

NOS 1.4 OPERATING SYSTEM

LEVEL 552/552

SOFTWARE RELEASE BULLETIN

SMD130244A

TABLE OF CONTENTS

	<u>Page No.</u>
1.0 INTRODUCTION	1
1.1 MATERIALS	1
1.2 INSTALLATION TAPE	1
1.3 RELEASE TAPES	1
2.0 INSTALLATION NOTES	3
2.1 RECOMMENDED SYSTEM CONTENTS.....	3
2.2 AVAILABLE CORRECTIVE CODE.....	3
2.3 CORRECTED SIM PROBLEMS	4
2.4 AVAILABLE CORRECTIVE CODE NOT RELEASED ON LEVEL 552	4
2.5 NOS Level 552 Release Tape Deviations	4
2.6 AID FOR ESTIMATING 2551 MEMORY REQUIREMENTS	4
3.0 TECHNICAL NOTES	5
3.1 OPERATING SYSTEM MODIFICATIONS	5
3.2 PRODUCT SET MODIFICATIONS	12
3.3 NETWORK MODIFICATIONS	13
3.4 MISCELLANEOUS MODIFICATIONS.....	14
4.0 OPERATING SYSTEM NOTES	17
5.0 FUTURE CHANGES	21
5.1 CEDIAG/KEDIAG DIAGNOSTIC REPLACEMENT	21
5.2 ERROR FLAG CHANGES	22
5.3 INDIRECT ACCESS FILE SIZE.....	22
5.4 PF AND QUEUE UTILITIES	22
5.5 O26 PROCESSING	22
5.6 FILE QUEUEING	23
5.7 PFLOAD PROCESSING	24
5.8 RHF CHANGES	25
6.0 PRODUCT SET NOTES AND CAUTIONS	26
6.1 APL NOTES AND CAUTIONS.....	30
7.0 KNOWN PROBLEMS	31
7.1 REFERENCE MANUAL CORRECTIONS.....	33
8.0 OPERATING SYSTEM CRITICAL CODE	34
9.0 OPERATING SYSTEM SUGGESTED CODE	35
10.0 CONTROLWARE LEVELS	40
11.0 MISCELLANEOUS INSTALLATION COMMENTS	41
11.1 NAM/RBF START-UP PROCEDURES	41
11.2 IAF/TAF START-UP PROCEDURES	41
11.3 RHF START-UP PROCEDURE	41
11.4 XEDIT HELP FILE	42
11.5 MOVEPF	42
11.6 NOTES ON PRODUCT INSTALLATION	42
11.7 NOTES ON INSTALLATION VERIFICATION JOBS	43
11.8 RESEQUENCED DECKS	43

12.0	DETAILED INSTALLATIONS NOTES	44
12.1	SAMPLE LIBDECK WITHOUT ECS	44
12.2	SAMPLE LIBDECK WITH ECS	45
12.3	SAMPLE IPRDECK	46
12.4	NOS EVALUATION CHANGES TO INSTALLATION DEFAULTS ...	47
12.5	NETWORK HOST PRODUCTS	47
12.6	RECOMMENDED INSTALLATION PROCEDURE	48
13.0	INSTALLATION RESPONSE FORM	60
14.0	APPENDIX A - ATTACHED CORRECTIVE MODSET LISTINGS	A-1

1.0 INTRODUCTION

1.1 Materials

The NOS 1.4-552/552 RELO (Installation Tape), the NOS 1.4-552/552 unconfigured Deadstart Tape, the NOS 1.4-552 Common Product Set release tapes, the NOS 1.4-552 Network Product Set (NP) release tapes, and the NOS 1.4-552 Operating System release tapes constitute the materials required for NOS 1.4 level 552/552 installation.

