NOS V2.2 Level 605 OPERATING SYSTEM

LEVEL 605/587

SOFTWARE RELEASE BULLETIN

LEVEL 605 ADDENDUM

Control Data Corporation recommends that the NOS V2.2 Level 596 Software Release Bulletin as well as this addendum be read in its entirety prior to any software installation of this system.

SMD130632

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NOS Version 2.2 Level 605/587 Software Release Bulletin
March 27, 1984

1.0 INTRODUCTION

The Software Release Bulletin (SRB) is to be used in conjunction with the Installation Handbook (IHB) for installing Control Data Corporation systems. Control Data recommends that the SRB be read in its entirety prior to software installation. Any conflicts between the IHB and the SRB are to be resolved in favor of the SRB.

1.1 Scope

The SRB is the vehicle whereby any changes to the IHB or the Installation Feature Notes, after they have gone to print, are documented. Although features are not fully documented in this SRB, major changes in the system are highlighted with emphasis placed on installation dependent and configuration management data.

1.2 Content

This document contains information necessary to build and install the NOS V2.2 level 605/587 system. The information included in the 602/587 SRB addendum is also included in the 605/587 SRB addendum. The appendix section contains documentation on the new CYBER Initialization Process.

2.0 NOS V2.2 RELEASE DESCRIPTION

This section lists the new features and enhancements of the NOS V2.2 levels 602/587 and NOS V2.2 605/587 systems.

2.1 Operating System Content

- Intelligent Small Disk (834)
- Monitor Display Driver (MDD) and OS Support Mods
- DSDI mods to support HPA Analysis of EDD Hardware registers
- Subsystem Expansion Mods
- CYBERPLUS Phase I Operating System Support
- HSIO Function Timeout
- Standardization of RECLAIM Utility
- Full Screen Editor Enhancements
- Corrective Code

2.2 Common Products

- RHF Corrective Code

2.3 Network Products

- Version levels updated to level 602.
- Corrective Code

2.4 Controlware

The only new controlware added is the following:

- MA722-A02 HSIO

2.5 CYBER Initializatin Package (CIP) Level 1

- Repackaging of CTI, MSL, HIVS, EI and Microcode.

Beginning with the NOS V2.2 level 602/587 system, CIP is required for installing and running the NOS V2 system. CIP is not shipped with operating system software releases for CYBER 170-800 customers.

See Appendix A for additional information on CIP.

2.6 Installation Handbook Changes

The NOS Installation Handbook for NOS V2.2 Level 602 required several changes. A packet of change pages is available for that document and included in the NOS V2.2 Level 602 release. Level 605 update orders, where the previous level was a 596 or earlier level, will have the packet of change pages included with Level 605 release materials.

3.0 SYSTEM INSTALLATION NOTES

A new tailored release process has changed the format of release materials. The concept of REL tapes no longer exists. Release materials now consist of a tailored release deadstart tape and a set of permanent file dump tapes. The permanent file dump tapes are processed by the RECLAIM utility. A document titled Installation Feature Notes is included in the release materials. The Installation Feature Notes supplement the IHB for source installations, documenting the new tape formats and new procedures. It also is a complete set of documentation for the new binary installation process.

CAUTION: Changes to PPR entry points at NOS V2.2 Level 602 require that all PP code must be reassembled.

3.1 Tailored Release Deadstart Tape

The tailored deadstart tape is now two files. The first is the multi record deadstart binaries and the second is a two record file containing the RECLAIM data base and a directory.

It is recommended that a backup copy of the RECLAIM dump tapes be made as a first step for anyone doing a source installation.

For additional information, you should consult the Installation Feature Notes.

3.1.1 Resequenced New Decks for NOS V2.2 Level 602

The following decks were added at NOS V2.2 Level 602:

COMPTMA
COMPDLI
COMPIOU
RECLAIM

No existing decks were resequenced. A new naming convention was used for the composite feature modset identifier. The identifier used was V22L602. It identifies the V2.2 release level and the 602 PSR Summary level. No resequencing was done for Level 605.

3.2 Tailored Release Installation Notes

This section is included to clarify some of the procedures and error messages you may encounter when first using the tailored release process.

