



# Control-D CA-DISPATCH 9.0.00 Conversion Guide



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- 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
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## About this guide

This guide contains the information necessary to help you to convert from CA-DISPATCH to Control-D. The guide contains the following parts:

### **Chapter 1 – Overview**

Provides an introduction, outlines conversion steps, gives naming conventions, and gives a short explanation of each step of the conversion process.

### **Chapter 2 – Conversion Steps**

Specifies the steps needed to perform the conversion.

### **Chapter 3 – Building a Control-D Recipient Tree**

Gives the procedure and examples for defining and building a Control-D Recipient Tree using utility CTDBLDTR.

### **Appendix A – Default Conversion Parameters**

Describes default definition parameters for decollation missions are contained in member CADDEFDM in the IOA SAMPLE library.

### **Appendix B – Messages**

Describes error messages related to the conversion of CA-DISPATCH to Control-D.

## 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.

## Related Publications

### *Control-D Getting Started Guide*

Introduction to Control-D concepts and facilities in the framework of a hands-on demonstration.

### *Control-D Online Viewing Guide*

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

### *Control-D Implementation Guide*

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

### *AFP in the Control-D Environment Implementation Guide*

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.

# 1 Overview

This chapter includes the following topics:

- [Introduction](#) (on page 11)
- [Conversion Steps](#) (on page 11)
- [Naming Conventions](#) (on page 11)
- [Creating the Control-D Recipient Tree](#) (on page 12)
- [Building the Control-D Recipient Tree](#) (on page 12)
- [Required Reports](#) (on page 12)
- [Creating Decollation Mission Definitions](#) (on page 13)
- [Using CADCDECM](#) (on page 13)
- [Using CADJDEC1 \(optional\)](#) (on page 14)
- [Using CADJDECM](#) (on page 14)
- [Creating Printing Parameters](#) (on page 14)
- [Using CADCOUTP](#) (on page 14)
- [Using CADCPERM](#) (on page 15)
- [Using CADCDJDE](#) (on page 15)
- [Using CADJOUTP](#) (on page 15)
- [Using CADJAPAP](#) (on page 16)
- [Using CADJDJDE](#) (on page 16)
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- [Using CTDDJDE and CTDAPA](#) (on page 17)
- [Using CTDX003](#) (on page 17)
- [Creating the Control-D History User File](#) (on page 17)
- [Using CADCARC1 and CADCARC2 Members](#) (on page 17)
- [Using Job CADJARC0](#) (on page 17)
- [Using Job CADJARC1](#) (on page 17)
- [Using Job CADJARC2](#) (on page 18)
- [User Exit CTDX004](#) (on page 18)
- [Using CADSKL Skeleton Job](#) (on page 18)
- [Special Considerations](#) (on page 28)

## Introduction

This publication helps you convert from CA-DISPATCH to Control-D software.

The CA-DISPATCH to Control-D conversion tool creates Control-D components based on information extracted from the CA-DISPATCH database.

This conversion tool supports Control-D version 6.3.00 and later. IOA and Control-D environments must be installed before starting the conversion process.

The conversion tool is supplied as an open source in the IOA...SAMPLE library. The tool can be adjusted for a specific conversion process.

The layout of the input files used for the conversion might be different based on the release or settings of the converted product. Requirements for conversion might be different based on a specific implementation.

All these details must be analyzed before the conversion is started, and the CADLxxxx, CADJxxxx, and CADDxxxx members must be adjusted accordingly. Note that the SORT parameters in the CADJxxxx jobs must match the record layout described in the CADLxxxx members.

The conversion tool provides the following methods for creating Control-D Recipient Names.

- The first 8 characters of the CA-DISPATCH Recipient Name, which is 16 characters long, are used as the Control-D Recipient Name. This option can be used if the first 8 characters of CA-DISPATCH Recipient Names are unique.
- The CA-DISPATCH maildrop, which is 8 characters long, is used as the Control-D Recipient Name. This option can be used if each CA-DISPATCH recipient corresponds to one unique maildrop.

When using either method, the supplied CADJANLZ job can be used to issue a report about duplicate Control-D Recipient Names that will be created. This job can be submitted after the CULPRIT report, DSCULP02, is extracted (see [Step 1.A Create CA-DISPATCH Report DSCULP02](#) (on page 20)). The report issued by CADJANLZ can help you to decide which method to use. If duplicates are created in both methods, use the method which yields the least number of duplicates.

Using information issued by CADJANLZ, you can change the Recipient Names or maildrops in the CULPRIT reports to avoid duplicate Control-D Recipient Names.

After deciding which method to use, you must tailor the conversion jobs correspondently.

## Conversion Steps

The steps for converting CA-DISPATCH to Control-D are described in [2 Conversion Steps](#) (on page 19).

Each of these steps can be implemented separately according to the needs of the report distribution environment. For example, CA-DISPATCH archive indexes can be converted without performing other parts of the conversion.

## Naming Conventions

CA-DISPATCH to Control-D conversion members are located in the IOA SAMPLE library. Nearly all the members associated with this conversion tool have names beginning with the characters CAD.

- CADC $xxxx$ —CA-DISPATCH CULPRIT report definitions
- CADDEF $xx$ —Members containing default settings and definitions
- CADJ $xxxx$ —Members containing conversion jobs
- CADL $xxxx$ —CA-DISPATCH report layouts
- CADMS $xxxx$ —Message member
- CADS $xxxx$ —Source programs of the conversion jobs
- CADUSER—Sample of the user conversion table

## Creating the Control-D Recipient Tree

### Building the Control-D Recipient Tree

The CA-DISPATCH to Control-D conversion tool provides two methods of building the Control-D Recipient Tree.

**Table 1 Methods for Building the Control-D Recipient Tree**

Method	Description
Method A	<p>This method creates a 3-level Control-D Recipient Tree. The first level, level 10, contains one user—CTDTREE. The second level, level 20, contains all the CA-DISPATCH MAILDROPS and their Addresses. The third level, level 30, contains all the CA-DISPATCH recipients.</p> <p>This method is recommended when the MAILDROP names differ from the recipient names and there are many recipients for each MAILDROP.</p>
Method B	<p>This method creates a 2-level Control-D Recipient Tree. The first level, level 10 contains one user—CTDTREE. The second level, level 20, contains all the CA-DISPATCH MAILDROPS. The CA-DISPATCH recipients who belong to each MAILDROP are placed in the first description line. The CA-DISPATCH recipient description and address are placed in the ADDRESS lines.</p> <p>Use this method when the CA-DISPATCH MAILDROP is used for the Control-D Recipient name.</p>

### Required Reports

The Recipient Tree conversion requires two standard CA-DISPATCH reports:

- Report Recipient File Listing (known as DSCULP02).
- Report Distribution Maildrop Listing - Defaults (known as DSCULP04).

