

CONTROL-D Getting Started Guide



Supporting

CONTROL-D version 6.2.21

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Have the following information available so that Customer Support can begin working on your issue immediately:

- product information
 - product name
 - product version (release number)
 - license number and password (trial or permanent)
- operating system and environment information
 - machine type
 - operating system type, version, and service pack or other maintenance level such as PUT or PTF
 - system hardware configuration
 - serial numbers
 - related software (database, application, and communication) including type, version, and service pack or maintenance level
- sequence of events leading to the issue
- commands and options that you used
- messages received (and the time and date that you received them)
 - product error messages
 - messages from the operating system, such as `file system full`
 - messages from related software

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About This Guide

This guide describes how to begin using CONTROL-D, particularly the following functions:

- Automatic backup and restoring of production job MSGCLASS output
- Report handling
 - Decollation (separation)
 - Online viewing
- Report editing
 - Printing
 - Backing up and restoring
- Preparing for production implementation

Format of This Guide

This guide is composed of two major parts:

- Online demonstration of many of the basic CONTROL-D facilities (Chapters 1 through 5).
- Suggestions and recommendations for implementing CONTROL-D in a production environment (Chapter 6, Preparing for Production).

When you have completed the *CONTROL-D Getting Started Guide*, you are ready to implement CONTROL-D in production.

Before You Begin

In order to access online the examples described in this guide, CONTROL-D must be installed at your site in accordance with the *INCONTROL for z/OS Installation Guide*.

Using a color terminal is recommended, but not necessary.

- 1 Prepare jobs PREPGSD and INITGS using option 7.3 in the INCONTROL™ Installation and Customization Engine (ICE).
- 2 Submit the JCL in member PREPGSD in the IOA INSTWORK library to prepare the Getting Started environment. If the JCL in member INITGS of the INSTWORK library was not run during the CONTROL-D installation, submit it also.

After the job has executed successfully, you will be ready to proceed.

- 3 Ensure that the CONTROL-D monitor is active.
- 4 Perform the exercises in this guide in the order that they are presented.

Help Information

Help information is readily available while using CONTROL-D. Help screens can be accessed by using the HELP command by typing **HELP** in the COMMAND line or by pressing **PF01/PF13** from any CONTROL-D screen.

Use standard scrolling conventions (**PF08/PF20** and **PF07/PF19**) to scroll forward and backward through the help information. To return to the original screen, use the END command (**PF03/PF15**).

Conventions Used in This Guide

Notational conventions that may be used in this guide are explained below.

Standard Keyboard Keys

Keys that appear on the standard keyboard are identified in boldface, for example, **Enter**, **Shift**, **Ctrl+S** (a key combination), or **Ctrl S** (a key sequence).



WARNING

The commands, instructions, procedures, and syntax illustrated in this guide presume that the keyboards at your site are mapped in accordance with the EBCDIC character set. Certain special characters are referred to in this documentation, and you must ensure that your keyboard enables you to generate accurate EBCDIC hex codes. This is particularly true on keyboards that have been adapted to show local or national symbols. You should verify that

\$ is mapped to x'5B'

is mapped to x'7B'

@ is mapped to x'7C'

If you have any questions about whether your keyboard is properly mapped, contact your system administrator.

Preconfigured PFKeys

Many commands are preconfigured to specific keys or key combinations. This is particularly true with regard to numbered PF keys, or pairs of numbered PFKeys. For example, the END command is preconfigured to, and indicated as, **PF03/PF15**. To execute the END command, press either the **PF03** key or the **PF15** key.

Instructions to enter commands may include

- only the name of the command, such as, enter the END command
- only the PF keys, such as, press **PF03/PF15**
- or both, such as, press **PF03/PF15**, or enter the END command

Command Lines and Option Fields

Most screens contain a command line, which is primarily used to identify a single field where commands, or options, or both, are to be entered. These fields are usually designated **COMMAND**, but they are occasionally identified as **COMMAND/OPT** or **COMMAND/OPTION**.

Option field headings appear in many screens. These headings sometimes appear in the screen examples as **OPTION**, or **OPT**, or **O**.

Names of Commands, Fields, Files, Functions, Jobs, Libraries, Members, Missions, Options, Parameters, Reports, Subparameters, and Users

The names of commands, fields, functions, jobs, libraries, members, missions, options, parameters, reports, subparameters, users, and most files, are shown in standard UPPERCASE font.

User Entries

In situations where you are instructed to enter characters using the keyboard, the specific characters to be entered are shown in this **UPPERCASE BOLD** text, for example, type **EXITNAME**.

Syntax statements

In syntax, the following additional conventions apply:

- A vertical bar (|) separating items indicates that you must choose one item. In the following example, you would choose *a*, *b*, or *c*:

a | b | c

- An ellipsis (. . .) indicates that you can repeat the preceding item or items as many times as necessary.
- Square brackets ([]) around an item indicate that the item is optional. If square brackets ([]) are around a group of items, this indicates that the item is optional, and you may choose to implement any single item in the group. Square brackets can open ([) and close (]) on the same line of text, or may begin on one line of text and end, with the choices being stacked, one or more lines later.
- Braces ({ }) around a group of items indicates that the item is mandatory, and you must choose to implement a single item in the group. Braces can open ({) and close (}) on the same line of text, or may begin on one line of text and end, with the choices being stacked, one or more lines later.

Screen Characters

All syntax, operating system terms, and literal examples are presented in this typeface. This includes JCL calls, code examples, control statements, and system messages. Examples of this are:

- calls, such as

```
CALL 'CBLTDLI'
```

- code examples, such as

```
FOR TABLE owner.name USE option, . . . ;
```

- control statements, such as

```
//PRDSYSIN DD * USERLOAD PRD(2) PRINT
```

- **system messages, both stand-alone, such as** You are not logged on to database `database_name`, **and those embedded in text, such as the message** You are not logged on to database `database_name`, **are displayed on the screen.**

Variables

Variables are identified with *italic* text. Examples of this are:

- In syntax or message text, such as
Specify database *database_name*
- In regular text, such as
replace database *database_name1* with database *database_name2* for the current session
- In a version number, such as
EXTENDED BUFFER MANAGER for IMS 4.1.xx

Special elements

This book includes special elements called *notes* and *warnings*:

NOTE



Notes provide additional information about the current subject.

WARNING



Warnings alert you to situations that can cause problems, such as loss of data, if you do not follow instructions carefully.

Information New to This Version

Where substantive additions and modifications to the content of this guide occur, revision bars have been inserted in the margin.

Related Publications

CONTROL-D Online Viewing Guide

Tutorial guide that demonstrates the features of the Online Viewing facility.

CONTROL-D Planning and Implementation Guide

Practical guide for determining implementation objectives and, for planning and performing the implementation of CONTROL-D.

CONTROL-D User Guide

Detailed explanation of the base CONTROL-D product, an output management system that automatically schedules and controls every aspect of report processing and distribution, including report decollating, bundling, printing, online viewing, and archiving

Implementing AFP in the CONTROL-D Environment

Guide to the efficient utilization of the built-in AFP support features of CONTROL-D.

INCONTROL for z/OS Administrator Guide

Information for system administrators about customizing and maintaining INCONTROL™ products.

INCONTROL for z/OS Installation Guide

Step-by-step guide to installing INCONTROL products using the INCONTROL™ Installation and Customization Engine (ICE) application.

INCONTROL for z/OS Messages Manual

Comprehensive listing and explanation of all INCONTROL and IOA messages and codes.

INCONTROL for z/OS Security Guide

Step-by-step guide to implementing security in INCONTROL products.

INCONTROL for z/OS Utilities Guide

Describes utilities designed to perform specific administrative tasks that are available to INCONTROL products.

CONTROL-D Recipient Tree

This chapter includes the following topics:

Overview	20
Entering and Displaying the Recipient Tree	20
Displaying Additional Information on Recipients	22

Overview

The Recipient Tree is a list of users who can receive online reports and/or printed reports. The tree is built in either a basic format or a hierarchical format, according to the requirements of your data center. Considerations on how to build your tree appear in [Chapter 6, “Preparing for Production,”](#) and in the *CONTROL-D User Guide*.

A sample tree, CTDTREE, has been supplied for the tutorial in this guide. This chapter has you look at the sample tree and see what users are defined.

NOTE



You must submit the JCL found in member PREPGSD in the IOA INSTWORK library to prepare the Getting Started environment, as described in [“Before You Begin” on page 11](#). When the job has executed successfully, you are ready to proceed.

Entering and Displaying the Recipient Tree

- 1 Enter the IOA Primary Option menu (the INCONTROL products main menu), using any online environment supported by CONTROL-D (TSO, TSO/ISPF, ROSCOE, CICS, IMS/DC, VTAM, IDMS, COM-LETE, and so on).

Figure 1 IOA Primary Option Menu

----- IOA PRIMARY OPTION MENU ----- (1)		
OPTION ==>		USER NO6
IOA	CONTROL-D/V	CONTROL-O
4 COND-RES	A MISSION STATUS	OR RULE DEFINITION
5 LOG	M MISSION DEF	OM MSG STATISTICS
6 TSO	R REPORT DEF	OS RULE STATUS
7 MANUAL COND	T RECIPIENT TREE	OL AUTOMATION LOG
8 CALENDAR DEF	U USER REPORTS	OA AUTOMATION OPTS
IV VARIABLE DATABASE	F PC PACKET STATUS	OC COSMOS STATUS
	DO OBJECTS	OK KOA RECORDER
CONTROL-M & CTM/Restart	CONTROL-M/Analyzer	CONTROL-M/Tape
2 JOB SCHEDULE DEF	BB BALANCING STATUS	TR RULE DEFINITION
3 ACTIVE ENV.	BM MISSION DEF	TP POOL DEFINITION
C CMEM DEFINITION	BV DB VARIABLE DEF	TV VAULT DEFINITION
	BR RULE DEFINITION	TI INQ/UPD MEDIA DB
	BA RULE ACTIVITY	TC CHECK IN EXT VOL
COMMANDS: X - EXIT, HELP, INFO OR CHOOSE A MENU OPTION		16. 20. 21

- In the OPTION field, type **T** and press **Enter**. The IOA Recipient Tree entry panel is displayed.