1.2 Installation Tape

The format of the RELO (as re-issued on 03/31/82) tape is as follows:

<u>FILE</u>	<u>RECORD</u>	<u>DESCRIPTION</u>
1	1	Procedure to install files from RELO
	2	REP binaries (Installation Summary Report)
	3-n	Installation Decks (MODIFY PL)
2	1-n	Operating System Critical Code
*3	1	Product Set Mods (UPDATE PL)
4		PSR Data Base Report
	1	(Empty Record)
	2	(Empty Record)
	3	552 CPS and 552 NP PSRs (sorted by product and site)**
	4	552 CPS and 552 NP PSRs (sorted by product and routine)
	5	552 CPS and 552 NP PSRs (sorted by product and PSR number)**
5	1-n	Product Set Suggested Code (TEXT - referred to in this document as UPDSUGG)
6	1-n	Operating System Suggested Code (TEXT - referred to in this document as MDYSUGG).
*7	1	Network Products Mods (UPDATE PL)
8	1-n	APL Suggested Mods (TEXT - Referred to in this document as CAPL)

* Logically empty file.

** Different from Installation Handbook (IHB).

1.3 Release Tapes

The CCP base PL (REL13B) contains only four files with content. The last four files are empty at this release. If the listings which are retained on those four files are required, then they must be obtained from the REL13B tape output (NEW13B) by the CCP build process.

The file identifiers in the labels of the release tapes for this release are YYYYY*NOS552552, where YYYYY is the associated product identifier listed in Table 2-1 of the NOS Installation Handbook (IHB).

2.0 INSTALLATION NOTES

The NOS 1.4-552/552 unconfigured deadstart tape must be used for updating to level 552/552.

2.1 Recommended System Contents

The content of the system during the final system test cycle consisted of the release level PL's plus the following modsets contained on the RELO tape:

<u>CRITICAL</u> <u>(file 2)</u>	<u>UPDSUGG</u> <u>(file 5)</u>	<u>MDYSUGG</u> <u>(file 6)</u>	<u>CAPL</u> <u>(file 8)</u>
ANCPM2	CC4C147	IAFEX58	*NONE*
IAFEX57	CC4O534	IAFEX59	
ANRECL	CD20040		
CIO25	CD20048		
AN1SP1	CD2A378		
CIO24	CL5B229		
FCOPY1A	FL5A560		
MAC23	ID1A177		
CPM17	NA2B770		
	NA2B607		
	RB2A573		

It is strongly recommended that all of the code listed above be added to the system during installation.

2.2 AVAILABLE CORRECTIVE CODE

The following modsets are also available on the RELO tape to fix a variety of problems. This code plus the code listed above was installed and minimally tested during the week preceding the release.

<u>CRITICAL</u> <u>(file 2)</u>	<u>UPDSUGG</u> <u>(file 5)</u>	<u>MDYSUGG</u> <u>(file 6)</u>	<u>CAPL</u> <u>(file 8)</u>
NONE	CC4C128	ANDSD2	AN1SJ5
	CC4C124	COPYU1	KNWC19
	FDP7	GFL1	KNWC18
	NA2B778	DSP17	TAF55
	NA2B774	PVID1	KRA859
	NA2B775	MFQ1A	TAF43A
	NA2B658	ANCPME1	TAF56
	RB2A540	ANCHKPL	KNWC16A
		ANPFDU1	TAF58
		PRKRA5	KRA866
		ANCRD01	PTFS2
		CIO26	ANMSM3
		KRA878	ANSTL1
		KRA832	ANCPD2
		RHFOU2	
			AP2A068

2.2.1 Available Corrective Code not on RELO

The following modset to fix an AAM2 problem is listed in Section 6.0.10 of this document, but does not reside on RELO and has not been tested during the week preceding release:

AM20104

2.3 Corrected SIM Problems

Problems had been previously encountered with modsets contained in some SIM's issued against release levels prior to 552. The problems were corrected by resubmittal of the modsets and the correct modsets are included in the level 552 release materials.

Operating System - A243, A247, A254 and A255

All O.S. and product set SIM's issued with the notation that the code would be included in level 552 are included in the level 552 release materials.

