NOS 2.8.2 LEVEL 826 SOFTWARE RELEASE BULLETIN

SMD134577

NOS 2.8.2 L826 SRB (12/19/93-10:16:59)

Contents

Chapter 1
SRB Introduction

This document is the NOS 2.8.2 L826 Software Release Bulletin (SRB). It is to be used in conjunction with the NOS Installation Handbook (IHB) for installing NOS and its products. Control Data Systems, Inc. recommends that the SRB be read in its entirety prior to software installation. You should also verify that all of your hardware is at the FCA levels indicated in the Configuration Management section of the Software Availability Bulletin (SAB).

The NOS 2.8.2 L826 system described in this document is being released at the following levels:

Operating System	Level 826
Network Host Products	Level 826
Common Product Set	Level 826
CDCNET	Level 826

Audience

The SRB is written primarily for the site analyst. It contains notes and cautions about installation and usage of NOS 2.8.2 L826. Chapter 4 contains information intended for a system/operations administrator and chapter 5 contains information for the end user.

Central Software Support Hotline

Central Software Support (CSS) maintains a hotline to assist you in the use of our products. If you need help not provided by the documentation or find that a product does not perform as described, phone one of the following numbers. A support analyst will work with you.

From the USA and Canada: (800) 345-6628

From other countries: (612) 482-3434

SOLVER Access Phone Number Changes

Effective immediately, please begin using the following phone numbers to access SOLVER:

1200/2400 baud V.22 : 612-482-6000
9600 baud V.32 : 612-482-4000

Please inform all others at your site who access SOLVER that do not receive a copy of the NOS SRB.

Please note the addition of our new 9600 baud lines that were added May 1991.

Chapter 2
Installation

This chapter emphasizes changes in the operating system and its products which may be of particular interest to the person performing the system installation.

Notes and Cautions

This section highlights changes which should be kept in mind when installing NOS 2.8.2 L826.

All Local PP Programs Must Be Reassembled

Changes to PP common decks and NOSTEXT at NOS 2.8.2 L826 require that all sites reassemble any local PP programs.

CIP L826 Required for All CYBER 180-Class Mainframes

All CYBER 180-class mainframes require CIP L826 to deadstart NOS 2.8.2 L826. For further information regarding CIP, refer to the CIP L826 SRB.

PSR Summary Report

A summary report of all the NOS PSR modsets in NOS 2.8.2 L826 is available on the permanent file tapes. It is loaded to the installation user name during the SYSGEN procedure call SYSGEN(SOURCE) and has a permanent file name of PSRRPT.

Dual State Support

NOS 2.8.2 L826 includes support of the Dual State product. A build procedure in DECKOPL, a source library, and permanent files are released with this product. Dual state binaries for NOS/VE 1.8.1 L826 are contained on the NOS deadstart tape for dual state customers. The permanent file tapes contain binaries for NOS/VE 1.8.1 L826 compiled to run on NOS/VE 1.7.1 L803.

Manual Errata

The NOS Version 2 Installation handbook (60459320) was not updated for the NOS 2.8.2 L826 release. The following updates should be noted:

1. All references to building the product CEDIAG should be removed. The source for for this product is no longer available. CEDIAG is reference on pages 6-13, 6-17, and 6-22.

2. On page 7-3, the last bullet on the page should read as follows:

    1. If you do not want to store the startup procedure files on user name SYSTEMX, you can put the procedure files on the deadstart tape. For more information, refer to the NOS Version 2 Analysis Handbook (60459300).

3. An additional bullet has been added to page 6-1.

    . The *R1G* register should not be altered by the site while customizing binaries. If the UPROC on your installation user name sets the *R1G* register to a non-zero value, you should reset *R1G* to zero BEFORE you begin to customize any binaries.

Chapter 3
Analysis

This chapter emphasizes changes in the operating system which may be of particular interest to the site analyst.

Enhancements

This section highlights new capabilities in NOS 2.8.2 L826.