These reports are generated on separate sequential files.

These two files are used as input to the tree building utility, CTDBLDTR. This program can build the Control-D Recipient Tree from any DSCULP02 report. Specially tailored jobs to convert CA-DISPATCH reports using this program are contained in the IOA SAMPLE library, and described in Chapter 3, "Building a Control-D Recipient Tree." This utility can also be used also to add users to the Control-D Recipient Tree from any other DSCULP02 report. Instructions on how to use the CTDBLDTR utility are also contained in the IOA SAMPLE library, and described in Chapter 3, "Building a Control-D Recipient Tree."

Program CADSTREE is used to prepare the DSCULP04 report for processing by program CTDBLDTR.

Two jobs are supplied in the conversion tool IOA SAMPLE library:

- Job CADJTRE1 is the JCL for Recipient Tree creation Method A. Parameter members CADDEFT1, CADDEFT2 and CADDEFT3 are additional input for program CTDBLDTR.
- Job CADJTRE2 is the JCL for Recipient Tree creation Method B. Parameter members CADDEF4, CADDEFT5 and CADDEFT6 are additional input for program CTDBLDTR.

## Creating Decollation Mission Definitions

Conversion program CADSDECM creates Control-D generic decollation mission definitions from CA-DISPATCH information. A report similar to the CA-DISPATCH Selection By Recipients Listing is used as input. These generic decollation missions enable Control-D to decollate reports to the same recipients that received those Control-D CA-DISPATCH reports using CA-DISPATCH.

Printing characteristics are not processed by this conversion program because Control-D automatically extracts all printing characteristics from the JES SPOOL. Therefore, the printing characteristics from the job's JCL are used.

Reports are converted as follows:

1. Using CADCDECM
2. Using CADJDEC1 (optional)
3. Using CADJDECM

## Using CADCDECM

Member CADCDECM contains a CULPRIT report definition that produces a list of all reports defined in the CA-DISPATCH database. This report contains the relevant information for creating Control-D generic decollation definitions. The report is written to a disk file for later use by job CADJDECM. This report, used by the conversion program, is not the standard DSCULP13 report - Selection By Recipients Listing, because report DSCULP13 is not provided in all CA-DISPATCH releases. Therefore, a special CULPRIT report is supplied in this member.

## Using CADJDEC1 (optional)

This job must be submitted if the CA-DISPATCH Maildrop is used for the Control-D Recipient name. The CA-DISPATCH Recipient name is replaced with the Maildrop value in the file created by the job CADCDECM and the result is written to an output file. Then, in the next job CADJDECM, this file must be specified as the input instead of the file created by CADCDECM.

## Using CADJDECM

The first step of job CADJDECM defines all the files needed by the conversion program.

The second step sorts the output file created by job CADCDECM (or by CADJDEC1) and places it on a new file.

Decollation mission definitions can be built by report name or jobname. Sort the output file by REPORT NAME or JOBNAME according to whether you are building decollation mission definitions by report name or jobname. The sort also eliminates blank records.

The third step in job CADJDECM creates the decollation mission definitions in a designated Control-D REPORTS library. Each member is a Control-D decollation mission. The name of each member is the CA-DISPATCH report name or the CA-DISPATCH job name.

Job CADJDECM activates program CADSDECM to build the new Control-D decollation mission definitions. The source code of this program resides in the IOA SAMPLE library and can be locally tailored. This program receives the PARM parameter. The decollation mission definition members are built based on report names if this parameter is omitted. If the input file created by CADCDECM contains a jobname for each CA-DISPATCH report, you can build the decollation mission definition members based on jobname (the name of each member is the CA-DISPATCH jobname). To do this, specify PARM='JOB' parameter and change the previous step to sort the input file by jobname.

## Creating Printing Parameters

### Using CADCOUTP

Member CADCOUTP contains a CULPRIT report definition that produces a list of all the recipients and their related reports, as defined in the CA-DISPATCH database. This report contains the recipient name, the recipient's reports, and the printing parameters used for each report. This information is extracted from CA-DISPATCH Type 3 LOAD records.

The report is written to a disk file for later use by the CADJAPAP job. This report is used by the conversion programs. It is not a standard CA-DISPATCH report because none of the standard CA-DISPATCH reports contains all the printing characteristics information assigned for each report. Therefore, a special CULPRIT report is supplied in this member.

This report does not contain any JCL. You must add the correct JCL. Make sure that the output is routed to a disk file and properly referenced by DD statement SYS018 (as specified in the CULPRIT report). Specify the file destination only in the JCL and not in the CULPRIT options because the ASA code is used during the conversion process.

## Using CADCPERM

Member CADCPERM contains a CULPRIT report definition that produces a list of the reports as defined in the CA-DISPATCH database. This report contains the Jobname, Report name, Recipient name, Maildrop and printing parameters used for each report.

The report is written to a disk file for later use by jobs CADJOUTP and CADJPERM. It is not a standard CA-DISPATCH report. Special CULPRIT report parameters are supplied in this member. This member does not contain any JCL. You must add the correct JCL.

## Using CADCDJDE

Member CADCDJDE contains a CULPRIT report definition that produces a list of all the recipients and their related reports, as defined in the CA-DISPATCH database. This report contains the recipient name, the recipient's reports, and all the DJDE parameters used for each report. This information is extracted from CA-DISPATCH LOAD records of Type 7, 8, 9, and A.

This report is written to a disk file for later use by job CADJDJDE. This report is used by the conversion program. It is not a standard CA-DISPATCH report because none of the standard CA-DISPATCH reports contains all the DJDE information assigned for each report. Therefore, a special CULPRIT report is supplied in this member.

This report does not contain any JCL. You must add the correct JCL. Make sure that the output is routed to a disk file, properly referenced by DD statement SYS018 (as specified in the CULPRIT report). Specify the file destination only in the JCL and not in the CULPRIT options because the ASA code is used during the conversion process.

## Using CADJOUTP

Job CADJOUTP activates program CADSOUTP to build the new Control-D OUTPARMS members. The source code of this program resides in the IOA SAMPLE library and can be locally tailored.

The job consists of the following steps:

1. Defines all the files needed by the conversion program.
2. Sorts the file created by the job CADCPERM according to RECIPIENT NAME (in ascending order) and REPORT NAME (in ascending order). This sort also eliminates blank records. This step is supplied for the method of using the CA-DISPATCH Maildrop for the Control-D Recipient name. If the CA-DISPATCH Recipient name is used for the Control-D Recipient name, this step must be adjusted as it is described in the JCL comments.
3. Creates the OUTPARMS parameter members in the Control-D OUTPARMS library. This step is supplied for the method of using the CA-DISPATCH Maildrop for the Control-D Recipient name. If the CA-DISPATCH Recipient name is used for the Control-D Recipient name, the PARM='RECIP' parameter must be added to the EXEC statement.