2.4 Available Corrective Code Not Released on Level 552.

The following corrective modsets are not included in Release Level 552, but are attached in Appendix A of this document and are available formally from Field Support:

- * Modset AM20104 - the correct modset listing correcting the AAM2 problem listed in section 6.0.10 of this document.
- * Modset DIMA637 - Corrects FMDFT to not ERROR on GET SERIAL on READ FACTORY/UTILITY MAPS with incomplete data returned to PP.
- * Modset FIPl (No PSR) - Allows installation of RHF with 63 character set.
- * Modset IAFEX61 (NS1A172) - Fixes garbled output encountered in extended character mode processing.
- * Modset KRA881 (NS0G567 and NS05021) - Fixes potential loss of users UEM FL caused by ROLLOUT/ROLLIN.
- * SIM N058-1 (CC40602) - Mode 4 Printer Hangs.
- * SIM N059-1 (CC4C164) - Transparent output on 9600 BPS lines.
- * SIM N060-1 (CC4C198) - CCP loses buffers.
- * SIM N061-1 (RB20179) - Batch terminal hangs at end of print file.
- * SIM N062-1 - Cross Macro Assembler Incompatibility.

2.5 NOS LEVEL 552 Release Tape Deviations

At the 552 Level Release, all Update PL's contained on the release tapes contained 552 level identifiers except as follows:

<u>Tape</u>	<u>Product</u>	<u>PL File #</u>	<u>Last Level Identified</u>
REL2C	FDP (FORMAT)	1	*L538*
REL3B	CCL	1	*L538*
	BINEDIT	9	*L538*
REL5B	LCS3	1	*L538*
	FCS3	8	*L538*

2.6 Aid for Estimating 2551 Memory Requirements

Some customers who had nearly saturated their 2551's have encountered problems - - depending upon their mix of terminals - - when upgrading to level 543 Networks. These problems, which would also apply to level 552, appear to stem from the level 543 rewrite of CCP to introduce the physical record unit (PRU) interface. This rewrite changed the buffer requirements for various terminal types. The document listed below - - which is almost all tables and is an expansion of two informational SIMs - - provides the informational aid necessary to recompute the 2551 configuration requirements for your site.

2551 MEMORY UTILIZATION

This is a rewrite and expansion of SIM's (Software Information Memorandums) N053 and N054. It provides the data necessary to compute the requirements for 2551 memory and allows the user to establish the system memory configurations needed to support these requirements when using Network Products at levels 543, 552, and 562. Section 1 provides the computation for Table Space Requirements. Section 2 provides the data for computing the Buffer Space Requirements. Total 2551 memory requirements are determined by adding the Table Space and Buffer Space requirements and then using the tabulation in Section 3 to determine the configuration necessary to support these requirements. The Tabulation in Section 3 provides the memory space available for Tables and Buffers for various combinations of software and hardware configurations.

Sec. 1 Table Space Memory Computation

The total words required for table space is computed by the following:

$$\begin{aligned} \text{Table Space} &= 50 \times \text{total number of configured lines} \\ &+ 64 \times \text{total number of configured devices} \\ &+ 114 \times \text{number of configured Remote Link trunks.} \end{aligned}$$

Sec. 2 Buffer Space Memory Computations

For each 2551 in the configuration, use the following table to calculate the number of 2551 memory words required for data buffers. Multiply the number of active devices for each traffic type and speed as described by the buffer words required for that entry. The sum of these provides the total Buffer Space requirements for this 2551. Note that Buffer Space must be included for each active device connected to a Packet Switching Network as well as Buffer Space for the X.25 line(s) to the Packet Switching Network.

Words of Buffer Space Required Per Active Device as Described.						
Traffic Type	300	1200	Line Speed (BPS)		9600	19200
			2400	4800		
Mode 4 Batch						
per active output device	--	--	1792	1792	1792	1792
per active input device	--	--	576	576	576	576
HASP M/L						
per active output device	--	--	960	960	960	960
per active input device	--	--	256	256	256	448
BISYNC						
per active output device	--	--	960	960	960	960
per active input device	--	--	200	200	200	200
High Volume Interactive						
per active input/output device	256	256	512	1024	1024	--
Medium Volume Interactive						
per active input/output device	176	176	304	560	560	--
Low Volume Interactive						
per active input/output device	96	96	96	96	96	--
Remote Link Trunk						
per active trunk	--	--	--	--	1344	1344
X.25						
per active line	--	--	400	400	400	400

