DNOS COBOL
Object Installation

Part No. 2270542-9701 *C
15 December 1983

READ FIRST

Contents

Title   Page

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¶                                                                   ¶
¶READ THIS DOCUMENT BEFORE ATTEMPTING TO USE    THIS    OBJECT   KIT.¶
¶THIS    DOCUMENT    DESCRIBES    THE    3.4.1 VERSION OF THE DNOS COBOL¶
¶OBJECT    INSTALLATION    MEDIA,    PART    NUMBERS    2276420-1601    OR¶
¶2276420-1604.                                                      ¶
¶                                                                   ¶
¶                                                                   ¶
¶                                                                   ¶
¶TEXAS    INSTRUMENTS    ASSUMES NO RESPONSIBILITY FOR MODIFICATIONS¶
¶MADE TO THIS OBJECT KIT.                                           ¶
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Section 1

Introduction

1.1 GENERAL INFORMATION

Be sure to copy and/or write-protect this master. For copy
procedures, refer to the DNOS Operations Guide, part number
2270502-9701.

All system command interpreter (SCI) commands in this document
are given in abbreviated form and may be executed by entering the
command exactly as is, or by using the interactive prompting from
the SCI. For a discussion of the abbreviated command form, refer
to the DNOS System Command Interpreter (SCI) Reference Manual,
part number 2270503-9701.

1.2 FILE SECURITY

If you are installing this package on a system that uses file
security, be sure to log on with a user ID that is a member of
the SYSMGR access group. The proper ID allows you or the
installation batch streams executing under your ID to create and
delete files. Refer to the DNOS Security Manager's Guide, part
number 2308954-9701, for more information on file security.

1.3 MEDIA DEFINITION

Product shipments are in three formats:

* Disk - A DS10, DS25, DS50, or DS200 disk pack, or a
  dual-sided, double-density diskette that contains the
  object

* Magnetic Tape - An 800 bpi or 1600 bpi magnetic tape
  that contains the object

* Add-On - A disk volume that contains both the COBOL
  object installation and one or more other products

The installation instructions in this document assume that the
object files are accessible with a synonym. Section 2 describes
how to prepare the media so that you can use a synonym to access
the files.

1.4   THE INSTALLATION PROCEDURE

The object media contains the files and batch streams to do the following:

* Install the object files

* Verify the installation

1.5   SYSTEM REQUIREMENTS

To successfully perform this installation procedure, you must have a functioning DNOS system.

Section 2

Preparing for Installation

2.1 INTRODUCTION

Before executing the installation instructions, you must prepare
the object files so that the batch stream can access them. The
following paragraphs describe how to prepare each of the media.

2.2 DISK FORMAT

If you received the object on a disk, prepare it for installation
by performing the following steps:

   1. Put the installation disk in an available disk drive on
      a functioning DNOS 1.X system, and load it.

   2. Install the disk by issuing the following command:

          IV U=DSxx, V=CBLINSDN

      In this command, DSxx is the disk drive on which you
      loaded CBLINSDN.

   3. Assign the synonym COBOLINS to the disk by issuing the
      following command:

          AS S=COBOLINS, V=CBLINSDN

Now go to Section 3 for instructions for installing the object.

2.3   MAGNETIC TAPE FORMAT

If you received the object on a magnetic tape, you must move the
files to a disk before beginning the installation process. To do
this:

    1. Create a directory on a disk by issuing the   following
        command:

            CFDIR P=<volume name>.CBLINSDN, M=15

        In this command, <volume name> is the name of the disk
        on which you will create the directory.

    2. Load the magnetic tape on an available tape drive.

    3. Move the contents of the magnetic tape to the directory
        you created by issuing the following command:

            RD S=MTxx, D=<volume name>.CBLINSDN, L=.LISTING,

        In this command, MTxx is the tape drive from which you
        will copy the object. <volume name> is the name of the
        disk volume onto which you will copy the object. The
        file .LISTING now contains a listing of the directory
        restored from the magnetic tape. You can examine this
        file by executing a Show File (SF) or a Print File (PF)
        command.

    4. Unload the tape.

    5. Assign the synonym COBOLINS to the pathname of the
        restored directory by issuing the following command:

            AS S=COBOLINS, V=<volume name>.CBLINSDN

        In this command, <volume name> must be the volume name
        of the disk that received the restored directory.

Now go to Section 3 for instructions for installing the object.

2.4 ADD-ON FORMAT

If you received the object as an add-on package, prepare it for
installation by performing the following steps:

1. Put the disk containing the add-on package in an
   available disk drive on a functioning DNOS 1.X system,
   and load it.

2. Install the disk by issuing the following command:

      IV U=DSxx, V=<volume name>

   In this command, DSxx is the disk drive on which you
   loaded the volume, and <volume name> is the volume name
   of the add-on disk. The volume name is marked on the
   disk. You can also execute a Show Volume Status (SVS)
   command to obtain the volume name.

3. Assign the synonym COBOLINS to the disk by issuing the
   following command:

      AS S=COBOLINS, V=<volume name>.CBLINSDN

Now go to Section 3 for instructions for installing the object.

Section 3

Installing the Object

This section describes the procedure to install the COBOL
compiler and run-time support on your DNOS system.   The
installation procedure does the following:

1. Deletes the previously installed version of DNOS COBOL

2. Installs the DNOS COBOL runtime and compile

To install the object, perform the following steps:

1. Assign the logical name S$COBOL by   issuing   the
   following command:

        ALN L=S$COBOL, A=.S$LANG, G=YES

   In this command, .S$LANG is the pathname of the program
   file.