- A tailored release binary installation does not require any of the verification jobs be run.
- When the CCP diagnostics tape or the Link Interface Program 1 under CCP3 tape is used by RECLAIM a "No Files Processed" error message is issued. The data base was updated and the error message is normal.
- Non-fatal loader errors or unsatisfied externals do not cause the product build jobs to abort. Dayfiles must be checked for these errors. This will be changed in a future release so that all errors cause aborts.
- It is necessary to use unlabelled tapes when writing deadstart tapes.
- This release takes advantage of a new permanent file utility called RECLAIM. Please refer to the NOS Version 2 Reference Set Volume 3. RECLAIM documentation is included in the change pages packet at NOS V2.2 level 602.
- Code needed in the NOS OPL common decks cannot be added via the USER file during execution of the appropriate DECKOPL procedure. An intermediate OPL must be built with the common deck code prior to executing the DECKOPL procedures.
- All SYSGEN procedures (see the Installation Feature Notes for a full description of SYSGEN) write output to file SYSLIST. All SYSGEN procedures produce a dayfile except the SYSGEN (DST) procedure.
- The tailored release build process builds, by default, a trace, non-debug version of NAM.

4.0 OPERATION SYSTEM CHANGES

4.1 FSE Terminal Support

The NOS Full Screen Editor (FSE) will additionally support the Tektronix 4115, the Lear Siegler ADM3A and the Lear Siegler ADM5 terminals. Use the following SCREEN commands to enter screen mode:

```
SCREEN,T4115
SCREEN,ADM3A.
SCREEN,ADM5.
```

4.2 New TLX Functions

The following capabilities have been added as new TLX functions:

1. Typeahead input checking - a running program can check for the presence of typed ahead input stored for that user in IAF's FL.

2. Program initiated detach - a running program can detach itself from the user's terminal.

4.3 Subsystem Expansion

The limitation that only 12 subsystems (those with the highest subsystem ID-s) can be System Control Point (SCP) subsystems has been removed. Any subsystem can be an SCP subsystem. The format of Control Point Area word SSCW has changed to support this. A UCP will now be allowed to connect to no more than five system control points simultaneously.

As part of this change, a new method of defining subsystems in common deck COMSSSD is used. New macros define the subsystem ID and all attributes of a subsystem. All decks that require a table of subsystem-related information use this common deck to build it. Adding a new subsystem requires the appropriate definition in COMSSSD along with a few other changes which are listed in COMSSSD.

Also, all of the ENABLE/DISABLE status bits for subsystems have been moved from CMR word SSTL to new word SSSL. The bit corresponding to each subsystem is determined by the subsystem ID. The ENABLE, subsystem,cp. and DISABLE,subsystem,cp. operator commands have been moved to the SUBSYST L display utility. It is now necessary to enter the SUBSYST command to bring up the L display before entering these commands. The L display will show the current status of each subsystem.

4.4 Manuals

Complete manual updates will be made for NOS V2.3. The NOS Commands Instant, online manual only, has been updated to fix internal linkage problems encountered when using the compiler commands; no other manuals have been updated. The Security Administrators Handbook will not be included in this release.

ONLINE MANUALS

If you have purchased online manuals, the manual installation procedure on the release tape will install the following files:

File Name	Description
SYSMAN7	Source file for the NOS System Information Manual.
SYSBOOK	Bound file for the NOS System Information Manual.
CONTIN7	Source file for the Online Manual System Reference Manual.
CONTEXT	Bound file for the Online Manual System Reference Manual.
COMMIN7	Source file for the NOS Commands Instant.
COMMAND	Bound file for the NOS Commands Instant.
SORTIN7	Source file for the Sort/Merge Version 5 Reference Manual.
SORT5	Bound file for the Sort/Merge Version 5 Reference Manual.
CIDMAN7	Source file for the CYBER Interactive Debug for NOS 2 Reference Manual.
CID	Bound file for the CYBER Interactive Debug for NOS 2 Reference Manual.
FTNMAN7	Source file for the FORTRAN Version 5 Reference Manual.
FTN5	Bound file for the FORTRAN Version 5 Reference Manual.