The CA-DISPATCH report contains CLASS DEFAULT and SPECIFIC CLASS fields. To support these fields, the last step uses an input parameter, CLASS DEFAULT, assigned using DD statement INPUT. If this input parameter contains a value and the SPECIFIC CLASS field in the CA-DISPATCH report does not, the value specified for input parameter CLASS DEFAULT is assigned to parameter CLASS. If input parameter CLASS DEFAULT is not assigned a value, then parameter CLASS is not added to the OUTPARMS member.

The OUTPARMS library supports JOBNAME in addition to USERNAME and REPORT NAME.

## Using CADJAPAP

Job CADJAPAP activates program CADSAPAP to build the new Control-D APAPARM members. The source code of this program resides in the IOA SAMPLE library and can be locally tailored.

Job CADJAPAP consists of two steps:

1. Defines all the files needed by the conversion program.
2. Creates the APA parameter members in the Control-D APAPARM library.

## Using CADJDJDE

Job CADJDJDE activates the CADSDJDE program to build the new Control-D DJDEPARM members. The source code of this program resides in the IOA SAMPLE library, and can be locally tailored.

Job CADJDJDE consists of four steps:

1. Defines all the files needed by the conversion program.
2. Runs program CTDSCULU, which updates the output created by job CADCDJDE and places the recipient and report names in each of the records. This enables the reports to be sorted by recipient name and report name.
3. Sorts the output from the previous step by USER NAME (in ascending order) and REPORT NAME (in ascending order), while keeping the original order of the records for each USER/REPORT NAME combination. The sort also eliminates the blank records.
4. Creates the DJDE parameter members in the Control-D DJDEPARM library.

## Using CADJPERM

Job CADJPERM creates Control-D Permanent User File from the CA-DISPATCH report created by the job CADCPERM. In addition, the CA-DISPATCH JCL containing OUTPUT cards can be used as input file to take FORMDEF, PAGEDDEF output parameters.

The created by this job Permanent User File can be used in Control-D decollation missions to build print mission names and printing characteristics of decollated Control-D reports. For this purpose the submitted CTDX0221 user exit sample should be used in Control-D.

The job consists of three steps:

1. Defines all the files needed by the conversion program.
2. Sorts the output created by the job CADCPERM according to RECIPIENT NAME (in ascending order) and REPORT NAME (in ascending order). This sort also eliminates blank records. This step is supplied for the method of using the CA-DISPATCH Maildrop for the Control-D Recipient name. If the CA-DISPATCH Recipient name is used for the Control-D Recipient name, this step must be adjusted as it is described in the JCL comments.
3. Adds records to the Control-D Permanent User File. This step is supplied for the method of using the CA-DISPATCH Maildrop for the Control-D Recipient name. If the CA-DISPATCH Recipient name is used for the Control-D Recipient name, the PARM='RECIP' parameter must be added to the EXEC statement.

## Using CTDDJDE and CTDAPA

The CTDDJDE and CTDAPA routines that reside in the IOA SAMPEXIT library, support JOBNAME by default. Because the conversion programs build members in the APAPARM and DJDEPARM libraries by USERNAME, the CTDDJDE and CTDAPA routines support USERNAME. To make these routines work by USERNAME, activate optional wish WD2754 in the IOA PARM library.

## Using CTDX003

After Using CTDDJDE and CTDAPA, activate the changes by re-assembling and link-editing User Exit CTDX003 into the IOA LOAD library using ICE.

If CTDOUT is changed by this conversion, the user exit must be tailored and marked with OUTPARM set to USER (instead of being set to JOB or blanks). Otherwise, the needed members will not be found in the OUTPARMS library when printing a report.

**Note:** Program CADSMEM is used in the other conversion programs to perform all the PDS operations while creating the members in each new library.

## Creating the Control-D History User File

This part of the conversion process creates the History User file in the Control-D environment to facilitate access to reports archived by CA-DISPATCH. This enables reports created by CA-DISPATCH to be restored in the Control-D environment from the original tapes backed up by CA-DISPATCH.

## Using CADCARC1 and CADCARC2 Members

Members CADCARC1 and CADCARC2 contain a CULPRIT report definition that produces a list of all reports defined in the CA-DISPATCH database and a list of all archived reports. These lists contain the relevant information for creating the Control-D History User file. These lists should be written to a disk file for later use by job CADJARC0.

## Using Job CADJARC0

Job CADJARC0 is a 3-step job that creates a sequential file for job CADJARC1.

1. Defines all the files used in this job.
2. Sorts the CULPRIT report list of the definitions according to Recipient name and removes unneeded records.
3. Replaces the Recipient name by Maildrop if the CA-DISPATCH Maildrop is used for the Control-D recipient name. If the first 8 characters of CA-DISPACH Recipient name are used for the Control-D Recipient name, the RECIP parameter must be specified and this step does nothing.

## Using Job CADJARC1

Job CADJARC1 is a 9-step job that creates a sequential file for job CADJARC2. Job CADJARC2 builds the Control-D History User file.

1. Defines all the files used in this job.
2. Sorts the CULPRIT report list of the definitions and remove unneeded records.
3. Sorts the table of user names. A sample user name table is supplied in member CADUSER.
4. Converts user names in the list of report definitions according to the user table in member CADUSER.
5. Removes duplicate records from the list of report definitions.
6. Reformats the CULPRIT report list of archived reports using the CADCARC1 report format.
7. Merges both reports into one report and sorts it by REPORT NAME(default) or JOBNAME. To sort by JOBNAME this step must be adjusted as it is described in JCL comments.
8. Propagates user names for all records in the resulting report.
9. Prepares resulting report according to job name for later use by job CADJARC2.

## Using Job CADJARC2

Job CADJARC2 creates records in the Control-D History User file.

- Defines all the files needed by the conversion program using CADJARC2.
- Creates records in the Control-D History User file using CADJARC2 based on input from job CADJARC1.

This job adds records to an existing History User file. If this job is rerun, you must reformat the History User file to prevent the addition of duplicate records. Use job CTDUFDBF from the CTD JCL library to reformat the History User file.

## User Exit CTDX004

Recompile the supplied source CTDX004L as User Exit CTDX004 using ICE.

Exit CTDX004 receives control during the restore request and starts a process for restoring reports from CA-DISPATCH tapes.

Exit CTDX004 submits a job to locate the corresponding report on the tape, writes this report directly to a CDAM file, and creates new user and sysdata records in the Active User file.

## Using CADSKL Skeleton Job

CADSKL is a skeleton for building a job to restore reports from CA-DISPATCH tapes. This skeleton is located in the Control-D SKL library.

