/CR=TEST
MAC>^Z
$

```

The binary file created has the same name as the listing or map file and its file type is always .CRF.

CRF.TSK is then run, using either the RUN command or the CRF CCL if installed. When run using the RUN command, CRF will prompt with CRF>. Typing Ctrl/Z to this prompt will cause an exit to your default RTS. The command line is a single RSTS/E file specification of the file into which the cross reference listing is to be placed. The default file type for this file is .LST. If the file specified already exists, CRF appends the listing to it; otherwise, a new file is created. The CRF output is variable length records and, therefore, if the file specified for output already exists, it must also be a variable length file. The listing file produced by MAC and the map file created by TKB are both variable length files making them prime candidates. For example:

```
$ RUN $CRF
CRF>TEST.LST
CRF>^Z
$
```

This will cause the cross-reference listing to be appended to the TEST.LST listing file which was originally created by MAC. CRF can also append the cross-reference listing to the MAP file generated by TKB. For example:

```
$ RUN $CRF
CRF>TEST.MAP
CRF>^Z
$
```

In either case, the binary cross-reference file TEST.CRF, which was created by MAC or TKB, will be deleted automatically by CRF.

CRF requires the binary cross-reference file to have the same name as the output file with a file type of .CRF. Since CRF always deletes this file when it is done, you must copy this file into a non-.CRF file before running CRF if you wish to keep a copy of it.

CRF also accepts as input an indirect command file (preceded by @) which can contain a list of file specifications. Each specification in the file will be processed as if it was separately entered to the CRF> prompt. The default file type for the command file is .CMD. CRF only allows one level of command indirection.

RSX-11 Utilities Do Not Handle All RSTS/E File Specifications — RSX-11 Package Restriction

RSTS/E V10.0
RSX-11 Emulator and Utilities
Package Restrictions

Several RSX-11 utilities do not properly handle all RSTS/E file specifications. Table 1 lists those RSX-11 tasks which do not handle various parts of a RSTS/E Filespec.

Table 1: RSX-11 Utilities — RSTS/E Filespec Restrictions

Utility	Allow Logical Name Longer than six Characters?	Allow Logical Name Containing Dollar (\$) Sign?	Allow Omitted Fields in PPN?
TKB	Yes	Yes	No
MAC	Yes	Yes	No
PAT	No	No	Yes
LBR	No	Yes	No

Use of Underscore in RT-11 Utilities

RSTS/E V10.0
RT-11 Emulator and Utilities
Package Notes

RSTS/E allows the use of the underscore (`_`) character before a device name in a file specification to indicate that the device name is not to undergo logical translation. Utilities provided with the RT-11 emulator will allow the use of the underscore character; however, due to the nature of the emulator, it is still possible for the device name to undergo translation before a file is opened.

In the RT-11 emulator, file specifications given to a utility are scanned using the RT-11 CSI (command string interpreter). At this time, the device designation may or may not undergo logical translation (depending on whether or not the underscore was used). The CSI returns RT-11 file description blocks to the utilities.

When the utility program then requests the emulator to open a file, the file open code does an additional logical translation on the specified device name. This is an unavoidable consequence of allowing logical device names to be specified in RT-11 file description blocks.

Disk Unit Numbers Greater Than Nine May Not Be Displayed Correctly — RT-11 Package Restriction

RSTS/E V10.0
RT-11 Emulator and Utilities
Package Restrictions

The following utilities will not correctly print the disk name and unit number in error messages for DU disks with unit numbers greater than nine:

- LINK.SAV
- LIBR.SAV
- MACRO.SAV

For example, if the source file TEST01 does not exist on disk DU15, you will get this error message:

```
$ RUN $MACRO
*DU15:TEST01=DU15:TEST01
?MACRO-F-File not found DVE:TEST01.MAC
DU15:TEST01=DU15:TEST01
```


SET EXECUTOR SEGMENT BUFFER SIZE May Fail Without Warning — NCP.TSK Restriction

RSTS/E V10.0

DECnet/E Utilities V4.1 (DECNET\$)

Package Restrictions

The NCP Command **SET EXECUTOR SEGMENT BUFFER SIZE *n*** does not work when the **EXECUTOR STATE** is ON. The command should fail with an appropriate error but instead appears to succeed without taking any action.



SHOW NODE Command May Fail — NCP.TSK Restriction

RSTS/E V10.0

DECnet/E Utilities V4.1 (DECNET\$)

Package Restrictions

When attempting to issue a command such as:

```
SHOW NODE node_address COUNTERS
```

and the node *node_address* is not defined in your volatile database, NCP will report that the node does not exist, even though you may have an active link to it.

The workaround is to ensure that all the nodes you normally access are defined in your volatile parameter file.

Network Parameter File Will Not Hold More Than 26,000 Nodes — DECnet/E Package Restriction

RSTS/E V10.0

DECnet/E Utilities V4.1 (DECNET\$)

Package Restrictions

DECnet/E will not successfully create a network parameter file for networks with more than 26,000 nodes. To successfully create the node database NETPRM.SYS, you must specify a Maximum Nodes value smaller than 26,000.