The default manual CONTEXT will be installed if you did not order the optional set.

5.0 FUTURES

5.1 Alternate Catlist

Effective with the release of NOS 2.3, files in a user's catalog will no longer appear in an alternate user CATLIST of that catalog unless explicitly authorized on a file-by-file basis by the owning user.

A file's visibility in an alternate user CATLIST will be controlled by means of a new parameter, AC, recognized by the CHANGE, DEFINE, and SAVE permanent file operations.

If AC=Y is supplied as a parameter to one of these operations, the file(s) referenced will appear in an alternate user CATLIST for any user with permission to access the file(s).

If AC=N is supplied, or if no AC parameter is supplied for the DEFINE or SAVE, the file(s) will not appear in any alternate user CATLIST, regardless of whether the user has permission to access the file(s).

In situations where an unauthorized person has gained access to a system, or where files must be maintained as Semi-private or Public due to accessing requirements, this feature will help to prevent a user from "browsing" through users' catalogs to locate potentially interesting files.

5.2 RHF/LCN QMOD Enhancement

The common LCN NAD code will be upgraded. This upgrade, known as the QMOD enhancement, affects all NADs by allowing them to more efficiently balance and process network activity. The major features include:

- The queueing technique for path requests has been changed to a round robin scheme. This ensures equitable service on all paths.
- The queue searches are performed with new and faster instructions. See required FCOs on the attached matrix.
- The CYBER 170 NAD QMOD controlware supports NAD based code conversion. Host software support of this feature will be released in NOS 2.3 and NOS/BE 1.5 Level 604. Enabling this feature requires a minimum of 96K bytes of NAD memory.
- Network timeouts are automatically performed at the NAD to NAD and NAD to host levels. This allows for faster and more consistent handling of network timeouts.

- Additional network status is provided. This allows for future host enhancements in the areas of reliability, maintainability and availability improvements.

The QMOD enhancement is identified for CYBER 170, 7000, IBM and DEC NADs by a new controlware identification number (MG4XX). It is available for CYBER 200 NADS with the VSOS 2.1.5 software release. When this new controlware/software is installed, all the NADs on the network must be upgraded to this level.

****WARNING**** The QMOD trunk protocol is not compatible with non-QMOD trunk protocol. The two protocols cannot be intermixed on the network. Thus, QMOD and non-QMOD should not be installed on the same trunk.

INSTALLATION PROCESS

Prerequisites:

- The NAD hardware must be upgraded to contain the new queue search instructions. See the attached matrix for the required hardware equipment levels.

- The operating system and RHF software must be upgraded as specified in the attached matrix.

The hardware may be upgraded independently and software may be upgraded independently. (All the software releases specified in the matrix will support either QMOD or non-QMOD mode of operation.) However, before QMOD can be installed both the hardware and software must be upgraded as specified by the matrix. Please contact Central Software Support (800-328-9567 or 612-482-3074) if you desire to install QMOD without all the software components being at the indicated levels.

INSTALLATION PROCEDURE

All QMOD NAD controlware/software applicable to a network must be installed simultaneously.

- For CYBER 170, IBM, 7000 and DEC NADs:

  - Install QMOD NAD controlware identified in the attached matrix.

- For CYBER 205 NADs:

  - Install QMOD NAD software per instructions in the VSOS 2.1.5 Software Release Bulletin.

TERMINATION OF NON-QMOD SUPPORT

- Software releases after those specified in the matrix will require a QMOD network environment.
- Future releases of non-QMOD controlware/software are not planned.

QMOD MATRIX

CONFIGURATION	MF TYPE	CYBER 205	CYBER 170			7600	IBM	VAX
	OPER SYSTEM	VSOS	NOS 1	NOS 2	NOS/BE	SCOPE 2.1	MVS	VMS
	NAD TYPE	380-200	380-170			QSE	380-370	380-110
PREREQUISITES	NAD EQUIP. NO. - CONFIG. IDENT.	FW103-A12 (1) FW203-B14 (2)	FW101-A09 (1) FW201-B14 (2)			FW211-B01	FW107-A11 (1) FW207-B14 (2)	FW205-B12 (2)
	RHF SW		1.4 601 2/84 (3)	2.2 605 3/84 (4)	1.5 604 3/84		R2.0 7/84	R1.0 9/84 (6)
	OS SW	2.1.5 607 3/84				(5)	N/A	
	ERROR LOG		CML 161 (HPA) 5/84					
INSTALLATION	NAD CW	N/A	MG401-A01 5/84			MG411-A01 (5)	MG407-D01 6/84	MG405-D01 6/84
	NAD SW	2.1.5 607 3/84	N/A					