## 2 Conversion Steps

This chapter includes the following topics:

[Overview](#) (on page 20)

[Step 1 Create Control-D Recipient Tree](#) (on page 20)

[Step 1.A Create CA-DISPATCH Report DSCULP02](#) (on page 20)

[Step 1.B Create CA-DISPATCH Report DSCULP04](#) (on page 20)

[Step 1.C Tailor and Run Job CADJTRE1 or CADJTRE2](#) (on page 20)

[Step 2 Create Decollation Mission Definitions](#) (on page 21)

[Step 2.A Tailor and Run Job CADCDECM](#) (on page 21)

[Step 2.B Check and/or Modify Options Specified in Member CADDEFDM](#) (on page 21)

[Step 2.C Tailor and Run Job CADJDEC1](#) (on page 21)

[Step 2.D Tailor and Run Job CADJDECM](#) (on page 21)

[Step 2.E Copy and Tailor Member CADUNIVR](#) (on page 22)

[Step 3 Create Printing Parameters](#) (on page 22)

[Step 3.A Tailor and Run Job CADCOUPT](#) (on page 22)

[Step 3.B Tailor and Run Job CADCPERM](#) (on page 23)

[Step 3.C Tailor and Run Job CADCDJDE](#) (on page 23)

[Step 3.D Tailor and Run Job CADJOUTP](#) (on page 24)

[Step 3.E Tailor and Run Job CADJPERM](#) (on page 24)

[Step 3.F Tailor and Run Job CADJAPAP](#) (on page 25)

[Step 3.G Tailor and Run Job CADJDJDE](#) (on page 25)

[Step 3.H Activate Optional Wishes WD1643 and WD2754](#) (on page 26)

[Step 4 Create Control-D History File](#) (on page 26)

[Step 4.A Tailor and Run Jobs CADCARC1 and CADCARC2](#) (on page 26)

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[Step 4.C Tailor and Recompile User Exit CTDX004](#) (on page 27)

[Step 4.D Tailor Skeleton CADSKL in the Control-D SKL Library](#) (on page 27)

## Overview

Use the CTDBLDTR utility to create or modify the Control-D Recipient Tree. This utility uses input from two sources: a report (referenced by DD statement REPORT), and a set of instructions (referenced by DD statement SYSIN) specifying how the data in the report is used to create users in the Recipient Tree.

This utility produces a list (referenced by DD statement SYSPRINT) summarizing the structure (input supplied by the user in SYSIN), and the Recipient Tree (referenced by DD statement TREE). TREE is a member of a partitioned dataset. If TREE is an empty member, the utility creates the Recipient Tree. If TREE contains an existing Recipient Tree, the utility modifies it.

The utility scans each line of the REPORT input and processes it according to the specifications included in the SYSIN data.

For sample JCL programs to execute utility CTDBLDTR, see the CTDBLDDC and CTDBLDJB members in the IOA SAMPLE library.

## Step 1 Create Control-D Recipient Tree

### Step 1.A Create CA-DISPATCH Report DSCULP02

1. Create the CA-DISPATCH report: Report Recipient File Listing. Use standard CA-DISPATCH member DSCULP02.

The DD statement for the report output must reference a dataset definition and not a sysout. Write the CULPRIT report to a sysout but ensure that the Report Recipient File Listing is routed to a file and not a sysout.

2. Name the output file CTD.CADI.REPORT02. Otherwise, you must change the name in jobs CADJTRE1 and CADJTRE2. The output file must have the following characteristics: physical sequential, RECFM FBA, LRECL 133.

### Step 1.B Create CA-DISPATCH Report DSCULP04

1. Create the CA-DISPATCH report: Report Distribution Maildrop Listing – Defaults. Use standard CA-DISPATCH member DSCULP04.

The DD statement for the report output must reference a dataset definition and not a sysout. Write the CULPRIT report to a sysout but make sure that the Report Distribution Maildrop Listing – Defaults is routed to a file and not a sysout.

2. Name the output file CTD.CADI.REPORT04. Otherwise, you must change the name in jobs CADJTRE1 and CADJTRE2 jobs. The output file must have the following characteristics: physical sequential, RECFM FBA, LRECL 133.

### Step 1.C Tailor and Run Job CADJTRE1 or CADJTRE2

1. Tailor member CADJTRE1 or member CADJTRE2 to create a Recipient Tree using Method A or Method B. For more information about these two methods, see [Building the Control-D Recipient Tree](#) (on page 12).

2. Submit the job for execution and check the sysout for error messages.

## Step 2 Create Decollation Mission Definitions

### Step 2.A Tailor and Run Job CADCDECM

1. Tailor member CADCDECM in the IOA SAMPLE library. This member is a CULPRIT report definition.
2. Create the JCL for running this report. The DD statement for the report output must reference a dataset definition and not a sysout. Write the CULPRIT report to a sysout but make sure that the output of job CADCDECM is routed to a file and not a sysout.

The following table describes the input and output for this step:

**Table 2 Job CADCDECM Input and Output**

Data	Description
Input	CA-DISPATCH Database.
Output	A sequential file containing the report Name the output file CTD.CADI.REPORT. Otherwise, you must change the name in job CADJDECM. The output file must have the following characteristics: physical sequential, RECFM FBA, LRECL 279

3. Submit the job for execution and check the sysout error messages. The job must end with a condition code of 0.

### Step 2.B Check and/or Modify Options Specified in Member CADDEFDM

Tailor the Control-D options specified in member CADDEFDM of the IOA SAMPLE library.

### Step 2.C Tailor and Run Job CADJDEC1

Submit this step only if the CA-DISPATCH Maildrop is used as the Control-D Recipient name. It replaces the Recipient name with the maildrop in the CTD.CADI.REPORT file created in the Step 2.A, and writes the results in the CTD.CADI.REPORT.UPDATED output file.

The job must end with a condition code of 0.

### Step 2.D Tailor and Run Job CADJDECM

This job creates the Control-D REPORTS library for report decollation mission definitions.

The following table describes the input and output for this step:

**Table 3** Job CADJDECM Input and Output

Data	Description
Input	<p>CTD.CADI.REPORT file, created by CADCDECM (as described in Step 2.A above). If the CA-DISPATCH Maildrop is used as the Control-D Recipient name, the job must be tailored to use CTD.CADI.REPORT.UPDATED, created in Step 2.C, instead of CTD.CADI.REPORT.</p> <p>Member CADDEFDM in the IOA SAMPLE library. This member contains external parameters for the conversion. These parameters are used as defaults for the report decollation definitions.</p>
Output	<p>A PDS library containing Control-D generic report decollation mission definitions.</p> <p>The default file name is CTD.REPORTS. The output file has the following characteristics: partitioned dataset, logical record length 80, blocksize 3120.</p>

1. Tailor member CADJDECM in the IOA SAMPLE library.

**Note:**

- Ensure that the SPACE parameter specified for the DAREPMIS file contains enough directory blocks and the primary allocation value is large enough.
- The job can run for quite some time, depending on the number of reports in the CULPRIT report file.