SET HOST May Give Erroneous Error Message — NETUNS.TSK Restriction

RSTS/E V10.0

DECnet/E Utilities V4.1 (DECNET\$)

Package Restrictions

When you SET HOST from RSTS/E to some versions of VMS and log off the VMS system, DECnet/E may display the following message:

```
%Logical link failure to remote node xxxxxx  
NSP reason code = 0  
Control returned to node xxxxxx
```

This error message is triggered by the receipt of an unexpected message from the VMS node during the disconnect. The error message is extraneous; no actual error has occurred and the user session is not otherwise affected.

Similarly, when you SET HOST to RSTS/E from some versions of VMS, the same error may be displayed. In such cases, the remote job on the RSTS/E system is left detached.

Network File Transfers May Not Correctly Preserve Protection Codes — NFT.TSK/FAL.TSK Restriction

RSTS/E V10.0

DECnet/E Utilities V4.1 (DECNET\$)

Package Restrictions

NFT (the Network File Transfer program) and FAL (the File Access Listener) do not always preserve protection codes when creating files. Protection codes for the output files are computed by adding together the default system protection code and the codes for executable (64), protected (128), or executable and privileged (64+128) as set on the input file.

SHOW and LIST Commands Display Inappropriate Information — Mandatory Patch

DECnet/E Utilities for RSTS/E V10.0
DECnet/E Utilities Corrections

Problem

The SHOW KNOWN NODES and LIST KNOWN NODES commands display inappropriate information. When the executor node record is purged, the first node in the database is displayed twice. If no nodes are defined in the database, the error message "Error getting network device DDB" is displayed.

Solution

The following patching procedure corrects this problem. It will be corrected in a future release.

Procedure

1. This is a required patch to NCP.TSK.
2. The patch described in step 4 *cannot* be installed using the PATCH option of INIT.SYS.
3. This patch must be installed using ONLPAT, the online patching program:

```
RUN $ONLPAT
Command File Name? <CR>          RETURN for patch installation
File to patch? DECNET$:NCP.TSK
File found in account [0,16]
```

4. The patch is as follows:

```
Base address? NOREIN
Offset address? 610
  Base   Offset  Old      New?
122500  000610  001000  ? 1010
122500  000612  000016  ? ^C   up-arrow/C to exit
```


List Processing Message "No room left..."

WPS-PLUS/RSTS
List Processing

Problem

When using List Processing, you might receive one of the following error messages:

- "No room left to run list processing"
- "No room left for this operation - DOCUMENT_TOO_LARGE"

Solution

If either of these error messages occur, it indicates that WPS List Processing has exceeded the maximum allowable space allocation for a single list processing transaction. The space allocation value is affected by the interaction of several factors, specifically:

- Number of items in the list document
- Text size of each item in the list document
- Text size of the form document
- File size of the list, form, and output documents

The result of exceeding this space allocation is that no additional text can be written to the output document.

Unfortunately, when the error occurs, the output document is not saved, and the error message overwrites the current record selected counter which is updated as list processing advances. This makes it difficult to determine how many records were processed before the error occurred.

The easiest way to resolve this limitation is to divide the list document in half and retry. If either half still fails, divide it in half again. Repeat as necessary.

Another method would be to process the same list and form document again while visually monitoring the record count until the error occurs again. Decrease the record count by five percent and use that value to determine into how many files the list document should be divided. The reason for the five percent reduction is to allow a margin of additional text added to the form document.

Instructions Missing in DATATRIEVE-11 V3.3 Installation Guide

DATATRIEVE-11 for RSTS/E V10.0
DDMF

Problem

There are no instructions in the *DATATRIEVE-11 V3.3 Installation Guide* that describe the procedure to restart the DTR-11 task DDMF after a system shutdown.

Solution

The DATATRIEVE-11 task images will reside in the directory [1,2]. If your system shuts down, make sure DECnet is running on your system, then you can restart the DDMF task image with the following commands:

```
$ RUN DECNET$:NCP
NCP> DEFINE OBJECT 30 FILE SY:[1,2]DDMF.TSK NAME DDMF
NCP> SET OBJECT 30 FILE SY:[1,2]DDMF.TSK NAME DDMF
```

You can include these commands in the startup file, [0,1]START.COM, along with the command in Section 4.3.5, Restart After Shutdown, in the *Installation Guide*:

```
$ DEFINE/COMMAND/SYSTEM DTR $DTR.TSK
```


IF-THEN-ELSE Statement Embedded Within DO-LOOP Causes Infinite Loop — Restriction

FORTRAN/77

FORTRAN/77 Package Restrictions

Problem

Incorrect code is generated when there is an IF-THEN-ELSE statement within a DO-LOOP. This causes the registers to be restored incorrectly, and an infinite loop occurs. This only happens when the optimizer is enabled during compilation, either by having the /OP qualifier defined as the default or by specifying it directly on the command line.

Workaround

The workaround to this problem is to use the /NOOP qualifier when compiling your programs. This will not optimize your code, but it will prevent the infinite loop problem from occurring.

Solution

An update that contains the correction to this problem will be available in a future RSTS/E operating system layered product update. This update will replace the CODEX1 module in F77.OLB, and the new library will be used to rebuild the compiler.