NOTES:
(1) Earlier model FW1XX NAD's require FCO CA043872.
(2) Earlier model FW2XX NAD's require FCO CA042805.
(3) Additional PSR's required. Contact Central Software Support for PSR list and availability dates.
(4) The initial release of NOS 2.3 will be verified with non-QMOD and QMOD controlware.
(5) Contact Central Software Support for current planned date.
(6) VAX R1.5 will be verified with non-QMOD and QMOD controlware.

6.0 CONFIGURATION MANAGEMENT

NOS V2.2 level 605/587 was tested in an environment containing the following controlware, microcode, environment interface, CML and HIVS/CTI software components:

Hardware Component	Release Level	Part Number
7054/844 (BCS-HALF TRACK)	MA710-A13	(PN52706607)
7021/67X (FIRM67X)	MB434-A14	(PN52653361)
7155/885/844-4X (FMD-HT/ET)	MA721-A00	(PN53479843)
7154/844 (BCF-FULL TRACK)	MA401-A07	(PN22724600)
7155-501/885-42/885-1X /844-4X (PHD-HT/FT)	MA722-A02	(PN53479851)
7255-01/834 Microcode	MA462-D01	(PN21939499)
380-170 (NAD)	MG101-A05	(PN53367354)
CYBER 18 Mode 4 emulator	MD426-A05	(PN88952276)
CYBER INITIALIZATION PACKAGE	CIP001	
Model 815 Microcode	M11AA09	
Model 825 Microcode	M12AA09	
Model 835 Microcode	M20AA12	
Model 845 Microcode	M310C01	
Model 855 Microcode	M300C01	
800 Series Environment Interface	Level 9	
HIVS	156	
MSL	156	

The following components are certified at the indicated levels:

Hardware Model	Hardware FCA Index	NOS Level	CML Level	CIP Level
CY170-815	3	V2.2 L605	155	001
CY170-825	4	V2.2 L605	155	001
CY170-835	5	V2.2 L605	155	001
CY170-845	1	V2.2 L605	155	001
CY170-855	5	V2.2 L605	155	001
CY170-865	1	V2.2 L605	155	001
CY170-875	1	V2.2 L605	155	001

6.1 Remote Host Verifications

Since the various system releases occur asynchronously, the standard release software used on a link system may be dependent on additional code to support a new system release. A definition of any dependent code is communicated to the Central Software Support organization. Please contact Central Software Support for information about any dependent code or if a problem occurs at your site.

The following systems were functionally verified for proper operation with this release of the Remote Host Facility.

NOS 2.2 L605 to NOS 2.2 L605
NOS 2.2 L605 to NOS 1.4 L601
NOS 2.2 L605 to NOS/BE 1.5 L604
NOS 2.2 L605 to VSOS 2.1.5 L607
NOS 2.2 L605 to NOS 2.2 L602

7.0 KNOWN PROBLEMS

Problems that could possibly affect the reliability or stability of the system are documented below by product area. This is not an all encompassing problem list but a list of those problems to be aware of at installation time. Several problems and solutions refer the reader to SOLVER. If your site does not have access to SOLVER, contact your local Professional Services office. It is not recommended that all this code be installed automatically but that it be chosen selectively after experiencing problem symptoms similar to those documented in these sections.

7.1 A00 FMD Controlware

A problem has been found in the A00 FMD controlware which causes an unrecovered error. HPA reports "BAD COMMAND/PARAM" with general status = 5000 and cylinder = 1777. This problem will be corrected in the MA721-A09 controlware FCO CA45089 which is due to release in mid-April. If this problem is critical to your site, you can obtain a pre-release of the A09 controlware by contacting Central Software Support (1-800-328-9567).