Sec. 3 2551 Memory Configuration

Total the previously computed Table Space and Buffer Space requirements to determine the total Buffer/Table Space needed. The table below defines the Buffer/Table Space available for the various 2551 hardware and terminal/trunk software configurations. Select the terminal/trunk configurations combination required to support the described network and follow the table across to determine the memory configurations necessary to provide the required Buffer/Table Space in thousands (decimal). If required space exceeds the limits of available space, the network must be configured on multiple 2551s. However, if required memory space exceeds available space by only one or two thousand words, the configuration may be acceptable since CCP regulation mechanisms will accommodate momentary peak buffer requirements. The entry --- means insufficient buffer space to complete initialization within the NPU size.

2551 Available Buffer/Table Space

TIP Configuration								2551 Memory Size			
LOCAL (HIP)	TRUNK (HLIP)	ASYN	ASYN EXT.	MODE 4	HASP	BISYN	X.25	64K	81K	96K	128K
X			X	X	X	X	X	---	---	7	31
X	X		X	X	X	X	X	---	---	3	26
X	X		X	X	X	X	X	---	---	8	26
X		X		X	X	X	X	---	---	5	32
X	X	X		X	X	X	X	---	---	3	27
X				X	X	X	X	---	---	17	33
X	X			X	X	X	X	---	---	13	33
X	X			X	X	X	X	---	---	12	33
X			X		X	X	X	---	---	16	33
X	X		X		X	X	X	---	---	13	33
X	X		X		X	X	X	---	---	11	33
X		X			X	X	X	---	---	18	34
X	X	X			X	X	X	---	---	14	34
X	X	X			X	X	X	---	---	13	34
X					X	X	X	---	10	26	35
X	X				X	X	X	---	7	23	35
X	X				X	X	X	---	5	21	35
X			X	X		X	X	---	---	12	31
X	X		X	X		X	X	---	---	9	31
X	X		X	X		X	X	---	---	7	31
X		X		X		X	X	---	---	13	32
X	X	X		X		X	X	---	---	10	32
X	X	X		X		X	X	---	---	8	32
X				X		X	X	---	6	22	33
X	X			X		X	X	---	2	19	33
X	X			X		X	X	---	---	17	33
X			X		X	X	X	---	6	22	34
X	X		X		X	X	X	---	2	18	33
X	X		X		X	X	X	---	---	17	33
X		X			X	X	X	---	7	23	35
X	X	X			X	X	X	---	4	20	35
X	X	X			X	X	X	---	---	18	35
X					X	X	X	---	16	31	36
X	X				X	X	X	---	12	28	35
X	X				X	X	X	---	11	27	35
X			X	X	X		X	---	---	15	32
X	X		X	X	X		X	---	---	12	31
X	X		X	X	X		X	---	---	10	31
X		X		X	X		X	---	---	16	33
X	X	X		X	X		X	---	---	13	32
X	X	X		X	X		X	---	---	11	32
X				X	X		X	---	9	25	33
X	X			X	X		X	---	5	22	33
X	X			X	X		X	---	4	20	33
X			X		X	X	X	---	9	25	34
X	X		X		X	X	X	---	5	21	34
X	X		X		X	X	X	---	4	20	34
X		X			X	X	X	---	10	26	35
X	X	X			X	X	X	---	6	23	35
X	X	X			X	X	X	---	5	21	35
X					X	X	X	---	3	19	36
X	X				X	X	X	---	15	30	35
X	X				X	X	X	---	14	30	35