SAVE, REPLACE, and LIST Sometimes Lose Lines of Source Text — Restriction

*RSTS/E V10.0
BASIC-PLUS-2 for RSTS/E V10.0
Restrictions*

Supersedes Seq. No. 4.3.1 R, December 1991 RSTS/E Software Dispatch

Problem

The SAVE, REPLACE, and LIST commands sometimes lose lines of source text.

Therefore, a program maintained by use of a sequence of an OLD command, editing commands, and a REPLACE command can be corrupted. No warning is given until a subsequent attempt at compilation — and perhaps not even then, should the loss of text be such as to result in a still syntactically valid program.

The problem is triggered by a source line that is either explicitly continued (by being terminated with an ampersand character) or that is not continued (because of being the last source line in a numbered BASIC-PLUS-2 statement). When such a source line is stored in the compiler's work file, and when the last byte of the source line happens to fall into the last byte of a disk block in the work file, then SAVE, REPLACE, and LIST can fail.

The SAVE, REPLACE, and LIST commands all work by retrieving source text from the compiler's work file. When such a source line is retrieved, an erroneous condition is set up in which the next implicitly continued statement to be retrieved may cause a truncation: all source lines following the next implicitly continued statement up through the end of the work file block in which it occurs will not be retrieved. The truncation can occur from any number of blocks farther down in the work file and can even occur on a subsequent SAVE, REPLACE, or LIST command.

Note that whether the last byte of a source line falls on the last byte of a work file block is determined by the number of bytes from the beginning of the source file. Thus, the problem is very sensitive to source text. The action of inserting or removing a space character in a comment can cause the truncation phenomenon to appear or to vanish.

Workaround

Because only the SAVE, REPLACE, and LIST commands are affected, the problem can be avoided by using other program-maintenance techniques, such as making changes to source programs by use of an editor.

The OLD command is not affected. The sequence of OLD plus COMPILE works correctly.

Solution

An update containing the correction to this problem will be available in a future RSTS/E layered-product update. This update will replace the KMON module in the RSTLIB.OLB, and the new library will be used to rebuild the compiler.

RSTS/E V10.0 Cumulative Index

This is a complete listing of all articles for RSTS/E V10 and layered products. Missing sequence numbers may pertain to problems unique to other versions of the same product or other major operating systems.

Unassigned articles are indicated: RESERVED.

Flags are currently being installed for all articles. The flags and definitions are as follows.

- *M = Mandatory Patch.* These patches correct errors in the software product. All users are required to apply these patches to maintain consistent "user level" unless the accompanying article specifies otherwise.
- *F = Optional Feature Patch.* These patches extend or configure functionality into the product. These functions will be treated as a supported part of the product for the duration of the current release and may be incorporated in a future release.
- *R = Restriction.* These articles discuss areas that will not be patched in the current release because they require major modification or because they are not consistent with the design of the product. Restrictions, except those described as permanent, are reviewed and modified when possible as part of the normal release cycle.
- *N = Note.* These articles provide explanatory information that supplements the manual set and provide more detailed information about a program or package. They also provide procedural information to make it easier to use a program or package.
- ** = Article appeared in the RSTS/E V10.0 Maintenance Notebook, August 1990.*
- *+ = Article appeared in the RSTS/E Software Dispatch Review, August 1990.*
- *- = Article is being republished.*

Sequence	Title	Released	Corrected	Mon/Yr
General Notes				
<i>System Notes</i>				
0.1.1 N	RSTS/E V10.0 Component Summary	V10.0	N/A	Aug 90 *
0.1.2 N	Announcing New Hardware Support for RA92 Disks	V10.0	N/A	Jul 91
0.1.3 N	Announcing New Hardware Support for DECserver 90L	V10.0	N/A	Jul 91