7.2 Interactive CCL and non-721 Terminals

1. Entering a SCREEN command and then calling an interactive CCL procedure will cause CCL prompting to fail. For example, entering "Screen, 722." and then calling CCL will incorrectly put you in input mode instead of CCL dialogue mode. Entering a "(CNTL) T" and a "Line,722." will switch CCL back to line by line prompting.

   Install modset CCL0291 from SOLVER to correct the problem.

NAM

1. NAM aborts shortly after an application has completed a NETON to the system when the system is relatively busy. The message NIP/SCP ERROR RC = 43B,JOBID=JSN is seen in the dayfile.

   Install modset NA5A480 from SOLVER to correct the problem.

2. An application is not allowed to NETON to the network if PRIV is specified in the LCF for that application even though it is a privileged program.

   Install modset NA5A407 from SOLVER to correct the problem.

7.3 Monitor Display Driver

1. The default register display for CPU registers numbered beyond 80 does not display the MCEL, CCEL or PFS registers correctly. A "DR P" command will display incorrect values.

   To correct the problem, display the registers individually with the following format: "DR P 81" will display the PFS1 register.

7.4 Binedit

1. The BINEDIT feature was not updated to the latest level. The released version of BINEDIT is missing corrective modsets at NOS V2.2 Level 602. This product will be updated at NOS V2.3.

7.5 834 Disk Subsystem

A potential problem exists for customers writing PP programs to deal with unrecoverable disk errors on 834 disks.

When writing data to an 834 device, up to 32D sectors of data can get buffered in the control module while waiting for the drive to come into position. This means that the logical disk address maintained by the PP writing data can be updated before the corresponding sector has actually been written to disk. If an unrecoverable error should occur while writing that sector, and if other sectors have been buffered behind the problem sector, then the logical disk address maintained by the PP writing the data will not match the actual sector in error. Users who have written specialized disk error recovery routines should therefore use the disk address returned in detailed status to determine the sector in error instead of the logical address maintained by the PP.

APPENDIX A

CYBER INITIALIZATION PACKAGE (CIP)

A new process has gone into effect regarding the use of the CTI, HIVS, EI and microcode components on CYBER 170-800 series machines. These components, referred to as the hardware/software interface modules, have been packaged together as the CYBER Initialization Package (CIP).

CDC introduces the CIP to simplify the installation of the hardware/software interface modules, and to unify the distribution of the hardware/software interface modules.

The objectives are accomplished by combining the modules into a single release package - CYBER Initialization Package (CIP) and enhancing the installation process to install automatically all of the CIP modules to disk upon selection of a single install option.

For CYBER 170-815, 825, 835, 845 and 855 mainframes, the CIP contains CTI, MSL, microcode, and EI. For CYBER 170-865 and 875 mainframes the CIP contains CTI and MSL. For CYBER 170-700, 170, 70 and 6000 mainframes the CIP contains CTI and HIVS.

Prior to the CIP, the hardware/software interface modules were released on several tapes in various combinations. Combining the modules into the CIP facilitates management of this part of the system and eliminates confusion resulting from the asynchronous releases of the modules. Control Data ensures that the modules on the CIP form a cohesive set.

Prior to the CIP, the installation process required three tapes, three deadstarts and 40 steps. The new installation process requires one deadstart, a single tape and three steps.

Considerations for CYBER 170-800 Series Customers

The CIP was created to make it easier to deadstart CYBER 170-800 series mainframes. The benefits of the CIP and changes to the process affect CYBER 170-800 series customers more significantly than others. The following paragraphs explain how the new process affects all CYBER 170-800 series customers.

1. CIP Release and Distribution. The CIP is released when a change (either a new feature or a correction) is made to one of the CIP modules. A CIP release is planned to occur every six months. A critical problem which must be fixed between the planned releases will cause an additional CIP release.

   The CIP is released on magnetic tape and distributed to CYBER 170-800 series customers as a Field Change Order (FCO). As an FCO, the CIP is sent automatically. It is shipped to the same individual who receives hardware and microcode FCOs (in general, the site customer engineer (CE)). CIP is not shipped with operating system software releases for CYBER 170-800 customers.