Figure 2 IOA Recipient Tree – Entry Panel

```

----- IOA RECIPIENT TREE - ENTRY PANEL ----- (T)
COMMAND ==>

SPECIFY LIBRARY NAME AND MEMBER (TREE) NAME
LIBRARY ==> CTD. PROD. PARM
MEMBER ==> CTDTREE                                BROWSE (Y/N)

LEVEL 10      OPERATIONS                            ==>
      15      PRESIDENT                             ==>
      20      REGNL-MGMT                             ==>
      25      BRANCH                                 ==>
      30      BRANCH-DEPT                           ==>
      50      DIVISION                               ==>
      55      DEPARTMENT                             ==>
      60      SECTION                                ==>
      80      WORKERS                                ==>
      90      CD-CONTROL                             ==>
      95      OP-USER                                ==>

FOR DIRECT ACCESS, FILL IN RECIPIENT NAME IN APPROPRIATE LEVEL      11.51.41
    
```

- If the library name in the LIBRARY field is not the same as your CONTROL-D PARM library name, correct it. The member name should be CTDTREE.
- Press **Enter**. The CONTROL-D Recipient Tree screen is displayed.

View the user list to familiarize yourself with the tree format.

Type **N** in the **SAVE** field and press **Enter**.

N stands for **NO SAVE**, so that the sample tree required for the tutorial is not accidentally changed.

6 Press **PF03/PF15** to return to the IOA Primary Option menu.

Report Decollating Missions – Generic

This chapter includes the following topics:

Managing MSGCLASS Job Output	26
Activating a Decollating Mission Manually.....	33
Tracking and Control.....	36
Viewing and Editing MSGCLASS Output Online	39
Viewing MSGCLASS Output.....	39
Editing MSGCLASS Output	41
Immediate Printing	43

Managing MSGCLASS Job Output

CONTROL-D manages MSGCLASS job output with the help of a report decollating mission.

The decollating mission retrieves output from the system spool, creates compressed output datasets, and establishes ownership of the output (reports).

There are two types of decollating missions:

- A generic decollating mission that contains all instructions required for CONTROL-D to process a selected group of output from one or more predefined classes (meaning, one generic decollating mission for one or more jobs). A good example of a generic decollating mission is the MSGCLASS output of all production jobs.
- A job decollating mission that contains all instructions required for CONTROL-D to process one job name (meaning, one job decollating mission per job).

Define report decollating mission parameters only once for each job or group of jobs. CONTROL-D uses these parameters for numerous executions of the same decollating mission. You can modify the parameters at any time, as needed.

From the IOA Primary Option menu, do the following:

- 1 From the IOA Primary Option menu, select option R and press **Enter**. The Report Decollating Mission Definition entry panel is displayed.

Figure 6 Report Decollating Mission Definition Entry Panel

```

----- CONTROL-D/V REPORT DECOLLATING MISSION DEFINITION ENTRY PANEL -----(R)
COMMAND ==>

SPECIFY LIBRARY, JOB/REPORT NAME, CATEGORY

LIBRARY ==> CTD. PROD. REPORTS
JOB ==> (Blank for job selection list)
CATEGORY ==> (Blank for category selection list)

SHOW SCHEDULING CRITERIA ==> N (Y/N)

USE THE COMMAND "SHPF" TO SEE PFK ASSIGNMENT 12.39.42

```

If the library name in the LIBRARY field is not the same as your CONTROL-D REPORTS library name, correct it.

6 Type s and press Enter.

Figure 9 Predefined Generic Decollating Mission Definition

```

----- CONTROL-D/V CATEGORY DAILY JOB * ----- (R. S)
COMMAND ==> SCROLL==> CRSR
-----+-----
CATEGORY DAILY JOBNAME * GENERIC Y MONITOR 1
=====
DEF COPIES 01 LVL USER UNIDENT DEST MAX COPIES
=====
ON CLASS = EXTWTR DEST FORM
PRT COPIES LVL USER DEST MAX COPIES
PRINT/CDAM PARS = ALLOCOPT=JOBSDSN1
PRINT/CDAM PARS =
WHEN LINE - COL - PRINT REF NXT CT AND/OR
STRING =
DO NAME = PRODUCTION JCL
DO USER = PRODCNTL LVL LINE COL -
SN T SYNONYM = CONCAT =
DO BACKUP = BKPO007D
DO
WHEN LINE - COL - PRINT REF NXT CT AND/OR
STRING =
DO
=====
ON
FILL IN REPORT DEFINITION. CMDS: EDIT, SCHED, SHPF, PATH 13.53.36
    
```

This is a predefined generic decollating mission definition. At this stage you only need to be concerned with a few of the parameter fields on the screen. In general, CONTROL-D allows you to view all the parameters for each mission in one screen; however, only a few parameters are used in a typical mission.

Note the following fields:

Table 1 Decollation Mission Parameters (part 1 of 2)

Parameter	Description
JOBNAME	* selects any jobname. All jobs are selected.
GENERIC	Y indicates a generic decollating mission. The mission selects the non-held output from the specified class (as described in the ON CLASS parameter in this table), and decollates it.
ON CLASS	Specifies the generic class to process. During the installation process, one to eight generic classes are defined.
PRINT/CDAM PARS	= ALLOCOPT=JOBSDSN1 Use the ALLOCOPT parameter to improve CONTROL-D performance according to the type of output processed. For more information, see the CDAM chapter in the <i>CONTROL-D User Guide</i> . The optimum parameter for MSGCLASS generic processing is JOBSDSN1.

Table 1 Decollation Mission Parameters (part 2 of 2)

Parameter	Description
WHEN LINE STRING	Use the WHEN parameter to identify each page in a report. Because MSGCLASS output is not identified by page, leave this field blank for this example.
DO	<p>After output is selected, DO statements instruct CONTROL-D what to do with the output. You can specify any number of DO statements. In this example:</p> <ul style="list-style-type: none"> ■ DO NAME=PRODUCTION JCL All output processed from the specified class is named PRODUCTION JCL in CONTROL-D. ■ DO USER=PRODCNTL All output processed from the specified class is directed (not necessarily printed) to the recipient PRODCNTL. ■ DO BACKUP=BKP0007D All output processed from the specified class is backed up to tape or cartridge and retained for a week. For more information about backup, see Chapter 5, “Backup and Restoring.”

NOTE

Additional empty DO, WHEN, and ON clauses appear after the set of filled-in DO lines. These additional clauses are not required for this decollating mission, but they are available if you want to add additional criteria later.

The set of empty DO, WHEN, and ON clauses is created each time you fill-in and enter a new set of DO, WHEN, and ON clauses.

7 When you define scheduling criteria for the decollating mission for the first time, these scheduling criteria are usually hidden, and they are seldom used. Display them as follows:

A Position the cursor in the COMMAND field.

B Type `SCHED` and press **Enter**.

Figure 10 Scheduling Criteria Display

```

----- CONTROL-D/V CATEGORY DAILY JOB * ----- (R. S)
COMMAND ==> SCROLL==> CRSR
+-----+
CATEGORY DAILY JOBNAME * GENERIC Y MONITOR 1
OWNER M22 TASKTYPE REP GROUP MSGCLASS-JCL JOBID
DESC GENERIC - FOR ALL PRODUCTION MSGCLASS (JCL)
DESC
=====
DAYS ALL DCAL
AND/OR
WDAYS WCAL
MONTHS 1- Y 2- Y 3- Y 4- Y 5- Y 6- Y 7- Y 8- Y 9- Y 10- Y 11- Y 12- Y
DATES
CONF CAL SHIFT RETRO N MAXWAIT OO
MI NI MUM PDS
=====
IN
WHEN IN QUEUE CLS TIME FROM UNTIL INTERVAL PRI ORI TY
DSN
=====
OUT
SHOUT WHEN NOTOK TO OPER2 URG R
MSG GENERIC DECOLLATING MISSION --> PRODJCL ENDED N O T O K !!!!
FILL IN REPORT DEFINITION. CMDS: EDIT, SCHED, SHPF, PATH 14.06.08

```

The scheduling criteria are displayed.

C Look for the SHOUT option. This SHOUT sends a highlighted, unscrollable message to the operator console if this mission finishes without executing successfully.

8 To hide the scheduling criteria again do the following:

A Position the cursor in the COMMAND field.

B Type **SCHED** and press **Enter**. The scheduling criteria are hidden again.

9 Press **PF03/PF15**. You are returned to the Category list.

10 Press **PF03/PF15** once again. If any modifications were made to the generic decollating mission, the Exit Option window is displayed.

Type **N** in the SAVE field and press **Enter**.

N stands for NO SAVE, so that the sample generic decollating mission required for the tutotial is not accidentally changed.

11 Press **PF03/PF15** twice to return to the IOA Primary Option menu.

Activating a Decollating Mission Manually

Decollating missions defined in a library are activated by “ordering” them. In CONTROL-D, missions are ordered in two ways:

- Automatic ordering – Use automatic orders for most regularly scheduled processing. All missions defined for automatic processing are “ordered” automatically. For more information, see [“Setting Up Automatic Orders of Missions” on page 91](#).
- Manual ordering – Use manual orders for missions that cannot be planned in advance, and for mission testing.