Initialization				
<i>INIT.SYS Program Patches</i>				
1.1.1 M	INIT Can Fail During Some RQDX Controller Accesses — Mandatory Patch	V10.0	N/A	Jan 91
Initialization				
<i>INIT.SYS Notes</i>				
1.2.1 N	Unnecessary Error Message When Booting 800 bpi Tape on TM02	V10.0	N/A	Aug 90 *
<i>INIT.SYS Restrictions</i>				
1.3.1 R	First TMSCP Drive on System Must Be Unit 0	V10.0	N/A	Aug 90 *
1.3.2 R	MT/MM Tapes Must Be Booted From Unit 0	V10.0	N/A	Aug 90 *

RSTS/E V10.0 Cumulative Index

System Installation and Update

Installation/Update Notes

2.1.1 N Installation Flag Files V10.0 N/A Aug 90 *

Installation/Update Restrictions

2.3.1 R RSTS/E Version 10.0 Installation Procedure Restrictions V10.0 N/A Dec 90

2.3.2 R Cannot Mount Disks at the Beginning of the Installation Procedure V10.0 N/A Feb 91

2.3.3 R Monitor Installation on Target Disk Uses System Disk for Template V10.0 N/A Feb 91

Executive

Monitor Patches

3.1.1 M DEASSIGN SYS Call Can Crash System — Mandatory Patch V10.0 N/A Feb 91

3.1.2 M Protection Violation Error When Issuing the .RTS Directive — Mandatory Patch V10.0 N/A Jul 91

Monitor Restrictions

3.3.1 R DCL Log File Corruption on Full Disk V10.0 N/A Aug 90 *

Terminal Service Corrections

3.4.1 F Changing Special Login Terminal V10.0 N/A Aug 90 *

3.4.2 F Input Escape Sequence Handling V10.0 N/A Aug 90 *

3.4.3 M Host-Initiated LAT Connections May Crash System — Mandatory Patch V10.0 N/A Dec 90

3.4.4 M Three Problems in Terminal Service — Mandatory Patch V10.0 N/A Mar 91

3.4.5 M Problem with TECO Mode — Mandatory Patch V10.0 N/A May 91

3.4.6 M Inappropriate Character Echoing — Mandatory Patch V10.0 N/A Jun 91

3.4.7 M Private Delimiters Cause Problems with Command Recall — Mandatory Patch V10.0 N/A Jun 91

3.4.8 M Characters Lost When Data Error Received — Mandatory Patch V10.0 N/A Jun 91

3.4.9 M Command Recall May Crash System — Mandatory Patch V10.0 N/A Jul 91

3.4.10 M Forced Characters Echoed Even Under NOECHO — Mandatory Patch V10.0 N/A Aug 91

3.4.11 M Problem Processing Escape Sequences as Type Ahead — Mandatory Patch V10.0 N/A Aug 91

Terminal Service Notes

3.5.1 N Modem Support on RSTS/E V10.0 N/A Aug 90 *

3.5.2 N Unexpected Abort from Captive Command File Will Not Hang Up Dialup Line V10.0 N/A Aug 90 *

File Processor Patches

3.7.1 M Attaching to a Detached Job May Crash System — Mandatory Patch V10.0 N/A Dec 90

3.7.2 M Dynamic Region Creation Can Crash System — Mandatory Patch V10.0 N/A Jan 91

3.7.3 M Previous System Logical Assignment Not Replaced — Mandatory Patch V10.0 N/A Apr 91

3.7.4 M Spawned Job May Fail to Execute — Mandatory Patch V10.0 N/A Apr 91

3.7.5 M Characters May Not Echo When Setting Host to VMS System — Mandatory Patch V10.0 N/A Jul 91

3.7.6 M System Hangs After Setting Terminal Width — Mandatory Patch V10.0 N/A Aug 91

Device Driver Restrictions

3.12.1 R DB/DR Driver May Log Errors for Wrong Unit V10.0 N/A Aug 90 *

Sequence	Title	Released	Corrected	Mon/Yr
3.12.2 R	Swapping MSCP/TMSCP Unit Numbers May Cause Crash	V10.0	N/A	Aug 90 *
BASIC-PLUS				
<i>BASIC-PLUS Patches</i>				
4.1.1 F	Special PRINT-USING Characters	V10.0	N/A	Aug 90 *
4.1.2 F	Default SCALE Factor	V10.0	N/A	Aug 90 *
4.1.3 F	Omitting SCALE Factor Warning Message	V10.0	N/A	Aug 90 *
4.1.4 F	Default to NOEXTEND Mode	V10.0	N/A	Aug 90 *
4.1.5 F	Immediate Mode from .BAS File	V10.0	N/A	Aug 90 *
4.1.6 F	Disabling the CCL SYS Call	V10.0	N/A	Aug 90 *
4.1.7 M	DATE% Is Now a Reserved Keyword — Mandatory Patch	V10.0	N/A	Jan 91
4.1.8 F	RAD% Is Now a Reserved Keyword — BASIC-PLUS Feature Patch	V10.0	N/A	Feb 91
<i>BASIC-PLUS Notes</i>				
4.2.1 N	New BASIC-PLUS Function — RAD%	V10.0	N/A	Feb 91
<i>Optional BASIC-PLUS Features</i>				
4.11.1 N	The BASIC-PLUS DEBUG Facility	V10.0	N/A	Aug 90 *
4.11.2 N	The BASIC-PLUS DUMP Facility	V10.0	N/A	Aug 90 *
4.11.3 F	Enabling DUMP from Compiled Files for Nonprivileged Users	V10.0	N/A	Aug 90 *
System File Restrictions				
<i>BACKUP.TSK</i>				
6.2.1 R	RESTORE/VERIFY/NOREPLACE Can Enter Infinite Sleep State	V10.0	N/A	Mar 91
System File Corrections				
<i>BACKUP.TSK</i>				
6.3.1 M	BACKUP Can Fail to Back Up Some File Data — Mandatory Patch	V10.0	N/A	Feb 91
6.3.2 M	BACKUP/INITIALIZE Can Exit with Error — Mandatory Patch	V10.0	N/A	Mar 91
6.3.3 M	BACKUP/VERIFY=ONLY Rewinds Before Execution — Mandatory Patch	V10.0	N/A	Jun 91