2. Submit the job for execution and check the sysout for error messages. The job must end with a condition code of 0.

## Step 2.E Copy and Tailor Member CADUNIVR

1. Copy member CADUNIVR from the conversion tool IOA SAMPLE library into the Control-D REPORTS library, which was created by job CADJDECM. Fill in the OWNER ID, GENERIC ON CLASS, BACKUP mission name, and the CADUNIVR character used by your site in the EXTWTR field.
2. Save the member.

This generic decollation mission is used to decollate all reports that were processed in CA-DISPATCH using the Universal Report Writer.

## Step 3 Create Printing Parameters

### Step 3.A Tailor and Run Job CADCOUTP

1. Tailor member CADCOUTP in the IOA SAMPLE library. This member is a CULPRIT report definition. Ensure that the output is routed to a file and not to a sysout. DD statement SYS018 references the output file. The report does not contain any JCL. You must add the correct JCL.

Do not change the CULPRIT definition itself. Otherwise, the results are unpredictable. Specify the file destination only in the JCL and not in the CULPRIT options because the ASA code is used during the conversion process.

The following table describes the input and output for this step:

**Table 4 Job CADCOUTP Input and Output**

Data	Description
Input	CA-DISPATCH database
Output	A sequential file containing the report Name the output file CTD.CADI.OUTPUT. Otherwise, you must change the name in the CADJAPAP job. The output file must have the following characteristics: physical sequential, record format FBA, logical record length 279.

2. Submit the job for execution and check the sysout for error messages. The job must end with a condition code of 0.

### Step 3.B Tailor and Run Job CADCPERM

1. Tailor member CADCPERM in the IOA SAMPLE library. This member is a CULPRIT report definition. The report does not contain any JCL. You must add the correct JCL.

The following table describes the input and output for this step:

**Table 5 Job CADCPERM Input and Output**

Data	Description
Input	CA-DISPATCH database
Output	A sequential file containing the report Name the output file CTD.CADI.DSPERM. Otherwise, you must change the name in the CADJOUTP and CADJPERM jobs. The output file must have the following characteristics: physical sequential, record format FBA, logical record length 1000.

2. Submit the job for execution and check the sysout for error messages. The job must end with a condition code of 0.

### Step 3.C Tailor and Run Job CADCDJDE

1. Tailor member CADCDJDE in the IOA SAMPLE library. This member is a CULPRIT report definition. Do not change the CULPRIT definition. Otherwise, results are unpredictable. Ensure that the output is routed to a file and not to a sysout. DD statement SYS018 references the output file.

The report does not contain any JCL. You must add the correct JCL. Specify the file destination only in the JCL and not in the CULPRIT options because the ASA code is used during the conversion process.

The following table describes the input and output for this step:

**Table 6 Job CADCDJDE Input and Output**

Data	Description
Input	CA-DISPATCH database.
Output	A sequential file containing the report Name the output file CTD.CADI.DJDE. Otherwise, you must change the name in job CADCDJDE. The output file must have the following characteristics: physical sequential, record format FBA, logical record length 1300.

2. Submit the job for execution and check the sysout for error messages. The job must end with a condition code of 0.

## Step 3.D Tailor and Run Job CADJOUTP

This step creates the Control-D OUTPARMS library whose members contain the regular printing characteristics for each report.

The following table describes the input and output for this step:

**Table 7 Job CADJOUTP Input and Output**

Data	Description
Input	CTD.CADI.DSPERM file created by the job in member CADCPERM.
Output	A PDS library, containing Control-D OUTPARMS members. Default file name: CTD.OUTPARMS. The characteristics of the file are: Partitioned dataset, logical record length 80, blocksize 3120.

1. Tailor member CADJOUTP.

**Note:**

- Ensure that the SPACE parameter specified for the DAOUTPUT file contains enough directory blocks and the primary allocation value is large enough.
- The job can run for quite some time, depending on the number of reports in the CULPRIT report file.

2. Submit the job for execution and check the sysout for error messages. The job must end with a condition code of 0.

## Step 3.E Tailor and Run Job CADJPERM

This step adds records to the Control-D Permanent User File.

The following table describes the input and output for this step:

**Table 8 Job CADJPERM Input and Output**

Data	Description
Input	<ul style="list-style-type: none"> <li>▪ CTD.CADI.DSPERM file created by the job in member CADCPERM.</li> <li>▪ CTD.CADI.DIS60 -CA-DISPATCH JCL containing OUTPUT cards.</li> </ul>
Output	Control-D Permanent User File

1. Tailor member CADJPERM.
2. Submit the job for execution and check the sysout for error messages. The job must end with a condition code of 0.

### Step 3.F Tailor and Run Job CADJAPAP

This step creates the Control-D APAPARM library whose members contain the APA control statements for each report.

The following table describes the input and output for this step:

**Table 9 Job CADJAPAP Input and Output**

Data	Description
Input	CTD.CADI.OUTPUT file created by the job in member CADCOUTP
Output	A PDS library containing Control-D APAPARM members Default file name: CTD.APAPARM. The output file must have the following characteristics: Partitioned dataset, logical record length 80, blocksize 3120.

1. Tailor member CADJAPAP according to your local conventions:

**Note:**

- Ensure that the SPACE parameter specified for the DAAPA file contains enough directory blocks and the primary allocation value is large enough.
  - The job can run for quite some time, depending on the number of reports in the CULPRIT report file.
2. Submit the job for execution and check the sysout for error messages. The job must end with a condition code of 0.

### Step 3.G Tailor and Run Job CADJDJDE

This step creates the Control-D DJDEPARM library, whose members contain the DJDE control statements for each report.

The following table describes the input and output for this step:

**Table 10 Job CADJDJDE Input and Output**

Data	Description
Input	CTD.CADI.DJDE file created by the job in member CADCDJDE
Output	A PDS library containing Control-D DJDEPARM members Default file name: CTD.DJDEPARM. The output file must have the following characteristics: Partitioned dataset, logical record length 80, blocksize 3120.

1. Tailor the member CADJDJDE according to your local conventions.

**Note:**

- Ensure that the SPACE parameter specified for the DAAPA file contains enough directory blocks and the primary allocation value is large enough.
  - The job can run for quite some time, depending on the number of reports in the CULPRIT report file.
2. Submit the job for execution and check the sysout for error messages. The job must end with a condition code of 0.