Tape Management System (TMS)

Tape Management System (TMS) is a software subsystem that allows a computer center and its users to efficiently manage magnetic tape usage. TMS commands permit tape owners to select security options and permit alternate users to access their tapes. TMS establishes a database of available tapes, tape owners and alternate users access permission. The database keeps track of what users own specific tapes and enforces security options tape owners select. TMS commands also simplify the user's tape processing interface.

TMS was previously only available as part of the 5744 Automated Cartridge Subsystem (ACS) product (D521-13), but now can be ordered as a product on its own. When ordering the NOS Operating System, sites that want to use the Tape Management System must order option D800-211. Sites ordering the 5744 Automated Cartridge Subsystem (ACS) product will continue to receive TMS at no additional charge.

TMS Enhancement to Work with Tape Alternate Storage

In previous releases of NOS and TMS, the requirement that Tape Alternate Storage (TAS) destage dump tapes must have specially chosen and matched VSNs has prevented the use of TMS to manage the assignment of these tapes.

At NOS L826, TMS has been enhanced to allow a site to reserve a special pool of tapes (known as SYSTEM VSNs) which are to be used only as TAS tapes. Also, TMS has two new tools that work together in the automated selection and assignment of tape VSNs for TAS tapes; the GETTASV command and the SETTASV procedure. GETTASV selects TAS VSNs from the site's pool of TMS system VSNs, and then calls SETTASV to reserve and request the selected tapes.

Using the SYSTEM VSN feature and the new GETTASV and SETTASV tools, together with the existing GENPFD and PFDUMP utilities, a site may now write procedures that automatically create TAS destage dump tapes with appropriate

VSNs. Examples of such procedures may be found in the TMS Site Operations Manual (60463350, Revision E).

ACS (SILO) Error Processing Enhancements

Processing of ACS cartridge tape mount errors has been improved to provide operator visibility and to reduce the overhead of retry processing.

Previously, if the ACS library server returned an error status (e.g., if the requested cartridge was not in the ACS storage module, or the optical label could not be read), the request was retried immediately and no indication was made to the operator of the error condition.

At level 826, when one of these errors is encountered, a message describing the error will be posted on the DSD E,P display, and the mount request will be retried after a delay. This allows the operator to take corrective action. If a requested cartridge is not in the ACS storage module, the cartridge can simply be added to the ACS via the cartridge access port (CAP); the mount request will then be processed successfully when it is retried. For an unreadable optical label error, the operator must eject the cartridge from the storage module, replace the optical label, and then reenter the cartridge via the CAP; the mount request will then be processed successfully when it is retried.

MAGNET Now Supports More Tape Channels and Units

The maximum number of tape channels and tape units which may be configured has been increased. The maximum number of tape channels has been increased from 4 to 8; the maximum number of tape units has been increased from 16 to 32.

FTP Performance Improved for Coded Transfers

The character translation routines in NOS FTP have been rewritten. This rewrite both reduces CPU overhead and significantly improves throughput for transfers of coded (character) files. Throughput performance improvements of up to 200% have been observed with the new routines; the transfer rate for coded transfers now approaches the transfer rate for binary transfers. The transfer rate for binary transfers is not affected by this change.

Incompatibilities

This section describes any system incompatibilities with previously released NOS systems.

Device State Processing Changes for Tapes

The meaning of the OFF state for tape equipment has been modified. Prior to level 826, MAGNET would not check for labels when a tape was mounted on an unassigned unit in the OFF or DOWN state. At level 826, if an unassigned unit is OFF, the labels will be read but the unit will not be available for assignment to a job. Only the DOWN state will prevent label checking.

This should be noted if tape units are shared with another NOS or NOS/VE system. Since label checking will rewind the tape (even though the other mainframe may be actively writing on the tape), configuring a tape unit as ON on one mainframe and OFF on another may now lead to the destruction of data. Therefore, if you wish to configure a tape unit on more than one mainframe, you must now set the device to DOWN status on the mainframes which are not actively using the device.

Chapter 4
Operations

This chapter emphasizes changes in the operating system which may be of particular interest to the administrator responsible for performing user validations and accounting activities, and/or the person responsible for operational activities.

Enhancements

This sections highlights new capabilities in NOS 2.8.2 L826.