6.3.4 M	BACKUP/BUFFER_SIZE=OPTIMUM May Not Select the Optimum Buffer Size — Mandatory Patch	V10.0	N/A	Jul 91

RSTS/E V10.0 Cumulative Index

Sequence	Title	Released	Corrected	Mon/Yr
RSTS/E Utilities				
System Library (\$)				
<i>Library Restrictions</i>				
10.2.1 R	PIP Sometimes Loops When Copying Files into Themselves	V10.0	N/A	Aug 90 *
10.2.2 R	LOGIN May Not Always Execute Your Group and User LOGIN.COM	V10.0	N/A	May 91
<i>Library Corrections</i>				
10.3.1 M	LOGIN May Not Always Execute Your Group and User LOGIN.COM	V10.0	N/A	Aug 91 -
Auxiliary Library (AUXLIB\$)				
<i>Library Restrictions</i>				
11.2.1 R	ODT Displays Large Addresses Incorrectly	V10.0	N/A	Aug 90 *
Error Logging Package (ERROR\$)				
<i>Package Restrictions</i>				
12.2.1 R	ANALYS Incorrectly Shows Virtual Disk as Locked Out	V10.0	N/A	Aug 90 *
Operator Services and Spooling Package (OPSERS\$)				
<i>Package Notes</i>				
14.1.1 N	Notes on the Use of Serial Printers	V10.0	N/A	Aug 90 *
Print/Batch Services Package (PBS\$)				
<i>Package Notes</i>				
15.1.1 N	Notes on the Use of Serial Printers	V10.0	N/A	Aug 90 *
RMS-11 V2.0 (RMS\$)				
<i>Package Restrictions</i>				
22.2.1 R	RMS-11 Does Not Correctly Handle Underscores	V10.0	N/A	Aug 90 *
22.2.2 R	RMS-11 May Incorrectly Report Error on Remote Access of Indexed File	V10.0	N/A	Aug 90 *

Sequence	Title	Released	Corrected	Mon/Yr
Run-Time Systems Support				
DCL Run-time System and Utilities				
<i>Package Notes</i>				
27.1.1 N	Attributes Are Lost When RMS File Is Copied to DOS Format Tape	V10.0	N/A	Aug 90 *
27.1.2 N	Exclamation Marks in BROADCAST Commands	V10.0	N/A	Aug 90 *
<i>Package Restrictions</i>				
27.2.1 R	MOUNT Command with /OVERRIDE Qualifier	V10.0	N/A	Aug 90 *
<i>Package Corrections</i>				
27.3.1 M	Creating Global Symbols in Nested Command Files Can Cause an Unexpected Error — Mandatory Patch	V10.0	N/A	Jul 91
27.3.2 M	Using F\$SEARCH Can Cause an Unexpected Error — Mandatory Patch	V10.0	N/A	Jul 91
RSX-11 Emulator and Utilities				
<i>Package Notes</i>				
28.1.1 N	Using the RSX-11 CRF Utility	V10.0	N/A	Aug 90 *
<i>Package Restrictions</i>				
28.2.1 R	RSX-11 Utilities Do Not Handle All RSTS/E File Specifications	V10.0	N/A	Aug 90 *
RT-11 Emulator and Utilities				
<i>Package Notes</i>				
29.1.1 N	Use of Underscore in RT-11 Utilities	V10.0	N/A	Aug 90 *
<i>Package Restrictions</i>				
29.2.1 R	Disk Unit Numbers Greater Than Nine May Not Be Displayed Correctly	V10.0	N/A	Aug 90 *
Optional Software				
DECnet/E Utilities V4.1 (DECNET\$)				
<i>Package Restrictions</i>				
31.2.1 R	SET EXECUTOR SEGMENT BUFFER SIZE May Fail Without Warning	V10.0	N/A	Aug 90 *
31.2.2 R	SHOW NODE Command May Fail	V10.0	N/A	Aug 90 *
31.2.3 R	Network Parameter File Will Not Hold More Than 26,000 Nodes	V10.0	N/A	Aug 90 *
31.2.4 R	SET HOST May Give Erroneous Error Message	V10.0	N/A	Aug 90 *
31.2.5 R	Network File Transfers May Not Correctly Preserve Protection Codes	V10.0	N/A	Aug 90 *
DECnet/E Utilities for RSTS/E V10.0				
DECnet/E Utilities Corrections				
31.3.1 M	SHOW and LIST Commands Display Inappropriate Information — Mandatory Patch	N/A	N/A	May 91

RSTS/E V10.0 Cumulative Index

Sequence	Title	Released	Corrected	Mon/Yr
PDP-11 C V1.0				
33.0.1 N	Announcing PDP-11 C for RSTS/E V1.0	N/A	N/A	Aug 90 +
WPS-PLUS/RSTS				
List Processing				
34.1.1 N	List Processing Message "No room left..."	N/A	N/A	Apr 91
DATATRIEVE for RSTS/E V10.0				
49.1.1 N	Instructions Missing in DATATRIEVE-11 V3.3 Installation Guide	N/A	N/A	Jan 91

August 10th 92
Richard Harper.

RSTS/E Version 10.0 Cumulative Index

recu le 26 juillet.

This is a complete listing of all articles for RSTS/E Version 10 and layered products. Missing sequence numbers may pertain to problems unique to other versions of the same product or other major operating systems.

Unassigned articles are indicated: RESERVED.

Flags are currently being installed for all articles. The flags and definitions are as follows.

- *M = Mandatory Patch.* These patches correct errors in the software product. All users are required to apply these patches to maintain consistent "user level" unless the accompanying article specifies otherwise.
- *F = Optional Feature Patch.* These patches extend or configure functionality into the product. These functions will be treated as a supported part of the product for the duration of the current release and may be incorporated in a future release.