## Step 3.H Activate Optional Wishes WD1643 and WD2754

1. Activate optional wish WD1643.

By default, Control-D counts blank lines in decollation missions. When this wish is activated, Control-D will no longer count blank lines in decollation missions. This is similar to CA-DISPATCH, which also does not count blank lines. This wish functions only for decollation missions with the group name SKIPBLANK.

2. Activate optional wish WD2754.

Re-assemble user exits CTDX003 and CTDX014 using ICE.

For more information about this wish, see member IOADFLTS in the IOA DOC library.

## Step 4 Create Control-D History File

### Step 4.A Tailor and Run Jobs CADCARC1 and CADCARC2

1. Tailor members CADCARC1 and CADCARC2 in the IOA SAMPLE library. These members are CULPRIT report definitions. Adjust them according to your local conventions. Create the JCL for running this report. Ensure that the output is routed to a file and not to a sysout.
2. Write the CULPRIT report to a sysout. Only the DD statement specified for this report must contain a dataset definition and not a sysout. The reason for this is based on ASA code considerations in the conversion program.

The following table describes the input and output for this step:

**Table 11 Jobs CADCARC1 and CADCARC2 Input and Output**

Data	Description
Input	CA-DISPATCH database
Output	<p>Two sequential files containing the reports</p> <p>Name the first output file (created by job CADCARC1) CTD.CADI.OUTREP. Otherwise, you must change the name in job CADJARC1.</p> <p>The output file must have the following characteristics: physical sequential, record format FB, logical record length 80.</p> <p>The file format is illustrated below:</p> <pre> -----1-----2-----3-----4-----5-----+       REPORT      JOB              RECIPIENT                                 BEAUCHAT TOM        ADAREP      GPADA004        AIS ARCUS       ADAREP      GPADA004        TECH   SUPPORT                     </pre>
	<p>Name the second output file (created by job CADCARC2) CTD.CADI.HISREP. Otherwise, you must change the name in job CADJARC1.</p> <p>The output file must have the following characteristics: physical sequential, record format FA, logical record length 133.</p>

3. Submit the job for execution and check the sysout for error messages. The job must end with a condition code of 0.

### Step 4.B Tailor and Run Jobs CADJARC0, CADJARC1, and CADJARC2

1. Tailor and run jobs CADJARC0, CADJARC1, and CADJARC2. Check the sysouts for error messages. The jobs must end with a condition code of 0.
2. Run the CTDUFSR utility to resort the data portion of the History User file. A sample job can be found in member CTDUFSR in the CTD JCL library.

### Step 4.C Tailor and Recompile User Exit CTDX004

Adjust user exit CTDX004. Use sample exit CTDX004L supplied in the IOA SAMPEXIT library. Recompile this source using ICE.

### Step 4.D Tailor Skeleton CADSKL in the Control-D SKL Library

Tailor skeleton CADSKL in the CTD SKL library.

## Special Considerations

1. The RECIPIENT NAME in the CA-DISPATCH report has 16 characters maximum, blanks allowed. To adjust the RECIPIENT NAME to the Control-D environment, the name is truncated to 8 characters and blanks are replaced by underscores ("\_"). Another option is to use the CA-DISPATCH Maildrop for the Control-D Recipient name as it described above.

2. The function of the PAGE FLAG in CA-DISPATCH is implemented by AND/OR logic in the WHEN statement, and by the following Control-D parameters:

CONTID (Y/N).

REFER TO NEXT PAGE (Y/N).

PRINT (Y/N).

Special user name NULL must be defined in the Recipient Tree to support the REFER TO NEXT PAGE option.

3. The ARCHIVE option in CA-DISPATCH is converted to the BACKUP option in Control-D. When N is specified in the CA-DISPATCH report definition, no backup mission name is inserted in the report decollation definition. Otherwise, the default BACKUP mission name, specified as an external parameter in member CADDEFDM, is used in the DO BACKUP statement.

4. The DO NAME statement in each Control-D report decollation definition is set to the CA-DISPATCH report name concatenated with report description.

5. In each ON CLASS statement, parameter EXTWTR is set to the CA-DISPATCH report name. The report decollation is then made to this EXTWTR.

6. If a string is specified for TEST purposes in the CA-DISPATCH report, the same test is performed in Control-D. In addition, the conversion enables you to open a window for a string search. For more information, see "#LINES RANGE".

7. There is a maximum default value for the number of cards for each member built by this conversion. This number is specified in routine CADSDECM in the #CARDS and AREALEN constants. If necessary, this value can be locally tailored.

8. Each member created in a DJDEPARM, APAPARM, or OUTPARMS library is assigned a member name according to the following criteria:

- If the report name contains only three characters, the site is using a Universal Writer name. The member name is set to \$xxx, where xxx is the report name. Because only one occurrence of the member can exist, the first occurrence found in the CULPRIT report is used. Any later occurrence of the same report name in the CULPRIT report is ignored.
- If the report name starts with @ or #, the site is using a Unique report name. The member name is set to @xxxxxxx or #xxxxxxx, where xxxxxxx is the report name. Because only one occurrence of the member can exist, the first occurrence found in the CULPRIT report is used. Any later occurrence of the same report name in the CULPRIT report is ignored.
- For all other report names, the member name is set to the USERNAME, subject to the above restrictions (meaning, the name is truncated to 8 characters, embedded blanks are replaced by underscores, and trailing blanks are eliminated).

9. DJDE parameters ITEXT, OTEXT and RTEXT can contain a maximum of 82 characters in field SC. Because the DJDEPARM, APAPARM and OUTPARMS libraries have a LRECL of 80, the text in field SC is truncated to the maximum size line each member can contain.

10. If the same report is assigned to a user more than once, only the first occurrence of the report record is used. Duplications are ignored. However, if different occurrences of the same report name assigned to a specific user contain the CHARS option, it is added to the OUTPARMS member only if the first record also contained the CHARS option.

11. The contents of each member is constructed as follows:

- For a Universal Writer report or Unique report, the corresponding member contains

- for DJDE parameters:

```
+++*
      DJDE JDE=ABCDEF, JDL=GHI JKL, ;
      DJDE DEPT=' EXAMPLE OF DEPT FIELD' , END;
```

- for OUTPARMS parameters:

```
+++*
      CLASS=X
      CHARS=( CHR1, CHR2)
```

- Any other member contains

- for DJDE parameters:

```
+++report- name- 1
      DJDE JDE=ABCDEF, JDL=GHI JKL, ;
      DJDE DEPT=' EXAMPLE OF DEPT FIELD' , END;
+++report- name- 2
      DJDE JDE=XXXXXX, JDL=YYYYYY, ;
      DJDE FONTS=(( FONTS1, 12LPI) , ( FONTS2, 11DOTS) ) , END;
      .
      .
```

- for OUTPARMS parameters:

```
+++report- name- 1
      CLASS=X
      CHARS=( CHR1, CHR2)
+++report- name- 2
      CLASS=Y
      OPTCD=J
      FCB=ZZZ
```

12. Carefully check the CADLDJDE DSECT, describing the DJDE CA-DISPATCH record (Types 7, 8, 9, and A) before submitting job CADJDJDE, because the local tests performed for these record types do not contain complete information. Therefore, the field offsets can be incorrect. If the CADLDJDE DSECT is changed, programs CADSDJDE and CADSCULU must be re-assembled and link-edited into the conversion tool LOAD library.