New E,P Display Formats

The DSD E,P display has been reworked to allow the display of additional request information. An alternate set of data fields can now be displayed by entering the / key (if the E,P display is on the left screen) or the = key (if the display is on the right screen). The two sets of data fields for this display now contain sufficient information to replace the TMSDIS,PRE display when operating with TMS.

The default set of data fields for the E,P display are as follows:

- JSN of the requesting job.
- EST ordinal (if the request is for an assigned tape unit).
- Resource Type.
- External VSN (or Pack Name).
- Read or Write access requirement.
- Access Level required (if running with multi-level security enabled).
- User name.
- Family name.
- Error mnemonic.

The alternate set of data fields for the E,P display are as follows:

- JSN of the requesting job.
- EST ordinal (if the request is for an assigned tape unit).
- Resource Type.
- Internal VSN (or Pack Name).
- Flags indicating labeled or TMS controlled tape request.
- Error message corresponding to the error mnemonic.

The External VSN is the legible VSN affixed to a tape reel or cartridge; the Internal VSN is the VSN recorded in the ANSI VOL1 label. The requested External and Internal VSNs can differ if equivalenced VSNs were specified on

the LABEL or VSN command, or if the request is under TMS control and the tape catalog indicates differing VSNs.

New GO and STOP DSD Commands

DSD commands have been implemented to replace TMSDIS utility commands when operating with TMS enabled. The GO,est and STOP,est DSD commands replace the corresponding TMSDIS commands which have been removed.

Incompatibilities

BATCHIO STOP Command is Now HOLD

The STOP,est DSD command which was used to suspend a BATCHIO printer has been replaced with a HOLD,est command.

TMSDIS Displays and Commands Removed

All of the displays except the tape family catalog display have been removed from the TMSDIS utiliy. Likewise, all TMSDIS commands except for FAM and HELP have been removed. DSD has been enhanced to provide the displays and commands needed to mount and assign tapes in a TMS environment.

Chapter 5
End User

This chapter emphasizes changes in the operating system which may be of particular interest to the end user.

Enhancements

Tape File Access in System Origin Jobs

On NOS systems prior to level 826, the following exceptions were unconditionally made for system origin jobs when when validating access to ANSI labeled tape files:

- System origin jobs could overwrite non-expired files.
- System origin jobs could overwrite a VOL1 label even if the volume accessibility field in the label was non-blank.
- For system origin jobs, the file accessibilty field in the HDR1 label was not checked before allowing access to a file.

At NOS 2.8.2 L826, an option has been added to the LABEL command and macro to allow enforcement of expiration date, volume accessibility, and file accessibility in system origin jobs. The default processing for system origin is unchanged.

If PO=X is specified on the LABEL command in a system origin job, expiration date, volume accessibility, and file accessibility will be enforced on the assigned tape file. In a non-system origin job, specification of PO=X will have no effect.

When using the LABEL macro, bit 44 in word 10 (octal) of the FET should be set to select PO=X processing.

CATLIST Now Has File Type Parameter

CATLIST now has a new file type parameter at NOS 2.8.2 L826. The new TY parameter allows a user to select whether to get a list of all files (default), or just those of a particular type, either direct or indirect. The TY parameter can have any combination of the values A (all files), D (direct files) and I (indirect files). It can be used as shown in these examples.

```
CATLIST,TY=I.              List all indirect files.

CATLIST,TY=D.              List all direct files.

CATLIST,TY=A.              List all direct and indirect files.

CATLIST,LO=F,TY=A.         Same, but with full detail.

CATLIST,LO=F,RS=D,TY=A.    Same, for files resident on disk.
```

FTP Now Supports Secure Password Entry

NOS FTP has been enhanced to support secure password entry. For interactive sessions, FTP now blanks out the password after it has been entered. For batch job calls, FTP now suppresses the display of any commands which are included in the FTP prolog file; the display of commands containing passwords can, therefore, be avoided by placing these commands (define_auto_login) in the prolog file.