- *R = Restriction.* These articles discuss areas that will not be patched in the current release because they require major modification or because they are not consistent with the design of the product. Restrictions, except those described as permanent, are reviewed and modified when possible as part of the normal release cycle.
- *N = Note.* These articles provide explanatory information that supplements the manual set and provide more detailed information about a program or package. They also provide procedural information to make it easier to use a program or package.
- ** = Article appeared in the RSTS/E Version 10.0 Maintenance Notebook, August 1990.*
- *+ = Article appeared in the RSTS/E Software Dispatch Review, August 1990.*
- *- = Article is being republished.*

Sequence	Title	Released	Corrected	Mon/Yr
General Notes				
<i>System Notes</i>				
0.1.1 N	RSTS/E V10.0 Component Summary	V10.0	N/A	Aug 90 *
0.1.2 N	Announcing New Hardware Support for RA92 Disks	V10.0	N/A	Jul 91
0.1.3 N	Announcing New Hardware Support for DECserver 90L	V10.0	N/A	Jul 91
Initialization				
<i>INIT.SYS Program Patches</i>				
✓ 1.1.1 M	INIT Can Fail During Some RQDX Controller Accesses — Mandatory Patch	V10.0	N/A	Jan 91
<i>INIT.SYS Notes</i>				
1.2.1 N	Unnecessary Error Message When Booting 800 bpi Tape on TM02	V10.0	N/A	Aug 90 *
<i>INIT.SYS Restrictions</i>				
1.3.1 R	First TMSCP Drive on System Must Be Unit 0	V10.0	N/A	Aug 90 *
1.3.2 R	MT/MM Tapes Must Be Booted from Unit 0	V10.0	N/A	Aug 90 *

Sequence	Title	Released	Corrected	Mon/Yr
System Installation and Update				
<i>Installation/Update Notes</i>				
2.1.1 N	Installation Flag Files	V10.0	N/A	Aug 90 *
<i>Installation/Update Restrictions</i>				
2.3.1 R	RSTS/E Version 10.0 Installation Procedure Restrictions	V10.0	N/A	Dec 90
2.3.2 R	Cannot Mount Disks at the Beginning of the Installation Procedure	V10.0	N/A	Feb 91
2.3.3 R	Monitor Installation on Target Disk Uses System Disk for Template	V10.0	N/A	Feb 91
2.3.4 R	Online Monitor Installation Fails if Prebuilt Monitor Chosen	V10.0	N/A	Apr 92
Executive				
<i>Monitor Patches</i>				
✓ 3.1.1 M	DEASSIGN SYS Call Can Crash System — Mandatory Patch	V10.0	N/A	Feb 91
✓ 3.1.2 M	Protection Violation Error When Issuing the .RTS Directive — Mandatory Patch	V10.0	N/A	Jul 91
→ 3.1.3 M	Run-Time System May Become Permanent — Mandatory Patch	V10.0	N/A	Nov 91
<i>Monitor Restrictions</i>				
3.3.1 R	DCL Log File Corruption on Full Disk	V10.0	N/A	Aug 90 *
<i>Terminal Service Corrections</i>				
3.4.1 F	Changing Special Login Terminal	V10.0	N/A	Aug 90 *
3.4.2 F	Input Escape Sequence Handling	V10.0	N/A	Aug 90 *
✓ 3.4.3 M	Host-Initiated LAT Connections May Crash System — Mandatory Patch	V10.0	N/A	Dec 90
✓ 3.4.4 M	Three Problems in Terminal Service — Mandatory Patch	V10.0	N/A	Mar 91
✓ 3.4.5 M	Problem with TECO Mode — Mandatory Patch	V10.0	N/A	May 91
✓ 3.4.6 M	Inappropriate Character Echoing — Mandatory Patch	V10.0	N/A	Sep 91 -
✓ 3.4.7 M	Private Delimiters Cause Problems with Command Recall — Mandatory Patch	V10.0	N/A	Jun 91
✓ 3.4.8 M	Characters Lost When Data Error Received — Mandatory Patch	V10.0	N/A	Jun 91
✓ 3.4.9 M	Command Recall May Crash System — Mandatory Patch	V10.0	N/A	Jun 92 -
✓ 3.4.10 M	Forced Characters Echoed Even Under NOECHO — Mandatory Patch	V10.0	N/A	Aug 91
✓ 3.4.11 M	Problem Processing Escape Sequences as Type Ahead — Mandatory Patch	V10.0	N/A	Aug 91
→ 3.4.12 M	Host-Initiated Connections to Some Servers May Fail — Mandatory Patch	V10.0	N/A	Oct 91
→ 3.4.13 M	Problem with Echo Control Mode — Mandatory Patch	V10.0	N/A	Jun 92
<i>Terminal Service Notes</i>				
3.5.1 N	Modem Support on RSTS/E	V10.0	N/A	Aug 90 *
3.5.2 N	Unexpected Abort from Captive Command File Will Not Hang Up Dialup Line	V10.0	N/A	Aug 90 *
<i>File Processor Patches</i>				
✓ 3.7.1 M	Attaching to a Detached Job May Crash System — Mandatory Patch	V10.0	N/A	Dec 90
✓ 3.7.2 M	Dynamic Region Creation Can Crash System — Mandatory Patch	V10.0	N/A	Jan 91