Order the decollating mission for the Walkthrough manually since it was not planned in advance.

- 1 From the IOA Primary Option menu, select option R and press **Enter**.

Figure 11 Report Decollating Mission Definition Entry Panel

```

-----CONTROL-D/V REPORT DECOLLATING MISSION DEFINITION ENTRY PANEL -----(R)
COMMAND ==>

SPECIFY LIBRARY, JOB/REPORT NAME, CATEGORY

LIBRARY ==> CTD. PROD. REPORTS
JOB ==> (Blank for job selection list)
CATEGORY ==> (Blank for category selection list)

SHOW SCHEDULING CRITERIA ==> N (Y/N)

USE THE COMMAND "SHPF" TO SEE PFK ASSIGNMENT
12.39.42

```

You have entered the CONTROL-D Report Decollating Mission Definition entry panel. Do not change the library name that you just used.

To manually automate Generic Classes processing, issue operator command

```
F CONTROLD, STARTGEN
```

The following message is displayed on the operator console from which the modify command was issued:

```
CTD139I  GENERIC JOB DECOLLATION IS ACTIVE ON CLASSES (class-list)
```

To deactivate Generic Classes processing, issue operator command

```
F CONTROLD, STOPGEN
```

The last scrollable line in the screen is where the decollating mission that you ordered in the previous exercise is displayed. Other missions in the list are used in later sections of the Getting Started Guide.

The status of the newly ordered decollating mission is GENERIC WAITING FOR JOB. This indicates that CONTROL-D is waiting for a non-held job output to appear in the output class specified in the ON CLASS statement of the decollating mission.

- A** Press **Enter** periodically to display status changes. If the status remains unchanged for more than a few seconds (maximum thirty), there is no non-held output in the generic class on spool.
- B** For purposes of this tutorial, release a few MSGCLASS outputs to this class (using FLASHER, SDSF or any other spool display facility installed at your data center). When the decollating mission is processing the output of a job, its status changes to GENERIC DECOLLATING and the job name and job ID are also displayed.

The status may change to ENDED OK and to other statuses during operation. When the decollating mission returns to WAITING FOR JOB status, there is no more non-held output in the generic output class on spool.

- 3** Position the cursor to the left of the decollating mission.

Viewing and Editing MSGCLASS Output Online

Viewing MSGCLASS Output

- 1 From the IOA Primary Option menu, type **U** and press **Enter**. The User Reports entry panel is displayed.

Figure 17 User Reports Entry Panel

```

----- CONTROL-D/V - USER REPORTS ENTRY PANEL -----(U)
COMMAND ==>

OPTI ONS ==>          1. PERMANENT  2. ACTI VE/MI GRATED  3. HI STORY

REPORT NAME  ==>
USER         ==> PRODCNTL          Report name, pref i x or mask
DATE FROM   ==>          TO       Recipient name or pref i x
JOBNAME     ==>          Job name, pref i x or mask

SHOW MI GRATED ==> N             Include mi grated reports

I NDEX      ==>
VALUE      ==>
          ==>

DI SPLAY TYPE ==> J             BYPASS PANEL ==> N

```

The User Reports entry panel is the main end-user (recipient) interface to CONTROL-D information. Many facilities are provided under the User Reports screens. These are explained in depth in [Chapter 3, “Report Decollating Missions – Job.”](#)

- 2 Position the cursor in the USER field.
- 3 Type **PRODCNTL**.
- 4 The CONTROL-D Online Viewing facility displays the list of reports in many different display types. The display type you use now is for MSGCLASS (JCL) output.
 - A Position the cursor in the DISPLAY TYPE field.
 - B Type **J** and press **Enter**. The Active Report List screen is displayed.

Figure 18 Active Report List Screen

ACTIVE LIST	<J> JOB	REP	USR	PRODCNTL	(U)						
COMMAND ==>				SCROLL==>	CRSR						
O	JOBNAME	JNUM	STARTED	ENDED	PAGES	LI NES V	REMARK				
	PRDRPTS2	8879	05/05/00	08: 47 08: 47	5	78	C0000				
	PRDKPL01	9723	05/05/00	09: 17 09: 17	4	186	SOC4				
	M22PR01	8042	05/05/00	09: 28 09: 32	4	54	C0000				
	M22PR02	8059	05/05/00	09: 47 09: 56	4	48	C0000				
	M01OERM	8068	05/05/00	09: 48 10: 22	17	679	C0000				
	M200EP3	8100	05/05/00	10: 29 10: 29	15	583	JFAI L				
	M22PARM	8218	05/05/00	11: 58 11: 58	9	251	C0000				
	M12AWDT	8423	05/05/00	14: 50 14: 51	24	855	C0004				
	M08STMI S	9261	05/05/00	15: 07 15: 10	331	16497	S222				
	M0869REP	9262	05/05/00	15: 08 15: 10	320	16021	U1024				
	M225MANL	8443	05/05/00	15: 08 15: 08	8	539	C0000				
	M225MSGD	8463	05/05/00	15: 21 15: 21	9	701	C0012				
	M28RPTU	8521	05/05/00	16: 07 16: 32	12	954	C0016				
	M12WTO2	8650	05/05/00	18: 20 18: 21	83	3641	C0004				
	M12AMWTO	8655	05/05/00	18: 23 18: 24	152	6737	C0000				
	PRDKPL01	8657	05/05/00	18: 25 18: 25	4	185	SOC4				
	M14TES1	8690	05/05/00	18: 51 18: 51	4	47	C0000				
	M19SMPJ	8716	05/05/00	19: 18 20: 06	135	6143	S222				
	M201 NSCD	8365	05/05/00	20: 07 20: 52	19	1012	C0000				
P	PRINT	V	VIEW	U	UPDATE	I	INSERT	A	ADD INFO	E	EDIT
X	INDEX	N	NOTE	G	GIVETO	D	DELETE	Q	QUICK ACCESS		12. 39. 17

This screen list of all jobs decollated by the decollating mission appears on the screen.

Notice the **REMARK** field. This field indicates the highest condition code or abend of the job. It is possible to specify selection criteria according to the **REMARK**. A common use of this option is to select all jobs that have ended **NOTOK** by specifying **NOTOK** in the **REMARK** field of the Show Option window as accessed from the User Reports entry panel.

If you need more information on any of the fields on the screen, refer to Chapter 2 of the *CONTROL-D User Guide* or use the **HELP** key (**PF01/PF13**).

5 Select any job in the list:

A Position the cursor to the left of the line in which the job appears.

B Type **V** and press **Enter**.

A screen similar to the one in [Figure 19 on page 41](#) is displayed.

NOTE



Because the **INCONTROL** Administrator can change the letters used for screen options, the data you see may be different.

Figure 19 Report Viewing Screen

```

----- CONTROL-D REPORT VIEWING NOTES 0 PAGE 1 OF 5
COMMAND ==> SCROLL ==> CRSR
USER PRODCNTL JOBNAME M22UPDT1 JOBNUMB 0001948 DATA 050500 RULER
REPORT PRODUCTION JCL
-----1-----2-----3-----4-----5-----6-----7-----8
      J E S 2   J O B   L O G   - -   S Y S T E M   F D S F   - -   N O

13. 38. 46 JOB 1948 $HASP373 M22UPDT1 STARTED - INIT 2 - CLASS A - SYS FDSF
13. 38. 47 JOB 1948 IEF403I M22UPDT1 - STARTED - TIME=13. 38. 47
13. 39. 26 JOB 1948 M22UPDT1. STEP1 .#01; - COMPLETION CODE=0000
13. 39. 26 JOB 1948 M22UPDT1. STEP2 .#02; - COMPLETION CODE=0004
13. 39. 27 JOB 1948 M22UPDT1. STEP3 .#03; - COMPLETION CODE=0000
13. 39. 29 JOB 1948 M22UPDT1. STEP4 .#04; - COMPLETION CODE=0000
13. 39. 29 JOB 1948 M22UPDT1. STEP5 .#05; - COMPLETION CODE=NOT RUN
13. 39. 29 JOB 1948 IEF453I M22UPDT1 - JOB FAILED - JCL ERROR - TIME=13. 39. 29
13. 39. 29 JOB 1948 $HASP395 M22UPDT1 ENDED
----- JES2 JOB STATISTICS -----
      05 MAY 00 JOB EXECUTION DATE
      32 CARDS READ
      230 SYSOUT PRINT RECORDS
      0 SYSOUT PUNCH RECORDS
      13 SYSOUT SPOOL KBYTES
      0.71 MINUTES EXECUTION TIME
      1 //M22UPDT1 JOB ,GPL,MSGCLASS=R,CLASS=Q,NOTIFY=M22
CMDS: FIND str (PREV), EDIT, RULER on/off/name, N n P n 11.57.55

```

6 Practice a few minutes to familiarize yourself with the various scrolling options.

A Scroll forward and backward (**PF08/PF20** – **PF07/PF19**).

B Shift left and right (**PF10/PF22** – **PF11/PF23**).

C Scroll to the bottom of the report – type **M** (maximum) in the **COMMAND** field and press **PF08/PF20**.

D Scroll to the top of the report – type **M** (maximum) in the **COMMAND** field and press **PF07/PF19**.

Editing MSGCLASS Output

At this stage, you are introduced to report editing, an advanced feature of CONTROL-D. This exercise illustrates some advantages of using rulers (sets of screen editing rules) on MSGCLASS output. In a later section additional uses for rulers and how to define them are discussed.

Production personnel spend much time examining MSGCLASS output for error messages (for example, condition codes, abend codes, JCL errors, NOT CATLGD 2, and so on). CONTROL-D rulers can make this task easier.

Your report was sent to the spool for printing. The output has the same name as your logon ID (when working under TSO).