When changing the offsets within each DSECT, take special care with the SORT FIELDS of each conversion job, because the SORT key is based on a combination of USERNAME and REPORT NAME. An invalid sort can produce incorrect results and error messages while building the OUTPARMS, APAPARM and DJDEPARM libraries.

**13.** This conversion was designed with the assumption that the JOBNAME field is seldom used in the CA-DISPATCH database. Therefore, all members in the various libraries are named according to USERNAME. If the JOBNAME field is used at your site for every report entry, then:

- The conversion routines can locally be tailored to support JOBNAME as the member name.
- Change the SORT FIELDS in conversion jobs CADJOUTP and CADJDJDE to support JOBNAME as the primary sort key and REPORT NAME as the secondary sort key.
- CTDAPA and CTDDJDE can remain as supplied in the installation tape. However, CTDAPA will not then support report name masking.
- CTDOOUT must be referenced by User Exit CTDX003 using parameter OUTPARM set to JOB.

**14.** Set the default parameters in member CADDEFAR before job CADJARC2 is started.

Do not change the expressions PRODUCT=CA-DISPATCH and CATEGORY=CA-CONVERTED. User Exit CTDX004 inserts the CATEGORY field in the corresponding field in the USER records for additional analysis by User Exit CTDX004. Based on this parameter, Exit CTDX004 determines whether to use a special restore process.

**15.** Handling the Universal Report Character.

When using the CA-DISPATCH Universal Report option, all the report decollation missions created for this type of report can be omitted from the new Control-D REPORTS library. It is easy to identify these "Universal" report decollation missions because they all have a 3-character report name.

These reports are decollated using one generic decollation mission. This special generic decollation mission is supplied in member CADUNIVR in the IOA SAMPLE library. Copy member CADUNIVR manually to the new Control-D REPORTS library.

## 3 Building a Control-D Recipient Tree

This chapter includes the following topics:

[Overview](#) (on page 20)

[Defining the Levels](#) (on page 31)

[Additional Considerations for the PARENT Paragraph](#) (on page 33)

[TREE Construction Example](#) (on page 34)

### Overview

Use the CTDBLDTR utility to create or modify the Control-D Recipient Tree. This utility uses input from two sources: a report (referenced by DD statement REPORT), and a set of instructions (referenced by DD statement SYSIN) specifying how the data in the report is used to create users in the Recipient Tree.

This utility produces a list (referenced by DD statement SYSPRINT) summarizing the structure (input supplied by the user in SYSIN), and the Recipient Tree (referenced by DD statement TREE). TREE is a member of a partitioned dataset. If TREE is an empty member, the utility creates the Recipient Tree. If TREE contains an existing Recipient Tree, the utility modifies it.

The utility scans each line of the REPORT input and processes it according to the specifications included in the SYSIN data.

For sample JCL programs to execute utility CTDBLDTR, see the CTDBLDCC and CTDBLDJB members in the IOA SAMPLE library.

### Defining the Levels

The instruction syntax for building the Recipient Tree is as follows:

**Figure 1 Instruction Syntax for Building the Recipient Tree**

```

LEVEL=xx
USER -
POS=n
LENGTH=n
{   DEFAULT=ccc }
{   POS=n
LENGTH=n
{   DEFAULT=ccc } }
.
.
.
{   POS=n
LENGTH=n
{   DEFAULT=ccc } }
{ PARENT -
PLEVEL=xx
POS=n
LENGTH=n
{   DEFAULT=ccc }
{   TRANSLATE=tbl edd } }
{ ADDRESS -
POS=n
LENGTH=n
{   DEFAULT=ccc } }
{ SYNONYM -
POS=n
LENGTH=n
{   DEFAULT=ccc } }
{ SYNONYM -
POS=n
LENGTH=n
{   DEFAULT=ccc } }
END
    
```

Each LEVEL command can contain four types of paragraphs:

**Table 12 LEVEL Command Paragraphs**

Paragraph	Description
USER	Instructions to construct the user name. Mandatory.
PARENT	Instructions to construct the parent name. Optional.
ADDRESS	Instructions to construct the address text. Optional.
SYNONYM	Instructions to construct synonyms. Optional. Can be used more than once to construct more than one synonym for each user.
AUTHORIZE	Instructions to construct the authorized users. Optional.
DESC	Instructions to construct the description text. Optional.

Parameters define how to process the paragraph. These parameters are repeated for the same paragraph if the data to be constructed consists of data contained in more than one string in the report line.

The use of these parameters is as follows:

**Table 13 LEVEL Command Parameters**

Paragraph	Description
POS	Starting character position of the string in the input report. A value of 0 (zero) indicates that the default value is used. Data from the report is not used for this parameter.  The POS value is relative to the first print column of the report (that is, for the first column of the report, POS is set to 1) and does not include print control characters or variable record length values.
DEFAULT	The default value. Optional. Any position in the field of length LEN from the report that is blank is replaced by the corresponding character from parameter DEFAULT.

The combined total length of the data constructed from all the repetitions of the parameters, for each paragraph, must not exceed the number of characters shown in the table below:

**Table 14 Maximum Number of Characters for Paragraph Types**

# Characters	Paragraph Type
8	USER
8	PARENT
52	ADDRESS
20	SYNONYM

The utility constructs the users based on these definitions and searches the Recipient Tree to see if the constructed user is already defined. If the user is not found, the utility adds the user. If the user is found, the utility updates the Recipient Tree. This utility is especially useful if the only changes required are the addition of synonyms.

## Additional Considerations for the PARENT Paragraph

The PARENT paragraph has two additional parameters:

**Table 15 PARENT Paragraph Parameters**

Parameter	Description
PLEVEL	Mandatory. Level at which the parent is located.
TRANSLATE	Optional. DD name referencing a file containing the USER/PARENT correspondence.

If the parent of a user cannot be identified from the data on the report line, but can be determined from the user name, a file containing a table relating parent names to user names is supplied.

Each line in the external table is in the format `USER=usermask PARENT=parent`

In the *usermask* field, masking characters have the following meaning:

- \*—Matches any number of consecutive characters.
- ?—Matches any one character.

Examples

- `USER=ABC*D` matches users `ABC123D`, `ABC12D`, and `ABCXD`.
- `USER=ABC?D` only matches user `ABCXD` from the above set.