Sequence	Title	Released	Corrected	Mon/Yr
✓ 3.7.3 M	Previous System Logical Assignment Not Replaced — Mandatory Patch	V10.0	N/A	Apr 91
✓ 3.7.4 M	Spawned Job May Fail to Execute — Mandatory Patch	V10.0	N/A	Apr 91
✓ 3.7.5 M	Characters May Not Echo When Setting Host to VMS System — Mandatory Patch	V10.0	N/A	Jul 91
✓ 3.7.6 M	System Hangs After Setting Terminal Width — Mandatory Patch	V10.0	N/A	Aug 91
→ 3.7.7 M	Job's Private Memory Maximum Inforrect for Spawned Logged-in Jobs — Mandatory Patch	V10.0	N/A	Dec 91
→ 3.7.8 M	Possible Memory Corruption — Mandatory Patch	V10.0	N/A	Dec 91
→ 3.7.9 M	File Utility Directive May Truncate File — Mandatory Patch	V10.0	N/A	Jun 92
<i>Device Driver Corrections</i>				
→ 3.10.1 M	Some TMSCP Operations May Retry Forever — Mandatory Patch	V10.0	N/A	Nov 91
<i>Device Driver Restrictions</i>				
3.12.1 R	DB/DR Driver May Log Errors for Wrong Unit	V10.0	N/A	Aug 90 *
3.12.2 R	Swapping MSCP/TMSCP Unit Numbers May Cause Crash	V10.0	N/A	Aug 90 *
BASIC-PLUS				
<i>BASIC-PLUS Patches</i>				
4.1.1 F	Special PRINT-USING Characters	V10.0	N/A	Aug 90 *
4.1.2 F	Default SCALE Factor	V10.0	N/A	Aug 90 *
4.1.3 F	Omitting SCALE Factor Warning Message	V10.0	N/A	Aug 90 *
4.1.4 F	Default to NOEXTEND Mode	V10.0	N/A	Aug 90 *
4.1.5 F	Immediate Mode from .BAS File	V10.0	N/A	Aug 90 *
4.1.6 F	Disabling the CCL SYS Call	V10.0	N/A	Aug 90 *
✓ 4.1.7 M	DATE% Is Now a Reserved Keyword — Mandatory Patch	V10.0	N/A	Jan 91
4.1.8 F	RAD% Is Now a Reserved Keyword — BASIC-PLUS Feature Patch	V10.0	N/A	Feb 91
<i>BASIC-PLUS Notes</i>				
4.2.1 N	New BASIC-PLUS Function — RAD%	V10.0	N/A	Feb 91
<i>Optional BASIC-PLUS Features</i>				
4.11.1 N	The BASIC-PLUS DEBUG Facility	V10.0	N/A	Aug 90 *
4.11.2 N	The BASIC-PLUS DUMP Facility	V10.0	N/A	Aug 90 *
4.11.3 F	Enabling DUMP from Compiled Files for Nonprivileged Users	V10.0	N/A	Aug 90 *
System Files				
<i>System File Restrictions</i>				
6.2.1 R	RESTORE/VERIFY/NOERPLACE Can Enter Infinite Sleep State	V10.0	N/A	Mar 91
6.2.2 R	BACKUP/IMAGE Fails to Maintain Pack Attributes	V10.0	N/A	Oct 91
<i>System File Corrections</i>				
✓ 6.3.1 M	BACKUP Can Fail to Back Up Some File Data — Mandatory Patch	V10.0	N/A	Feb 91
✓ 6.3.2 M	BACKUP/INITIALIZE Can Exit with Error — Mandatory Patch	V10.0	N/A	Mar 91
✓ 6.3.3 M	BACKUP/VERIFY=ONLY Rewinds Before Execution — Mandatory Patch	V10.0	N/A	Jun 91
✓ 6.3.4 M	BACKUP/BUFFER_SIZE=OPTIMUM May Not Select the Optimum Buffer Size — Mandatory Patch	V10.0	N/A	Jul 91

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RSTS/E Version 10.0 Cumulative Index

Sequence	Title	Released	Corrected	Mon/Yr
6.3.5 M	BACKUP May Sleep Indefinitely — Mandatory Patch	V10.0	N/A	Jun 92
RSTS/E Utilities				
System Library (\$)				
<i>Library Restrictions</i>				
10.2.1 R	PIP Sometimes Loops When Copying Files into Themselves	V10.0	N/A	Aug 90 *
10.2.2 R	LOGIN May Not Always Execute Your Group and User LOGIN.COM	V10.0	N/A	May 91
<i>Library Corrections</i>				
10.3.1 M	LOGIN May Not Always Execute Your Group and User LOGIN.COM	V10.0	N/A	Aug 91 -
Auxiliary Library (AUXLIB\$)				
<i>Library Restrictions</i>				
11.2.1 R	ODT Displays Large Addresses Incorrectly	V10.0	N/A	Aug 90 *
Error Logging Package (ERROR\$)				
<i>Package Restrictions</i>				
12.2.1 R	ANALYS Incorrectly Shows Virtual Disk as Locked Out	V10.0	N/A	Aug 90 *
Operator Services and Spooling Package (OPSER\$)				
<i>Package Notes</i>				
14.1.1 N	Notes on the Use of Serial Printers	V10.0	N/A	Aug 90 *
Print/Batch Services Package (PBS\$)				
<i>Package Notes</i>				
15.1.1 N	Notes on the Use of Serial Printers	V10.0	N/A	Aug 90 *
<i>Package Corrections</i>				
15.3.1 M	Changing Printer Forms May Disable PBS Print Servers	V10.0	N/A	Jun 92
RMS-11 V2.0 (RMS\$)				
<i>Package Restrictions</i>				
22.2.1 R	RMS-11 Does Not Correctly Handle Underscores	V10.0	N/A	Aug 90 *
22.2.2 R	RMS-11 May Incorrectly Report Error on Remote Access of Indexed File	V10.0	N/A	Aug 90 *