- 5 Earlier, you saw that MSGCLASS output is much easier to analyze with the ruler activated. In the following steps, you are going to print the output with the ruler activated. A ruler similar to the ruler you used for viewing is defined for printing.

NOTE



A ruler is defined for either viewing or printing.

Position the cursor to the left of the report you just printed without a ruler activated.

- 6 Type **P** and press **Enter**. The same Print Option window you saw earlier is displayed again.
- 7 Type the same parameters that you typed previously.
- 8 Add an additional parameter as follows:

A Type **1**.

B Type **\$JOBCHK** in the RULER field (over DEFAULT), and press **Enter**.

The following message is displayed on the top line of the screen:

```
CTD9471 REPORT PRINTED OK - FROM ACTIVE FILE jobname/username/reportname
```

Your report was sent to the spool for printing; however, this time the ruler was activated.

- 9 Return to the IOA Primary Option menu for the next exercise.

Report Decollating Missions – Job

This chapter includes the following topics:

Report Separation Method	46
What is Decollation?	46
Sample Job Decollating Mission	46
Activating a Decollating Mission Manually	51
Tracking and Control	53
Viewing and Editing a Report Online	54
Viewing a Report	54
Displaying an Edited Report	57
Report Editing	59
Decollating a Report Directly from CDAM	64

Report Separation Method

Although the manual process of report separation is simple and straightforward, the process is very time-consuming, labor-intensive, and error-prone.

Individual reports that come off the printer are physically separated and stacked in piles according to recipient. Often, one report contains sections belonging to different users or departments. In these cases, the individual report must be manually examined to identify the sections or pages that belong to different users. These pages are physically separated and stacked in piles according to user. Finally, all reports in a pile relating to one user are bound together and shipped to the recipient location. CONTROL-D automates this manual process by “decollating” the reports.

What is Decollation?

Decollating a report, or any sysout, is primarily a process of establishing report ownership. A complete report may belong to one user, or different pages of a report may belong to different users. The decollating mission scans each page of the report for user-defined character strings that are unique to specific users and therefore indicate which user “owns” the page.

Report decollating mission parameters are defined once for each job. CONTROL-D uses these parameters for many executions of the same decollating mission. Of course, you can modify these parameters at any time.

Sample Job Decollating Mission

- 1 In the CONTROL-D JCL library, there is a member named REPORT1. Edit member REPORT1 (with either ISPF, ROSCOE, or one of the other online environments supported by CONTROL-D).

This job creates two sample reports, one report produced by each of the two steps in the job.

The reports are produced in class D. If this class is not convenient, change it to a different output class. Be sure to choose a class whose reports are not printed or purged before CONTROL-D gains control. Do not use the same class that was used for the generic decollating mission.

- 2 Submit the job.
- 3 View the reports created by the job on spool (using FLASHER, SDSF, and so on).

- 4 Return to the CONTROL-D Online facility and the IOA Primary Option menu.
- 5 Select Option **R** and press **Enter**. The CONTROL-D Report Decollating Mission Definition entry panel is displayed.

Figure 22 Report Decollating Mission Definition Entry Panel

```

----- CONTROL-D REPORT DECOLLATING MISSION DEFINITION ENTRY PANEL -----(R)
COMMAND ==>

SPECIFY LIBRARY, JOB/REPORT NAME, CATEGORY
LIBRARY ==> CTD. PROD. REPORTS
JOB ==> (Blank for job selection list)
CATEGORY ==> (Blank for category selection list)

SHOW SCHEDULING CRITERIA ==> N (Y/N)

USE THE COMMAND "SHPF" TO SEE PFK ASSIGNMENT 18.12.23

```

- 6 If the LIBRARY field does not contain the name of your CONTROL-D REPORTS library, correct it.
- 7 Press **Enter**. A list of all decollating missions used throughout the Getting Started Guide is displayed.

Figure 25 Predefined Report Decollating Mission Definition

```

----- CONTROL-D/V CATEGORY DAILY JOB jobnamR1 ----- (R.S)
COMMAND ==> SCROLL==> CRSR
+-----+
CATEGORY DAILY JOBNAME jobnamR1 GENERIC MONITOR
=====
DEF COPIES 01 LVL USER UNIDENT DEST MAX COPIES
=====
ON CLASS = D EXTWTR DEST FORM
PRT COPIES LVL USER DEST MAX COPIES
PRINT/CDAM PARMS =
WHEN LINE 0003 - 0003 COL 00034 - 00050 PRINT REF NXT CT AND/OR
STRING = INVENTORY REPORT
DO USER = WAREHOUSE LVL LINE COL - S N T
SYNONYM = CONCAT =
DO USER = PRODUCTION LVL LINE COL - S N T
SYNONYM = CONCAT =
DO NAME = INVENTORY REPORT
DO PRINT = STD COL -
DO BACKUP = BKP0007D
DO
WHEN LINE 0001 - 0001 COL 00014 - 00046 PRINT REF NXT CT AND/OR
STRING = EMPLOYEES REPORT
DO NAME = EMPLOYEES REPORT
DO USER = * LVL LINE COL 064 - 074 S N T
DO USER = * LVL LINE COL 064 - 074 S N T
SYNONYM = CONCAT =
DO PRINT = STD COL -
DO BACKUP = BKP0007D
DO
WHEN LINE - COL - PRINT REF NXT CT AND/OR
STRING =
FILL IN REPORT DEFINITION. CMDS: EDIT, SCHED, SHPF, PATH 08.57.23
    
```

12 Look at a predefined report decollating mission definition. At this stage, you need only a few of the parameter fields. In general, CONTROL-D lets you see all the parameters for each mission in a single screen. However, only a few of the parameters are used for each mission.

Note the following fields:

Table 2 Decollation Parameters (part 1 of 2)

Parameter	Descriptions
JOBNAME <i>jobnamR1</i>	Name of the job that produces the reports to be processed by the decollating mission.
ON CLASS	Job class output to be processed. If you changed the output class in the job that created the reports, make the same change here as well.

Table 2 Decollation Parameters (part 2 of 2)

Parameter	Descriptions
WHEN LINE STRING	WHEN line and column range parameters are used to indicate the report page area in which the identifying character string is located.
DO	<p>After the report page is identified, the DO statement instructs CONTROL-D what to do with the report. Any number of DO statements can be specified:</p> <ul style="list-style-type: none"> ■ DO USER=recipient name All output identified by the above WHEN statement is directed to the specified recipient. Notice the second WHEN statement. The DO USER statement under it specifies an asterisk (*). This instructs CONTROL-D to retrieve the recipient name (or synonym) from the report itself. ■ DO NAME=report name All output identified by the above WHEN statement is assigned this name in CONTROL-D. ■ DO PRINT=STD All output identified by the above WHEN statement is printed on your data center's standard (STD) form. ■ DO BACKUP=BKP0007D All output identified by the above WHEN statement is backed up to tape or cartridge and retained for a week.

13 Press **PF03/PF15** to return to the Category List screen.

14 Press **PF03/PF15** again. The Job List screen is displayed.

If you modified in the report decollating mission, the Exit Option window is displayed.

15 Type **y** in the SAVE field and press **Enter**.

Y stands for YES SAVE, so that the modifications you made are saved.

16 Continue with the next exercise to order the mission.

Activating a Decollating Mission Manually

As mentioned earlier, a decollating mission is never activated unless it is ordered. Since this decollating mission was not planned in advance, it must be ordered manually.

The last scrollable line in the screen is where the decollating mission that you just ordered is displayed.

- 2 The status may change several times during execution. Press **Enter** periodically to display the current status. When the decollating mission finishes execution, its status becomes ENDED OK.

Viewing and Editing a Report Online

Viewing a Report

- 1 Return to the IOA Primary Option menu.
- 2 Type \uparrow and press **Enter**. The User Reports entry panel is displayed.

Figure 29 User Reports Entry Panel

```

----- CONTROL-D - USER REPORTS ENTRY PANEL ----- (U)
COMMAND ===>

OPTIONS ===>          1. PERMANENT  2. ACTIVE  3. HISTORY

REPORT NAME  ===>
USER         ===> PROD
DATE FROM    ===> TO
JOBNAME      ===>
Report name, prefix or mask
Recipient name or prefix
Report date or relative day
Job name, prefix or mask

DISPLAY TYPE  ===> D
BYPASS PANEL  ===> N

SELECT AN OPTION FILL IN THE SELECTION CRITERIA AND PRESS ENTER 09.27.08

```

The User Reports entry panel is the main end-user (recipient) interface to access CONTROL-D information. Many facilities are provided under the User Reports screens.

- 3 Position the cursor in the USER field.

Figure 32 CONTROL-D Report Viewing Screen

```

----- CONTROL-D REPORT VIEWING NOTES 0 PAGE 1 OF 3
COMMAND ==>> SCROLL ==>> CRSR
USR PROD JB jobnamR1 00465 DT 050500 RUL
REPORT EMPLOYEES REPORT
-----1-----2-----3-----4-----5-----6-----7-----8
EMPLOYEE E M P L O Y E E S R E P O R T ----- FOR PRODUCTION DEPAR
NO. EMPLOYEE OFFICE ANNUAL SOCIAL NO. OF JOB CLASS
NO. NAME NO. SAL SECURITY NO. DEPENDENTS CODE
-----
66474 C. POHLHAMMER 23 39,500 831-62-8752 2
66475 G. MEREDITH 09 40,000 125-22-2235 3
66491 P. MILLER 12 31,500 585-47-2352 1
66498 K. BOYLE 22 39,500 832-52-5455 2
66501 R. BERLE 14 39,500 834-02-3361 2
66513 C. KING 12 30,000 988-02-8475 2
66519 G. BROWNE 02 36,500 748-38-2884 2
66524 R. SOLOMON 04 35,000 960-52-2350 3
66526 S. CUNNINGHAM 21 39,500 834-01-2852 2
66529 M. TABER 22 39,500 823-00-2352 2
66530 A. WINGER 23 39,500 823-44-5858 2
66531 B. BOOKSPAN 05 47,000 315-42-2358 4
66533 R. MULU 29 39,500 821-22-5850 2
66539 E. SMART 02 29,000 681-35-3126 4
66540 N. MATTOZZI 11 29,000 525-42-2845 2
CMDS: FIND str (PREV), EDIT, RULER on/off/name, VALUE, N n P n 11.57.55
  
```

11 Practice with the various scrolling options for a few minutes to get familiar with them.

A Scroll forward and backward (**PF08/PF20 – PF07/PF19**).