   Assigning   the   logical   name   in   this   way sets   it
   temporarily. It will remain active only until the
   system is halted.   In order for the logical name to be
   permanent, execute the following command:

        SGND

   This command has no parameters.

2. Assign the synonym DSC to the system disk on which you
   want to install COBOL by issuing the following command:

        AS S=DSC, V=<volume name>

   In   this command, <volume name> is the name of the disk
   on which you will install COBOL.

3. Assign the synonymn DSC2 to the disk on which you want
    to install the linkable run-time modules. Normally,
    you would assign the same value as you assigned to DSC.
    Assign the synonym by issuing the following command:

        AS S=DSC2, V=<volume name>

    In this command, <volume name> is the volume name of
    the disk on which you will install the linkable run-
    time modules.

4. Execute the batch stream by issuing the following
    command:

        XB I=CBLINSDN.INSTALL, L=.LISTING

This process normally takes about ten minutes to execute. During
this time, you may wish to check the status of the batch stream
for completion and proper execution. For this purpose, execute
either SCI command Show Background Status (SBS) or Wait (WAIT).
When the execution is complete, the following message appears:

COBOL INSTALLATION COMPLETE: ERRORS = nn

If nn is not equal to zero, examine the batch listing to
determine the error.   The following error codes are normal and
should be ignored.

*   0118 error in a Release LUNO (RL) command.

*   0316 error in a Create Directory File (CFDIR) command.

*   0315 error in a Delete File (DF), Delete Directory (DD),
    or Modify File Protection (MFP) command.

*   1023 error in a Delete Task (DT) or Delete Procedure
    (DP) command.

*   1029 error in a DT or DP command.

During installation of COBOL, the following components of the
compiler and run-time support are installed on the target disk:

Files:
  Directory:
    DSC.S$CMDS
      .XCP   SCI procedure - Execute COBOL Program
      .XCPF   SCI procedure - Execute COBOL Program
                                in Foreground
      .XCT   SCI procedure - Execute COBOL Task
      .XCTF   SCI procedure - Execute COBOL Task
                                in Foreground

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        .XCTD                       SCI procedure - Execute COBOL Task
                                    in Debug
        .XCC                        SCI procedure - Execute COBOL Compiler
        .XCCF                       SCI procedure - Execute COBOL Compiler
                                    in Foreground
        .M$COBOL                    SCI menu - COBOL SCI commands
     DSC.S$MSG.COBOL                Run-time message file
     DSC.S$MSG.COBOLCMP            Compiler message file
     DSC.S$EXPMSG.COBOL           Run-time expanded message file

  Directory:
    DSC2.S$SYSLIB
        .RCBPRC                     Alias pointing to RCBPRCNW
        .RCBPRCNW                   Standard linkable run-time reentrant
                                    procedure module.  This is arranged
                                    so that it is not necessary to change
                                    link control streams to link with
                                    the COBOL PLUS version.
        .RCBNOIO                    Alias pointing to RCBNOION
        .RCBNOION                   Standard linkable run-time reentrant
                                    procedure module without I/O
                                    capabilities.  This is arranged
                                    so that it is not necessary to
                                    change link control streams to
                                    link with the COBOL PLUS version.
        .RCBTSK                     Linkable run-time task segment without
                                    debugger
        .RCBTSKD                    Linkable run-time task segment with
                                    debugger
        .RCBMPD                     Linkable run-time main program
                                    designator
        .SVERS                      COBOL version indicator used for
                                    compatibility checks; do not delete
        .C$SUBS                     Run-time subroutine library (Directory)
      .WCS                          The files contained in this
                                    directory are activated if the
                                    performance package (DPP) is
                                    installed.
        .RCBPRCW                    Linkable run-time reentrant
                                    procedure module
        .RCBNOIOW                   Linkable run-time task segment
                                    without I/O capabilities
        .XCP                        Installable source for the
                                    run-time task
        .XCPD                       Installable source for the
                                    run-time task with debugger

  Tasks:
    Program file:
      DSC.S$LANG
        .COBOL                      Compiler task
        .XCP                        Run-time task without debugger
        .XCPD                       Run-time task with debugger
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Procedures:
   Program file:
      DSC.S$LANG
         .RLOADER   Task loader
   Program file:
      DSC.S$SHARED
         .RCOBOL   Shared reentrant run-time
                               procedure

If you wish to delete the installed runtime and compiler from
your system, use the DF, DD, DT, or DP commands, as appropriate,
to remove the components listed in the preceding list.

Section 4 discusses the instructions for verification of a
successful installation.

Section 4

Verifying the Installation

A test program is provided on the DNOS COBOL disk to determine if the package is installed properly.

1. Compile the test program by issuing the following command:

   XCCF S=CBLINSDN.TESTCASE, O=.TESTOBJ, L=ME

2. Execute the test program by issuing the following command:

   XCPF O=.TESTOBJ

   When the test program satisfactorily completes, the following message appears on the video display terminal:

   THIS TEST PROGRAM RUNS ON A TI990 MINICOMPUTER
           IT IS WRITTEN IN TI COBOL
   HIT RETURN TO COMPLETE TEST

3. Press the Return key to complete the test. The following message appears:

   I COBOL-C01C COBOL STOP RUN AT: 001C IN MAIN
   I COBOL-C009 END COBOL RUN

   Press the Command key to return to SCI.

4. Delete the generated COBOL object module, as follows:

   DF P=.TESTOBJ