Run-Time Systems Support				
DCL Run-time System and Utilities				
<i>Package Notes</i>				
27.1.1 N	Attributes Are Lost When RMS File Is Copied to DOS Format Tape	V10.0	N/A	Aug 90 *
27.1.2 N	Exclamation Marks in BROADCAST Commands	V10.0	N/A	Aug 90 *
<i>Package Restrictions</i>				
27.2.1 R	MOUNT Command with /OVERRIDE Qualifier	V10.0	N/A	Aug 90 *
<i>Package Corrections</i>				
✓ 27.3.1 M	Creating Global Symbols in Nested Command Files Can Cause an Unexpected Error — Mandatory Patch	V10.0	N/A	Jul 91
✓ 27.3.2 M	Using F\$SEARCH Can Cause an Unexpected Error — Mandatory Patch	V10.0	N/A	Jul 91

RSX-11 Emulator and Utilities*Package Notes*

28.1.1 N	Using the RSX-11 CRF Utility	V10.0	N/A	Aug 90 *
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Package Restrictions

28.2.1 R	RSX-11 Utilities Do Not Handle All RSTS/E File Specifications	V10.0	N/A	Aug 90 *
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RT-11 Emulator and Utilities*Package Notes*

29.1.1 N	Use of Underscore in RT-11 Utilities	V10.0	N/A	Aug 90 *
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Package Restrictions

29.2.1 R	Disk Unit Numbers Greater Than Nine May Not Be Displayed Correctly	V10.0	N/A	Aug 90 *
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Optional Software

DECnet/E Utilities V4.1 (DECNET\$)*Package Restrictions*

31.2.1 R	SET EXECUTOR SEGMENT BUFFER SIZE May Fail Without Warning	V10.0	N/A	Aug 90 *
31.2.2 R	SHOW NODE Command May Fail	V10.0	N/A	Aug 90 *
31.2.3 R	Network Parameter File Will Not Hold More Than 26,000 Nodes	V10.0	N/A	Aug 90 *
31.2.4 R	SET HOST May Give Erroneous Error Message	V10.0	N/A	Aug 90 *
31.2.5 R	Network File Transfers May Not Correctly Preserve Protection Codes	V10.0	N/A	Aug 90 *

DECnet/E Utilities for RSTS/E V10.0

DECnet/E Utilities Corrections

31.3.1 M	SHOW and LIST Commands Display Inappropriate Information — Mandatory Patch	N/A	N/A	May 91
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PDP-11 C V1.0

33.0.1 N	Announcing PDP-11 C for RSTS/E V1.0	N/A	N/A	Aug 90 +
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WPS-PLUS/RSTS

List Processing

34.1.1 N	List Processing Message "No room left..."	N/A	N/A	Apr 91
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DATATRIEVE for RSTS/E V10.0

49.1.1 N	Instructions Missing in DATATRIEVE-11 V3.3 Installation Guide	N/A	N/A	Jan 91
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PROGRAM
NOT INSTALLED

RSTS/E Version 10.0 Cumulative Index

Sequence	Title	Released	Corrected	Mon/Yr
FORTTRAN/77				
FORTTRAN/77 Package Restrictions				
57.2.1 R	IF-THEN-ELSE Statement Embedded Within DO-LOOP Causes Infinite Loop — Restriction	N/A	N/A	Oct 91
BASIC-PLUS-2 for RSTS/E				
Restrictions				
79.1.1 R	SAVE, REPLACE, and LIST Sometimes Lose Lines of Source Text — Restriction	V10.0	N/A	Apr 92 -



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Reader's Comments

RSTS/E Maintenance Notebook
AA-L997E-TC

Please use this postage-paid form to comment on this manual. If you require a written reply to a software problem and are eligible to receive one under Software Performance Report (SPR) service, submit your comments on an SPR form.

Thank you for your assistance.

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Accuracy (software works as manual says)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Page	Description
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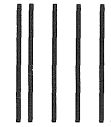
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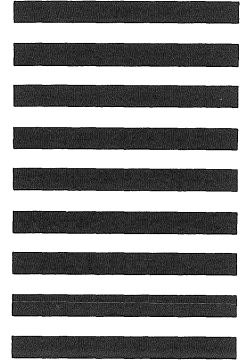
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Clarity (easy to understand)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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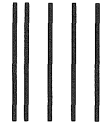
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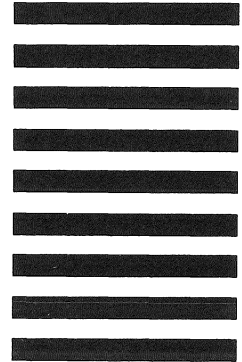


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