B Shift left and right (**PF10/PF22 – PF11/PF23**).

C Scroll by print-page – type **n 2** in the **COMMAND** field and press **Enter**. Notice the page count on the top right side of the screen.

D Scroll the maximum amount to the bottom – type **m** in the **COMMAND** field and press **PF08/PF20**.

Displaying an Edited Report

Customizing the report display to your needs can save you time when examining reports for the information that you regularly need. This is done through the use of rulers.

Rulers can be used to:

- Define headers
- Reposition fields in the screen layout
- Leave unwanted or unnecessary fields out of display
- Select records for inclusion in or exclusion from the display

Predefined Ruler \$EMPLOYE

In this exercise you activate a previously defined ruler called \$EMPLOYE. This ruler contains line-editing options, such as **Headers** for assigning lines as headers, and **Delete** for deleting lines from the display.

- 1 Verify that you are in the EMPLOYEE REPORT of user PROD. Check this by looking at the third line of the screen. The **USR** field should say PROD, and the **REP** field should say EMPLOYEE REPORT.
- 2 From the **COMMAND** field, type **RULER \$EMPLOYE** and press **Enter**.

View the edited report. Notice that the header lines are highlighted. Scroll forward and backward (**PF08/PF20** – **PF07/PF19**). The header lines do not scroll, enabling you to identify each column of the page even after scrolling down more lines than the terminal can display on one screen.

Look at the **RUL** field at the right of the third line of the screen. This field indicates the ruler name activated (if any). It is possible to deactivate the ruler.

- 3 Type **RULER** and press **Enter**.

View the same report without a ruler. Activate and deactivate the ruler as many times as you want. Reactivate the ruler. The ruler you have just activated contains headers for easier viewing.

Predefined Ruler \$EMPVAC

In this exercise, you activate a ruler called \$EMPVAC that was designed to check each employee's vacation and sick days. In its original form, this information is hard to find on the report because the employee number and employee name columns are formatted on the left side of the report, while the vacation and sick days columns are on the right side.

- 1 From the COMMAND field, type **RULER \$EMPVAC (or RU \$EMPVAC)** and press **Enter**.

Notice that only columns specifically needed at this time are shown. Examining the report is now quite simple. This has been achieved with the help of column-editing within a ruler.

- 2 Press **PF03/PF15** to return to the Active List screen.

View and activate these rulers on other reports to become more familiar with the Online Viewing and Editing. For additional information on advanced ruler techniques, refer to Chapter 2 of the *CONTROL-D User Guide*.

Report Editing

There are two types of rulers in CONTROL-D:

- VIEW rulers – Used for editing reports that are viewed.
- PRINT rulers – Used for editing reports to be printed.

In this exercise you specify the type of ruler while defining or modifying it.

- 1 From the Active User Report List screen, type **v** in the OPT field to the left of the **EMPLOYEES REPORT-MARKETING** and press **Enter**.

The report is displayed and the cursor is positioned in the COMMAND field of the report.

- 2 Type **EDIT** and press **Enter**. The Report Editing screen is displayed.

Figure 33 Report Editing Screen

```

----- CONTROL-D - REPORT EDITING -----(U. E)
COMMAND/OPT ==>
USER MKT          REPORT EMPLOYEES REPORT          JOB jobnamR1

RULER NAME  ==>          Name or blank for default ruler
RULER TYPE  ==> VIEW          View or Print
REPORT NAME  ==>

JOB NAME     ==>          To copy a ruler - full report name
USER NAME    ==>          To copy a ruler - full job name
                          To copy a ruler - full user name

1  EDIT      report lines and columns
2  INCLUDE   lines based on strings
3  EXCLUDE   lines based on strings
4  COLOR     lines based on strings

PLEASE SELECT OPTION, OR PRESS PF3 TO SAVE/EXIT THE RULER          14. 21. 41

```

This screen is used to copy existing rulers from other reports or recipients by selecting one of the four editing options:

1. Edit report lines and columns
2. Include lines based on strings
3. Exclude lines based on strings
4. Color lines based on strings

Editing Report Lines and Columns

Edit report lines and columns as follows:

- 1** Type 1 in the COMMAND field and press **Enter**. The Edit Report Lines and Columns screen is displayed.

Figure 34 Edit Report Lines and Columns Screen

```

----- CONTROL-D - EDIT REPORT LINES AND COLUMNS -----(U. E. 1)
COMMAND ==>
USR MKT          JOB jobnamR1 RULER DEFAULT   TYPE VIEW
REPORT EMPLOYEES REPORT
0 -----1-----2-----3-----4-----5-----6-----7-----
1
EMPLOYEE        E M P L O Y E E S   R E P O R T   -----   FOR MARKETING DE
NO.             EMPLOYEE      OFFICE ANNUAL SOCIAL          NO. OF      JOB CLAS
                NAME          NO.    SAL    SECURITY NO.  DEPENDENTS CODE
-----
66002   A. HABER           07   31,000   213-85-8954   2
66019   K. HARARI          16   35,500   894-58-0468   3
66043   K. TURRO           02   29,000   595-47-4186   1
66045   W. MAY             04   35,000   926-83-2454   4
66047   A. FELSEN          08   27,500   987-21-4684   2
66050   T. HUBERTY         08   27,500   334-72-9285   2
66052   K. WOOD            08   26,000   675-72-6784   2
66056   H. RUNDLE          08   26,000   685-21-3874   2
66059   L. WEST            26   38,000   623-41-2719   2
66078   N. LAMBERT         18   29,000   515-43-7447   3
66096   J. SHARPTON        09   29,000   993-62-8172   3
66112   K. BENNETT         04   29,000   424-34-1328   3
66113   T. OGURA          03   28,000   796-58-6897   4
66114   S. MCCLURE         02   37,500   834-04-0485   2
66115   N. TRACEY          08   23,000   152-89-4859   1
OPTI ONS:  H HEADER  F FOOTER  D DELETE  C COLUMNS  I INSERT  B BEFORE  15.08.04

```

The original report is displayed in the Edit Report Lines and Columns screen.

2 The first line of the report is not relevant and can be removed, as follows:

A Position the cursor to the left of the first line of the report in the OPT field.

B Type **D**. The cursor automatically moves to the next line. The following three lines will be used for the headers of our report.

3 Type **H** three times. These lines will be the header lines for the edited report.

4 Press **PF04/PF16** to see how these edits affect the appearance of this edited report.

NOTE

PF04/PF16 is used to alternately display the ruler definition and the report.



You can see that the line you deleted does not appear. Notice that the three header lines are highlighted. Scroll down using **PF08/PF20** and notice that the header lines do not scroll. To scroll up press **PF07/PF19**.

5 Press **PF04/PF16** to return to Edit mode.

5 Press **PF04/PF16** to return to the Report Editing screen.

Editing Colored Lines Based on Strings

If you have a color terminal, use Option 4 (COLOR) to color all salaries over 36,000, and try coloring all salaries over 50,000 in a different color.

Exiting and Saving the Ruler

1 From the Report Editing screen, press **PF03/PF15** to exit and save the ruler. The following Exit Option window is displayed.

Figure 36 Report Editing Exit Option Window

```

----- CONTROL-D - REPORT EDITING -----(U. E)
COMMAND/OPT ==>
USER MKT          REPORT EMPLOYEES REP
RULER NAME  ==> DEFAULT
RULER TYPE  ==> VIEW
REPORT NAME  ==>
JOB NAME     ==>
USER NAME    ==>

1  EDIT      report lines and columns
2  INCLUDE  lines based on strings
3  EXCLUDE  lines based on strings
4  COLOR    lines based on strings

PLEASE SELECT OPTION, OR PRESS PF3 TO SAVE/EXIT THE RULER
15.35.26
  
```

PLEASE SELECT EXIT OPTION

Exit option ==> 3

1 KEEP ruler active
2 CLEAR (no ruler)
3 SAVE ruler as:

Ruler name ==> your-name
Ruler type ==> VIEW

The Exit Option window includes following options:

Table 3 Exit Option Window Options

Option	Description
1	KEEP the ruler. The ruler is kept throughout this session only. Once you exit the CONTROL-D Online facility, the ruler disappears.
2	CLEAR the ruler. The ruler immediately disappears.
3	SAVE the ruler. The ruler is saved in the Active User Reports file. You can activate this ruler any time, even after exiting and re-entering the CONTROL-D Online facility numerous times.

2 Position the cursor in the Exit Option field and type 3.

- 3 Position the cursor in the Ruler Name field.
- 4 Type your name (or initials) and press **Enter**. A ruler in your name is now saved in the Active User Reports file.