2. Installation Options. Automatic installation of the CIP is achieved by selecting a single installation option. The CIP is installed so that it may co-exist with operating system information on the deadstart disk.

   Automatic installation can either be performed in update or initialize mode. Update mode installs the CIP to the deadstart disk and preserves operating system information on the disk. Initialize mode initializes the deadstart disk and installs the CIP, preserving no other information.

   The options to install the CIP modules individually are retained for emergency CIP repair.

3. Operator Changes. Changes have been made to some of the deadstart displays which will be apparent to the operators. The effect should be positive due to the simplified process and the usability features which have been added. In particular, the HELP displays should enable a user to execute most of the deadstart utilities without consulting a manual.

4. Documentation. A CIP User's Guide accompanies the first CIP FCO. The User's Guide includes information about: Installation Process, Operating System Deadstart Process, Displays and Options, FCA Interpretation, Problem Reporting Method, and Emergency CIP Repair Process.

5. Tailored CIP. The CIP is tailored for each CYBER 170-800 series mainframe type, e.g., a CYBER 170-835 series CIP contains microcode and MSL unique to the CYBER 170-835.

   Each CYBER 170-800 series mainframe in a multi-mainframe complex will receive a CIP FCO. Two or more CYBER 170-800 series mainframes in a customer's complex can share a disk containing the CIP only if the mainframes are of the same type and FCO level. (The CYBER 170-865 and 875 mainframes are an exception to this guideline. The CIP is the same for these mainframes and, therefore, a CYBER 170-865 mainframe and a CYBER 170-875 mainframe can share a disk containing CIP.)

6. Single CTI copy. One of the objectives of the process change is to release only one copy of any of the modules. CTI is a part of the CIP tape. Therefore, operating system deadstart tapes received with a NOS or NOS/BE order for CYBER 170-800 series sites will no longer contain a copy of CTI. Operating system load using the tape deadstart file will be supported.

   Note: Customers may use a deadstart tape containing CTI as the operating system load file. However, the CTI on the deadstart tape cannot be used to initialize the mainframe; deadstart from the CTI on the operating system deadstart tape is not supported.

Considerations for CYBER 170-700, 170, 70 and 6000 customers. The effect of the new CIP process on CYBER 170-700, 170, 70 and 6000 mainframe customers is minimal.

The CIP tape replaces the HIVS tape. CIP content and function are the same as HIVS:

- Contains CTI and HIVS modules.
- Is distributed with an operating system order (not as an FCO).
- Provides hardware verification sequencer and deadstart utilities.
- If installed to disk, provides disk deadstart capability.

  Note: Disk residence of the CIP is not a requirement.

The difference between the CIP tape and HIVS tape is that the installation of the CIP tape will be easier and the deadstart displays more usable.

APPENDIX B

PUBLICATIONS ADDENDUM

The following changes and additions to the NOS V2.2 level 602 IHB should be noted before attempting to install the system:

Page	
2-21	The DECKOPL parameters IUN, IPW and IFAMILY are no longer used by the MOVEPF procedure.
2-47	The COMBINC procedure has been dropped from DECKOPL.
2-63A	The insert implies that the file MANUALS must be moved to username LIBRARY when indeed it should be moved to username MANUALS.
2-64	The default values for IUN, IPW, and IFAMILY are now IUN=INSTALL, IPN=INSTALL, IFAMILY=$$.

INSTALLATION RESPONSE FORM

SOFTWARE RELEASE BULLETIN
NOS V2.2 LEVEL 605

Central Software Support maintains a list of the sites using NOS. In order that we may represent the customer base more effectively, we ask that you fill out the form below and return it to Central Software Support. Thank you.

SITE NAME AND CODE _____

SITE ADDRESS _____

_____

_____

_____

_____

CONTACT _____

DATE _____

This site has installed NOS V2.2 level 605/587 and is currently using it in a production environment.

Please return to:

CENTRAL SOFTWARE SUPPORT - ARH213
CONTROL DATA CORPORATION
4201 North Lexington Avenue
St. Paul, Minnesota 55112

NOS4668E