2551 Available Buffer/Table Space (Cont.)

TIP Configuration								2551 Memory Size			
LOCAL (HIP)	TRUNK (HLIP)	ASYN	ASYN EXT.	MODE 4	HASP	BISYN	X.25	64K	81K	96K	128K
X			X	X			X	---	6	22	32
X	X		X	X			X	---	18	32	32
X			X	X			X	---	17	32	32
X	X	X		X			X	---	7	23	33
X	X	X		X			X	---	3	20	33
X				X			X	---	18	33	33
X	X			X			X	---	16	30	34
X	X			X			X	---	12	28	34
X				X			X	---	11	27	34
X			X				X	---	16	30	35
X	X		X				X	---	12	28	34
X	X		X				X	---	11	27	34
X		X					X	---	17	31	36
X	X	X					X	---	13	29	35
X	X	X					X	---	12	28	35
X	X						X	10	26	37	37
X	X						X	6	22	31	36
X	X						X	4	21	31	36
X			X	X	X	X		---	6	22	31
X	X		X	X	X	X		---	2	18	31
X		X		X	X	X		---	---	17	31
X	X	X		X	X	X		---	7	23	32
X	X	X		X	X	X		---	4	20	32
X	X	X		X	X	X		---	---	18	32
X	X			X	X	X		---	16	32	33
X	X			X	X	X		---	12	28	33
X	X		X		X	X		---	11	27	33
X	X		X		X	X		---	16	32	34
X	X		X		X	X		---	12	28	33
X	X		X		X	X		---	11	27	33
X	X	X			X	X		---	17	33	35
X	X	X			X	X		---	13	29	34
X	X	X			X	X		---	12	28	34
X	X				X	X		9	26	35	35
X	X				X	X		6	22	35	35
X	X				X	X		4	21	35	35
X			X	X		X		---	11	27	31
X	X		X	X		X		---	8	24	31
X	X	X		X		X		---	6	22	31
X	X	X		X		X		---	13	29	33
X	X	X		X		X		---	9	25	32
X	X	X		X		X		---	8	24	32
X	X			X		X		5	21	33	33
X	X			X		X		---	18	33	33
X	X			X		X		---	16	32	33
X			X			X		5	21	34	34
X	X		X			X		---	18	34	34
X	X		X			X		---	16	32	34
X		X				X		7	23	35	35
X	X	X				X		---	13	29	33
X	X	X				X		---	9	25	32
X	X					X		---	8	24	32
X	X					X		5	21	33	33
X	X					X		---	18	33	33
X	X					X		---	16	32	33
X			X	X	X			5	21	34	34
X	X		X	X	X			---	18	34	34
X	X		X	X	X			---	16	32	34
X		X				X		7	23	35	35
X	X	X				X		---	13	29	33
X	X	X				X		---	9	25	32
X	X					X		---	8	24	32
X	X					X		5	21	33	33
X	X					X		---	18	33	33
X	X					X		---	16	32	33
X			X	X	X			10	26	35	35
X			X	X	X			---	14	31	32
X	X		X	X	X			---	11	27	32
X	X		X	X	X			---	10	26	32
X	X	X		X	X			---	16	32	33
X	X	X		X	X			---	12	28	33
X	X	X		X	X			---	11	27	33
X	X			X	X			8	24	34	34
X	X			X	X			5	21	33	33
X	X			X	X			3	19	33	33

2551 Available Buffer/Table Space (Cont.)

TIP Configuration								2551 Memory Size			
LOCAL (HIP)	TRUNK (HLIP)	ASYNC	ASYNC EXT.	MODE 4	HASP	BISYN	X.25	64K	81K	96K	128K
X			X		X			8	24	34	34
	X		X		X			4	20	34	34
X	X		X		X			3	19	34	34
X		X			X			9	25	35	35
	X	X			X			6	22	35	35
X	X	X			X			4	20	35	35
X					X			18	34	36	36
	X				X			14	30	36	36
X	X				X			13	29	36	36
			X	X				5	21	32	32
	X		X	X				---	18	32	32
X	X		X	X				---	17	32	32
X		X		X				6	22	34	34
	X	X		X				3	19	33	33
X	X	X		X				---	17	33	33
X				X				15	31	34	34
	X			X				11	27	34	34
X	X			X				10	26	34	34
			X					15	31	35	35
	X		X					11	27	35	35
X	X		X					10	26	35	35
X		X						16	32	36	36
	X	X						13	29	36	36
X	X	X						11	28	36	36
X								25	37	37	37
	X							21	36	36	36
X	X							20	36	36	36

NOS2200E