Decollating a Report Directly from CDAM

CONTROL-D uses two report processing techniques:

- **Basic Technique** – Does not require JCL changes. It implements immediately on any report. The reports are produced on spool and picked up by CONTROL-D.
- **CDAM Technique** – Requires only minor JCL changes. It writes reports produced by a job directly to CDAM datasets, and solves many problems in a typical data center. Several advantages of the CDAM technique are:
 - The reports are written directly to compressed sysout. They do not pass through the spool. Consequently, redundant read/write operations are eliminated and computer resources are conserved.
 - The elapsed time of jobs that create large reports is reduced by 10% or more.
 - The CDAM performs report compression. The compression rate is 30 to 70%, depending on the type of data that is compressed. This results in significant disk space savings.
 - CDAM sysout (datasets) are protected using regular conventional security methods, such as RACF, ACF2, or TOP-SECRET.
 - The risk of 100% spool utilization is greatly reduced, since the spool is minimally utilized.
 - There is no danger of SB37 abends due to insufficient space on disk (for the compressed sysout).

This exercise illustrates the CDAM technique.

- 1 From the IOA Primary Option menu, select Option R and press **Enter**. The Report Decollating Mission Definition entry panel is displayed.
- 2 If the library name in the LIBRARY field is not the same as your CONTROL-D REPORTS Library name, correct it.
- 3 Press **Enter**. The Job List screen is displayed.

- 4 Position the cursor in the OPT field to the left of the jobnamR2 mission.
- 5 Type **s** and press **Enter**. The Category List screen is displayed.
- 6 Position the cursor in the OPT field to the left of category DAILY.
- 7 Type **s** and press **Enter**. The Report Decollating Mission Definition screen is displayed.
- 8 A decollating mission uses the CDAM technique, as opposed to the basic technique, when the ON statement in the mission is defined as ON DSN. Examine the ON statement for this decollating definition, as it appears below:

```
ON DSN JOBNAME=jobnameR2
```

Parameter DSN indicates to CONTROL-D that the specified output was created directly to a CDAM dataset. Parameter JOBNAME instructs CONTROL-D to handle all output created by this job.

- 9 Press **PF03/PF15** twice to order the decollating mission.
- 10 If you made any changes in the decollating mission, an Exit Option window is displayed.

Type **n** in the SAVE field and press **Enter**. The cursor is positioned to the left of the decollating mission you have just exited.
- 11 Type **o** and press **Enter**. The following confirmation window appears:

Figure 37 Confirmation Window

```

LIST OF JOBS LIB: CTD. PROD. REPORTS
COMMAND ==>
----- SCROLL==> CRSR
OPT NAME ----- VV.MM  CREATED      CHANGED      SIZE  INIT  MOD  ID
  PRODJCL          01.01  00/03/03  00/04/04  12:11   14   12   0 M73
    jobnamR1          +-----+ 31   0 M55A
0  jobnamR2  <-----| CONFIRM      ODATE 050500  | 31   0 M55A
===== >>>>>>>>>>>>>>>> +-----+ <<<<<<<<<<<<<<<< =====

OPTIONS:  S SELECT  O ORDER  F FORCE  B BROWSE  D DELETE  18.30.53
    
```

NOTE



The job name prefix (jobnam) was automatically updated during the installation process with the user job name prefix defined by your data center.

12 Type **y** in the CONFIRM field and press **Enter**. The following screen is displayed:

```

----- CONTROL-D REPORT ORDER MESSAGES -----(R.0)
COMMAND ==>
----- SCROLL==> CRSR
-----
19.52.47 CTD049I MISSION PROCESSING STARTED
19.52.47 CTD528I MISSION jobnamR2 ODATE 050500 PLACED ON ACTIVE MISSIONS FILE
19.52.47 CTD696I ALL MISSIONS PROCESSED SUCCESSFULLY
===== >>>>>>>>>>>>>>>> END OF MESSAGE LIST <<<<<<<<<<<<<<<< =====
    
```

The decollating mission has just been ordered.

13 In the CONTROL-D JCL library, there is a member named REPORT2. Edit the member with either ISPF, ROSCOE, or any of the other online environments supported by CONTROL-D.

This job's output (report) is created directly to CDAM compressed datasets, and is not created on spool.

Find the following DD card named SYSUT2 in the job:

```

//SYSUT2 DD SUBSYS=(CDAM, 'SYSOUT=D')
    
```

This is the only change in the JCL required to create reports directly to CDAM.



NOTE

For more information about optional CDAM parameters, see Chapter 5 of the *CONTROL-D User Guide*.

Verify that this job is authorized to create CONTROL-D output datasets by your local security package (RACF, ACF2, TOP SECRET, and so on).

14 Submit the job.

15 Again, you can track the mission on the Active Missions screen. When the mission receives an ENDED OK status, you may proceed.

Transfer to the Active Report List screen, and select for viewing the report that was just decollated (in the same way you viewed reports previously).

Printing Bundles

This chapter includes the following topics:

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Defining a Mission to Print Bundles	70

Printing Missions

CONTROL-D prints reports in bundles. A bundle consists of reports intended for one or more recipients. The reports are sorted so that those for each recipient are grouped together.

Bundles are printed with separator pages called banners and include information such as the recipient name and address, an index of reports, and so on.

Bundles are created by activating a CONTROL-D printing mission. A printing mission is usually named according to the type of form on which it prints. The printing mission you are about to activate in this exercise is named STD because the form on which it prints is your data center's standard form.

The reports to be printed by a printing mission are those reports that were decollated with a DO PRINT=*printing_mission* parameter (in the decollating mission definition). You filled in this parameter in Chapter 3 of the Walkthrough.

The printing mission you activate has been predefined and ordered during the installation process. It is automatically ordered each day. The only action remaining for you to perform is to add a “trigger.”

A trigger in CONTROL-D is called a prerequisite condition. If a mission is dependent upon the existence of a prerequisite condition, it is not activated until the prerequisite condition exists (meaning, is added). This concept provides the ability to start the printing process at your request.

Adding a prerequisite condition is performed in the IOA Manual Conditions screen (Option 7 on the IOA Primary Option menu).

Defining a Mission to Print Bundles

- 1 From the IOA Primary Option menu, press **PF07/PF19** or type **7** and press **Enter**. The IOA Manual Conditions screen is displayed.

- A** Type **F STD** in the **COMMAND** field and press **Enter**. The cursor moves to the line including this mission, and the **STD** mission name is highlighted.
- B** Position the cursor in the **OPT** field, to the left of the **STD** printing mission.
- C** Type **P** and press **Enter**. The **Print Control** screen is displayed.

You can see the list of reports (bundles) that are in the print queue, and the exact report that is currently being printed (if the printing mission started to print). You can also control the printing process. For additional information about the **Printing Control** screen, refer to **Chapter 2** of the *CONTROL-D User Guide*.

- 5** Press **PF03/PF15** to exit the **Print Control** screen.
- 6** The status of the printing mission changes during processing, reflecting the stage it has reached.

Periodically press **Enter** to display the updated current status of the mission. When the status indicates that the mission is **PRINTING ON** a specific printer, you can view the output bundle on spool. When the bundle finishes printing, the status of the printing mission changes to **ENDED OK**.

- 7** You can now examine the printed bundle and notice the banners, index, and so on. Banners and indexes can be modified to suit your specific requirements. If there are banners that you do not want to produce (for example, banners between reports), they can be eliminated. More information about banner tailoring and printing is in [Chapter 6, “Preparing for Production.”](#)

Backup and Restoring

This chapter includes the following topics:

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Backup Missions

Backing up reports is performed in CONTROL-D by a backup mission.

A backup mission backs up reports to tape or cartridge (as defined in the installation process).

The reports, already compressed on disk, are kept for the number of days defined in the backup mission (retention period). Each backup mission name indicates how many days the reports are to be kept. For example, BKP0031D represents a backup mission for reports that will be kept 31 days.

Several predefined backup missions with commonly used retention periods are provided in the Getting Started and production environment.

The backup process for a backup mission consists of four stages:

1. Build the list of backup candidates

The list is built from those reports that were decollated with a DO BACKUP mission parameter that specified this backup mission name (in the decollating mission definition). You filled in this parameter in Chapter 3 of the Walkthrough.

2. Merge the backup candidate list with the backup JCL skeleton

3. Submit the backup job

4. Analyze the results of the backup job

The backup mission to be activated was predefined and ordered during the installation process. It is automatically ordered from this day forward. The only action you must perform is to add a prerequisite condition “trigger.”

- 1** From the COMMAND field, type =7 and press **Enter**. The IOA Manual Conditions screen is displayed.

The four stages mentioned earlier are now in process.

- 6 Press **Enter** periodically to display the current status. The backup mission enters a BACKUP-IN-PROCESS status.



NOTE

The submitted backup job initiates a mount for a tape. Please notify the computer operator to mount the tape. When the backup mission status is ENDED OK, you may proceed to the next exercise.

Deleting a Disk Copy of Unneeded Reports

Once a report is no longer needed for online viewing (or printing), it can be erased from the Active User Report list and deleted from disk using the CTDDLRP utility in the CONTROL-D JCL library.

The sample supplied deletes all reports that have been printed or backed up without waiting additional days. After completing the Walkthrough, you can change the value of parameter DAYS (for example, 1 saves all reports on the disk for 1 day after creation).

Additional parameters are optional and can be added any time. For more information on these parameters, see the *INCONTROL for z/OS Utilities Guide*.

- 1 Edit the CTDDLRP member and submit the job.

Ensure that the job finishes executing successfully. Notice that at the end of the output there are messages that list actions performed by the utility.

The following actions were performed:

- All reports that met the criteria specified to CTDDLRP were deleted from the Active User Report list.
- The CDAM datasets of the reports were deleted from disk.
- The History User Report list was updated to indicate which reports were backed up.

The process (backup mission) that you previously activated backed up the reports to tape (or cartridge), but it did not delete the reports from disk. In order to eliminate unnecessary restores of reports that still reside on disk, the record of the report remains in the Active Report list until the report is deleted from disk using CTDDLRP. When the report is deleted from disk, the record of the report is transferred to the History User Report list.