Incompatibilities

Changes to Equivalenced VSN Processing

The use of equivalenced VSNs on the LABEL and VSN commands has been clarified and restricted. Equivalenced VSNs are specified in the form VSN1=VSN2. Prior to level 826, this could be interpreted in two ways; either as a request for a tape with an external VSN of VSN1 and an internal VSN of VSN2, or as a request for either of two tapes, a tape with a VSN of VSN1 or a tape with a VSN of VSN2. At level 826, only the first interpretation is supported. Because of this, specification of more than two equivalenced VSNs is no longer allowed.

Changes to Tape Density and Conversion Mode Processing

Processing of the LABEL command and LABEL macro density and conversion mode parameters has been modified.

On systems prior to level 826, the density specified on the LABEL command or macro was used whenever a write operation was performed at load point (beginning of a reel). If the first write from load point occurred on other than the first reel of a multi-reel file, that reel could be written at a different density than the first reel. At level 826, the specified density will only be used when the first reel is written from load point.

The conversion mode will be processed in a similar fashion. Prior to level 826, the specified conversion mode was ignored unless it matched the actual conversion mode of the first reel and the LABEL command W parameter was specified on the request. At level 826, the conversion mode specified on the LABEL command or macro will be used whenever the first reel is written from load point.

Significant Problems

Tapes Written in LI Format on 698 Drives May Be Unreadable

The use of LI format on 698 tape drives should be avoided, since tapes written in LI format on 698 tape drives may be unreadable. If write errors occur when writing the tape, the errors sometime appear to be recovered. However, any attempt to read such a tape yields the error BLOCK TOO LARGE.

This problem only occurs when writing a tape in LI format on a 698 tape drive. Tapes written in LI format on a 679 tape drive do not have this problem, and can be read successfully on either a 679 or 698 drive.

Refer to PSR NS2G705 on SOLVER to track resolution of this problem.

Chapter 6
Configuration Management

Notes and Cautions

This section highlights changes in configuration management for NOS 2.8.2 L826.

Testing Environment

The NOS 2.8.2 L826 system was tested in an environment containing the following components:

Hardware Component	Release Level	CIP Level
Model 810 Microcode	M14AA16	L826
Model 815 Microcode	M11AA16	L826
Model 825 Microcode	M12AA16	L826
Model 830 Microcode	M13AA16	L826
Model 835 Microcode	M20AA17	L826
Model 840 Microcode	M340x09	L826
Model 845 Microcode	M310x11	L826
Model 850 Microcode	M330x12	L826
Model 855 Microcode	M300x10	L826
Model 860 Microcode	M320x11	L826
Model 960-11 Microcode	M3B0x08	L826
Model 960-31 Microcode	M3A0x09	L826
Model 990 Microcode	M40Ax22	L826
Model 990 Microcode	M41Ax22	L826
Model 994 Microcode	M44Ax22	L826
800 Series Environment Interface (EI)	Level 28	L826
DFT	V10	L826
SCI	V09	L826

NOTE

Microcode for model 870 is the same as that for the 860 and microcode for model 995 is the same as that for the 990.

The NOS 2.8.2 L826 system is supported in environments containing the following peripheral components:

Hardware Component	Release Level
7054/844 (BCS-Half Track)	MA710-D13*
7021/66X (FIRM66X)	MB434-D14*
7155/885/844-4X (FMD-HT/FT)	MA721-D12*
7154/855 (BCF-Full Track)	MA401-D08*
7155-401/885-42/885-1X/844-4X (PHD-HT/FT)	MA722-D03*
7221/639 (CW63X)	MB465-D04*
7255-01/834/835 (ISD I/II)	MA462-D06*
7165/895 (MA464)	MA464-D10*
5870 (CCC5870)	MA466-D03*
7990 (CCC7990)	MB466-D03*
380-170 (NAD)	NOS LVL-06
CM1 Controlware (CMD)	MH422-D07*
CM2 Controlware (CM2)	MH424-D03*
9853 (XMD) Controlware	MH426-D9C*
5830 (DAS) Controlware	MH427-D14*
FSC Tape	MB401-D04*
FSC Disk Firmware (ADP)	MA454-D04*
698-XX CMTS	MB467-D02*
Cartridge Tape PMC	MB468-D04*
CYBER Initialization Package (CIP)	CIP L826

*Contained on CIP 826