Examine the Active User Report list to verify that the record of the report was deleted from the Active User Report list.

- 2 Type =U in the COMMAND field and press **Enter**. The User Reports entry panel is displayed.

Figure 40 User Reports Entry Panel

```

----- CONTROL-D/V - USER REPORTS ENTRY PANEL -----(U)
COMMAND ===>

OPTI ONS ===>          1. PERMANENT  2. ACTIVE/MIGRATED  3. HISTORY

REPORT NAME  ===>
USER         ===>          Report name, prefix or mask
DATE FROM   ===>          TO      Recipient name or prefix
JOBNAME     ===>          Report date or relative day
SHOW MI GRATED ===> N      Job name, prefix or mask
INDEX       ===>          Include migrated reports
VALUE      ===>          Index name, prefix or mask

DISP LAY TYPE ===> D      BYPASS PANEL ===> N

SELECT AN OPTION FILL IN THE SELECTION CRITERIA AND PRESS ENTER      14.03.14

```

- 3 Type **MGT** in the USER field.

In the Show Option window, ensure that Y appears in the CHILD field. Also ensure that the SELECT BY fields are blank. For information about the Show Option window, see the Online Facilities chapter of the *CONTROL-D User Guide*.

- 4 In the User Reports entry panel, press **Enter**.

Notice that there are no reports in the list. All reports were backed up and then deleted from disk by the CTDDELRP utility. Records for these reports now appear in the History User Report list.

- 5 Press **PF03/PF15**.

Processing Restore Missions

Restoring in CONTROL-D is performed by a restore mission.

The restore process consists of four stages:

1. Build the list of restore candidates

The list is an accumulation of all restore requests that were interactively selected in the History User Reports List screen. The requests are processed when the restore mission is activated (as set out below).

2. Merge the restore candidate list with the restore JCL skeleton

3. Submit the restore job

4. Analyze the results of the restore job

Two restore missions are predefined for you:

- A cyclic restore mission, activated automatically once every 60 minutes
- An “ad hoc” restore mission, activated manually by adding a prerequisite condition (trigger)

In this exercise, you will use the cyclic restore mission.

- 1 To activate the cyclic “60 minutes” restore mission, do the following:

- A From the COMMAND field type =A and press **Enter**. The Active Missions Environment screen is displayed.

You automatically return to the Active Missions Environment screen. Press **Enter** to see the current status. The restore mission status changes to REQUESTED CHANGE HELD WAIT PROCESS. After a few seconds, the status changes again to HELD WAIT PROCESS.

- 13 Now that the restore mission is updated, free it, as follows:
 - A Position the cursor to the left of the restore mission.
 - B Type **F** and press **Enter**. Within a few seconds the restore mission is freed and activated.
- 14 Once the mission is activated, the four stages mentioned earlier are performed. Press **Enter** periodically to display the current status. The restore mission enters a RESTORE-IN-PROCESS status. The submitted restore job requests the tape that was used in the backup job. (A message appears on the operator console.)
- 15 You may want to verify that the computer operator has mounted the tape. When the restore mission has the status ENDED OK, you may proceed.

Viewing and Printing Restored Reports

In this exercise, you view the reports that were just restored and print one of them. All viewing is performed in the Active User Report List screen.

- 1 From the COMMAND field, type =U and press **Enter**. The User Reports entry panel is displayed.
- 2 Fill in the following fields:

COMMAND/OPTION	===> 2	1. PERMANENT	2. ACTIVE	3. HISTORY
USER	===> MGT	Recipient name or prefix		
Display type	===> D			

- 3 Press **Enter**.

The reports that were restored have a status of RESTORED in the Active User Report List screen. View the restored reports.

When you finish viewing the reports, return to the Active User Report List screen.

Restored reports, like any report in CONTROL-D, can be printed immediately or deferred (for printing by a printing mission). The P (Print) Option on this screen performs a print request for a restored report.

4 Position the cursor to the left of the restored report you want to print.

5 Type **P** and press **Enter**.

Figure 45 Print Request for a Restored Report Screen

ACTIVE LIST	<D> JOB	REP	USR MGT	CHI LD (U)
COMMAND ===>	-----+-----			
O USER	REPOR			
MKT	EMPLO	Print option ===>		
PROD	EMPLO			
P WAREHSE	INVEN	1 Immediate Printing		
===== >>>>>>>>>>		2 Deferred Printing (by Print Mission)		
		X Exit (no action)		
		COPIES 001	FORM	CLASS R
		DEST	WTR	
		FROM PAGE 1	TO PAGE 9	RULER DEFAULT
		PRINT MISSIONS	STD	
	USER WAREHSE	REPORT INVENTORY REPORT	JOB	jobnamR1
-----+-----				
V VIEW E EDIT P PRINT U UPDT I INS D DEL N NOTE A ADD INFO G GIVE TO 12.39.17				

The Print option window is displayed. Option 1 is for immediate printing. Option 2 is for deferred printing. At this point, perform an immediate print.

You may change any of the parameters in the window, if required.

6 Type **1** in the Print option field and press **Enter**.

The following message appears on the top line of the screen:

```
CTD954I REPORT reportname/jobname/username/ PRINTED OK
```

Your report was sent to the spool for printing. The output is identified by the same name as your logon ID (when working under TSO).

Viewing and Printing Migrated Reports

For an explanation of how to view or print CONTROL-V migrated reports, see Chapter 7 of the *CONTROL-D Online Viewing Guide*.

Preparing for Production

This chapter includes the following topics:

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Introduction

Now that you have gone through the tutorial in the preceding chapters, you are now ready to implement CONTROL-D in production. If you have not performed the exercises in the previous chapters, please do so now before proceeding.

This chapter provides suggestions and recommendations for implementing CONTROL-D in your production environment.

For more information about CONTROL-D options, refer to:

- The *CONTROL-D User Guide*
- The CONTROL-D and CONTROL-V chapter of the *INCONTROL for x/OS Administrator Guide*
- The CONTROL-D chapter of the *INCONTROL for z/OS Installation Guide*.

Preparing for Production covers the following topics:

- Building the Recipient Tree
- Defining new reports for decollation
- Defining additional backup and/or restore missions
- Setting up automatic orders for missions
- Utilities
 - Deleting a disk copy of unneeded reports
 - Deleting expired backed up reports
- Printing Considerations
 - Defining additional printing missions
 - Bundling reports
 - AFP (Advanced Function Printing) printers
 - XEROX (DJDE) printers
 - Tailoring the banners

Building the Recipient Tree

The Recipient Tree is a list of all possible report recipients. The tree can be organized in many ways. The simplest design is a non-hierarchical list of all users that is primarily used during early stages of CONTROL-D implementation. However, the benefits of CONTROL-D can be maximized by using a hierarchical Recipient Tree.

Experience working with CONTROL-D implementation suggests that you should not try to define the “best tree” before you implementing CONTROL-D. Instead, you must first implement a basic hierarchical tree following the guidelines in Chapter 7 of the *CONTROL-D User Guide*. You can modify the tree structure and contents as you become more familiar with different options of the product, and as you gain a greater understanding of the implications of tree changes in your report distribution environment.

In general, if you find that you are spending too much time designing the “best tree,” simply choose one of the alternatives you have been considering and modify it by trial and error until it fits your environment. You see results much faster this way.

Two of the supplied utilities can help you define the basic recipient tree required for starting implementation of CONTROL-D.

Table 4 Recipient Tree Utilities

Utility	Description
CTDUADS	Creates a recipient entry for each user (TSO-user) defined in the CTD JCL Library.
CRETREE	Creates a recipient entry for each user name that appears in a specified line and column range within a given report (similar to the USER = * option in the report decollating mission).

The IOA SAMPLE library contains an example of each utility with detailed information.

Defining New Reports for Decollation

Define decollating parameters for a new report as follows.

- 1 Produce the report on spool (preferably by a test job) to a class that is not printed. Note the class used.
- 2 Obtain all distribution requirements for the new report.
 - If the report is to be distributed in its entirety to one or more recipients, no additional information is required.
 - If different pages of the report are to be distributed to different users, determine an identifying character string that is unique to specific users (usually the report header and/or title), and note the identifying string and the string's position in the report (line and column range). Methods for determining exact string position appear below. It is also possible to identify a larger range of lines and columns in which the string will appear.

- 3 Determine the exact position of a recipient name, or any other string within a report, using one of the following methods:
 - View the report online using any spool display facility installed at your data center (FLASHER, SDSF, and so on). The exact column range in which a string appears can be determined with the aid of the COLS command (or equivalent).
 - Activate a job decollating mission with no separation criteria specified. Assign the entire report to one recipient. View the report in the CONTROL-D Online Viewing facility (Option U).
- 4 After the required information has been gathered, enter the Report Decollating Definition screen (Option R). Update report identifying information (if required for this report) and distribution information, as described in the Walkthrough.
- 5 Save the updated report decollating mission and manually order it. View the results of the test in the Active User Report List screen (Option U). If the results are as expected, add any additional parameters that are needed (such as DO PRINT, DO BACKUP, and so on), and the report is ready for production. If the results are not as expected, determine which parameter was specified incorrectly (for example, wrong column for identifying string, and so on), correct it, and order the report decollating mission again.
- 6 When the report decollating mission is ready for production, set it up for automatic ordering. For further information refer to [“Setting Up Automatic Orders of Missions”](#) on page 91.

Defining Additional Backup/Restore Missions

When CONTROL-D is installed, a number of commonly-used backup and restore missions are supplied. Following is a list of these missions:

Table 5 Commonly Used Backup and Restore Missions

Mission	Name	Description
Backup Missions	BKP0007D	Backup reports for 7 days (one week).
	BKP0031D	Backup reports for 31 days (one month).
	BKP0180D	Backup reports for 180 days (half of a year).
	BKP0365D	Backup reports for 365 days (one year).
Restore Missions	RST0060M	Restore reports every 60 minutes.
	RSTADHOC	Restore reports by manual request.

In most cases, the supplied missions meet the requirements of your data center.

If you want to define additional backup and/or restore missions, use the CLIST CTDCRMIS. This CLIST accepts essential information concerning the requested mission and builds all required components for the mission. The required components built by the CLIST are:

- Backup or restore mission definition in the BKPMIS or RSTMIS libraries. This definition contains identifying information, scheduling criteria, number of days to keep (for backup missions), run interval (for restore missions), and so on.
- JCL skeleton in the CONTROL-D SKL library. This skeleton is used to build backup and restore jobs in conjunction with the backup and restore utility for a site (specified during the installation process).

After activating the CLIST, all required components are created, and the mission can be activated.

To set up the mission for automatic ordering, refer to “Setting Up Automatic Orders of Missions” below.

While processing a backup and/or a restore mission, CONTROL-D creates the JCL required for the backup or restore job. The skeleton of the JCL resides in the CONTROL-D SKL library. The JCL created for each backup or restore mission is stored in the CONTROL-D JOB library. It is important to compress the CONTROL-D JOB library periodically, preferably daily.

Setting Up Automatic Orders of Missions

All missions in CONTROL-D can be ordered manually or automatically. In the Walkthrough, you ordered certain missions manually. Other missions (printing, backup and restore) were ordered automatically. Here are a number of suggestions about how to order missions automatically.

The CONTROL-D New Day Procedure (CTDNDAY) orders missions automatically every time it executes (once a day – the exact time is defined during the installation process). The New Day Procedure executes at the beginning of your working day. Therefore, all required missions can be ordered by CTDNDAY for the coming working day.

CTDNDAY orders for each mission type are contained in members found in the CONTROL-D PARM library. These members are:

Table 6 CTDNDAY Mission Lists

Member	Description
PRTLST	List of all printing missions to be ordered.
BKPLST	List of all backup missions to be ordered.
RSTLIST	List of all restore missions to be ordered.
REPLST	List of all (non-Generic) report decollating missions to be ordered.
GENLIST	List of all generic report decollating missions to be ordered.

Update these members to include any new missions to be ordered.

Missions can be ordered independently (not by CTDNDAY) by using a batch job. Reserve the batch method for special circumstances, such as ordering report decollating missions automatically, at a different time than the time when CTDNDAY executes. As a general rule, order all generic decollating missions by the CTDNDAY procedure. For detailed information about ordering missions, see Chapter 5 of the *CONTROL-D User Guide*.

CONTROL-M Users

If your data center uses the CONTROL-M Production Control System, order report decollating missions automatically while ordering the associated job in CONTROL-M. This option is implemented by CONTROL-M parameter D-CAT (defined in Screen 2 of the CONTROL-M Online facility, but prior to version 5.1.4 called CATEGORY). For more information about this option, see the CONTROL-D and CONTROL-V chapter of the *INCONTROL for z/OS Administrator Guide* and the parameters chapter of the *CONTROL-M for z/OS User Guide*.

CONTROL-D Utilities

There are many utilities available in CONTROL-D. The following pages explain utilities that are recommended for use from the first day of running CONTROL-D. All CONTROL-D utilities (including the utilities mentioned here) are documented in the *INCONTROL for z/OS Utilities Guide*.

Deleting a Disk Copy of Unneeded Reports

Once a report is no longer needed for online viewing (or printing), it can be deleted from disk. The utility that performs this task is CTDDLRP.

CTDDELRP performs the following tasks:

- Deletes from the active User Report list all reports that meet the criteria specified to CTDDELRP.
- Deletes the CDAM datasets for the reports.
- Updates the History User Report list to indicate which reports were backed up. The backup mission writes the reports to tape (or cartridge) but does not delete the reports from disk. To eliminate unnecessary restores of reports that still reside on disk, reports remain in the active User Report list until they are deleted from disk by CTDDELRP. After reports are deleted from disk, restore requests are allowed for the backed up reports.

The CONTROL-D JCL library contains member CTDDELRP. The supplied utility deletes all reports that have been printed and/or backed up (if requested) without waiting additional days. You can change the DAYS parameter to a different value. (For example, a value of 1 saves all reports on disk for 1 day after the day of creation.)

It is recommended that you run this utility once a day, preferably after all backups have finished executing.

However, for test purposes, it is desirable to run this utility more than once a day. After decollating a test report, it is frequently required to delete the report produced from disk. Sample JCL CTDDELR1 in the CONTROL-D JCL library performs this task.

Additional parameters are optional. It is recommended that you review them.

Deleting Expired Backed-Up Reports

After the retention period for backed up reports has expired, delete the reports and release the tape (cartridge) on which they reside. CONTROL-D utility CTDCLHIS (clear history) deletes expired backed up reports.

Utility CTDCLHIS performs the following tasks:

- Deletes entries of expired reports from the History User Report file.
- Produces a list of all tape (cartridge) volume serial numbers that are no longer needed. Under HSM, an HSM DELETE command is performed for each of the deleted reports.

There is no need to specify parameters for this utility. Just submit the example from the CONTROL-D JCL library.

It is recommended that you run this utility once a day, or at least once a week.

Printing Considerations

Defining Additional Printing Missions

When installing CONTROL-D, a printing mission named STD was supplied. This printing mission is intended to print all standard form reports of your data center.

Define a printing mission for each printing form in your data center. Make the printing mission name the same as the form name that is printed. This relates the physical form to the printing mission.

All parameters for defining new printing missions are documented in Chapter 4 of the *CONTROL-D User Guide*. In addition, there are printing recommendations in Chapter 7 of the *CONTROL-D User Guide*.

Bundling Reports

CONTROL-D printing missions bundle reports in one of two ways: one-chunk and multi-chunk method.

One-Chunk Method

The entire bundle is sent to the spool for printing at one time.

Activate this method by setting the value of CHUNKSIZE to 0 in the printing mission definition. If CHUNKSIZE is not specified, it defaults to the value specified during the installation process (in the PRINTER parameter).

Use this method to print reports that contain identical printing characteristics.

Multi-Chunk Method

CONTROL-D creates a new chunk each time the number of lines specified in the chunksize parameter is exceeded, or when printing characteristics or the reports change, whichever comes first (unless chunksize is set to “0” as described in the one-chunk method above). Chunksize can be specified in the printing mission definition. If chunksize is not specified, it defaults to the value specified during the installation process. For the multi-chunk method, the value specified for chunksize must be greater than 1. The recommended value is 10000.

There are two major advantages of multi-chunk processing:

- It prints reports with different printing characteristics in the same bundle.
- Since the size of the chunk is controlled, overloading the spool with too much output is prevented.

If you want additional information on how to use the multi-chunk method, refer to the CONTROL-D and CONTROL-V chapter of the *INCONTROL for z/OS Administrator Guide*.

Define each printing mission using one of the two methods described above.

XEROX (DJDE) Printers

CONTROL-D supplies enhanced XEROX printer support. During CONTROL-D installation, there are a number of tasks to be performed that are explained in the CONTROL-D chapter of the *INCONTROL for z/OS Installation Guide*.

If you print on XEROX printers, read “Printing Using XEROX LCDS (DJDE) Parameters” in the CONTROL-D and CONTROL-V chapter of the *INCONTROL for z/OS Administrator Guide*.

AFP Printers

CONTROL-D supplies enhanced Advanced Function Printing (AFP) printer support. During CONTROL-D installation, there are a number of tasks to be performed that are explained in the CONTROL-D chapter of the *INCONTROL for z/OS Installation Guide*.

If you intend to print on AFP printers, read the following the following documents:

- *Implementing AFP in the CONTROL-D Environment*.

- Printing on AFP (APA) Printers in the CONTROL-D and CONTROL-V chapter of the *INCONTROL for z/OS Administrator Guide*.
- PRINT/CDAM PARMS in the parameters chapter of the *CONTROL-D User Guide*.

Tailoring the Banners

Bundles printed by CONTROL-D are preceded by a header banner page, and each group of reports (or parts of reports) belonging to a specific user is separated by a banner page. Each report within the group of reports for a specific user is also separated by a banner page.

Banners are printed by printing missions and by the immediate print option.

A sample BANNERS library is supplied as part of the CONTROL-D installation. The banners printed in Part 1 are from the sample banners. Each type of banner is defined in a regular PDS member. The supplied banners are:

Table 7 Supplied Banners

Name	Description
\$\$BNDLST	Start of bundle banner
\$\$BNDLEN	End of bundle banner
\$\$USERST	Start of a user (recipient) reports banner
\$\$USEREN	End of a user (recipient) reports banner
\$\$REPSTA	Start of report banner
\$\$REPEND	End of report banner
\$\$UINDXH	Header of reports index
\$\$UINDXV	Format of each index line
\$\$ONLSTA	Start banner of immediate print requests
\$\$ONLEND	End banner of immediate print requests

Banners are optional and do not have to be printed. To delete a banner, simply rename the member for the specific banner type. For example, to delete the start of report banner and end of report banner, rename the following two members \$\$REPSTA and \$\$REPEND in the BANNERS library.

The supplied banners are samples that can easily be modified. Since the banners are regular PDS members, you can edit and change their format. Additional options, such as enlarging characters of the user address on the banner at the beginning of the user bundle, are explained in the CONTROL-D chapter of the *INCONTROL for z/OS Installation Guide*.

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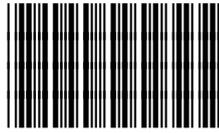
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