## TREE Construction Example

Suppose that the SYSIN file contains the following statements:

**Figure 2 TREE Construction Example**

```

LEVEL=20
USER -
POS=0
LENGTH=1
DEFAULT=L
POS=10
LENGTH=2
DEFAULT=03
PARENT -
PLEVEL=10
POS=0
LENGTH=6
DEFAULT=CDTREE
LEVEL=30
PARENT -
PLEVEL=20
POS=0
DEFAULT=L
LENGTH=1
POS=10
LENGTH=2
TRANSLATE=TABLE1
USER -
POS=0
LENGTH=1
DEFAULT=L
POS=1
LENGTH=4
DEFAULT=CKJ
SYNONYM -
POS=0
LENGTH=4
DEFAULT=USER
POS=1
LENGTH=4
SYNONYM -
POS=0
LENGTH=5
DEFAULT=SYN1-
POS=1
LENGTH=4

```

The Recipient Tree is constructed as follows:

For each line in REPORT file:

1. For a user at level 20 with the name *Lxy*, where *xy* are the contents of columns 10 and 11 in the report line:
  - If column 10 is blank, the name is 'L0y'
  - If column 11 is blank, the name is 'Lx3'
  - If both are blank, the name is 'L03'
2. The parent of this user is at level 10 with the name CDTREE.
3. For a user at level 30 with the name *Labcd*, where *abcd* are the contents of columns 4 through 7 in the report line:

Default CKJ is used in a manner similar to default 03 in item 1 above.

4. An attempt is made to determine a level 20 parent from the value 'L' plus the contents of columns 10 and 11. If this does not succeed, then the file referenced by DDNAME TABLE1 is scanned line by line until a match is found for the user name and the parent name are taken from the file.

Two synonyms are created: 'USER*abcd*' and 'SYN1-*abcd*', where *abcd* represents the contents of columns 1 through 4 in the report line.

## A Default Conversion Parameters

Default definition parameters for decollation missions are contained in member CADDEFDM in the IOA SAMPLE library. These parameters can be tailored according to the needs of your site.

**Table 16 Member CADDEFDM Default Decollation Definition Parameters**

Parameter	Description
ON CLASS	Mandatory. Describes the classes on which this report can be located. Maximum length: 8 characters. Specify at least one class.
DEFAULT USER	Optional. Specifies a valid user name, defined in the Control-D Recipient Tree, that gets the unidentified pages of a report. Maximum length: 8 characters.
DEFAULT COPIES	Optional. Defines the default number of copies to produce when printing the report. For more information, see the <i>Control-D and Control-V User Guide</i> . Parameter length: 3 characters. Leading zeroes must be used.
MAX COPIES	Optional. Defines the maximum number of copies. For more information, see the <i>Control-D and Control-V User Guide</i> . Parameter length: 3 characters. Leading zeroes must be used.
CATEGORY	Mandatory. Defines a report decollation mission category name. By default, the category name is set to a JOBNAME if one exists in the CULPRIT report. If not, the category name is taken from this parameter. Maximum length: 20 characters.
OWNER	Mandatory. Defines the default USER ID to which reports are assigned. Maximum length: 8 characters.
PRINT BY FORM	Optional. Indicates whether the printing mission name is set to <ul style="list-style-type: none"> <li>▪ the FORM name taken from the CA-DISPATCH CULPRIT report,</li> <li>▪ or the default printing mission name specified in the PRINT MISSION parameter.</li> </ul> Valid values: Y (Yes) for the FORM name or N (No) for name specified in PRINT MISSION parameter
BACKUP MISSION	Optional. Specifies the BACKUP MISSION name to be used if the Archive option is set to Y in the CULPRIT report. Maximum length: 8 characters.

Parameter	Description
#LINES RANGE	Optional. Defines the "window" in which to search for a string within the page. For example, if "from line" is set to 001 and #LINES RANGE is set to 003 in the CA-DISPATCH report, then the string in Control-D is searched from lines 001 through 003. The value 000 means: search only in the designated line. Parameter length: 3 characters. Use leading zeroes. Default: 000
RETRO	Optional. Retroactive scheduling. Specifies whether to schedule a report decollation mission if its original schedule date has passed. Default: "*", means do not schedule the mission.
MAXWAIT	Optional. Number of days to wait for report decollation completion. Specifies the number of "extra" days a decollation mission waits for execution in the Active Missions file. After the mission has waited the extra days, it is deleted. Default: 0 (days)
GENERIC	Do not modify GENERIC.
VERSION	Do not modify VERSION.
MONTHS	For future use. Do not modify MONTHS.
COPIES	Optional. Sets the default number of copies if this parameter is not specified in member INPARM. Default: 98.
PRINT MISSION	Default print mission name used in the DO PRINT statement in the decollation definition.

Default archive conversion parameters are contained in member CADDEFAR in the IOA SAMPLE library. Tailor these parameters according to the requirements of the site.

**Table 17 Member CADDEFAR Default Archive Conversion Parameters**

Parameter	Description
PRODUCT	Default CA-DISPATCH. Do not modify.
CATEGORY	Default CA-DISPATCH-CONVERTED. Do not modify.
CLASS	Optional.
COPY#	Optional.
FORM	Optional.
CHARS	Optional.
MODIFY	Optional.
DEFRETP	Default retention period. Default: 0110 (days)

## B Messages

### **CTDCAD01S BAD RC=*rc* FROM PUTMEM FUNCTION. MEMBER – *memname***

**Explanation:** An error occurred during processing by Control-M routine CTMMEM. The error probably occurred as a result of insufficient space in the Control-D REPORTS library or the DJDEPARM, APAPARM, or OUTPARMS library.

Routine CADSMEM is used to perform all the required operations on PDS libraries and members.

**System action:** The job terminates.

**User response:** Determine which library member was being processed and take appropriate corrective action.

### **CTDCAD02E INVALID INPUT PARM *param***

**Explanation:** The external input parameters list contains an invalid parameter. Valid options for input parameters are listed in the conversion routine.

**User response:** Determine which parameter is not valid and correct it.

### **CTDCAD03E MISSING VALUE FOR PARM *param***

**Explanation:** The parameter listed in this message is mandatory.

**User response:** See the description of the missing or invalid input parameter elsewhere in this guide. Specify a valid value for the required parameter.

### **CTDCAD04E MISSING OBLIGATORY PARAMETER**

**Explanation:** Member INPARM in the conversion library contains several mandatory parameters. At least one of them is missing.

**User response:** See the description of the missing parameters elsewhere in this guide. Specify a valid value for the parameters.

### **CTDCAD05E NO MORE SPACE FOR REPORT: *rpt*. PROCESSING NEXT REPORT**

**Explanation:** Report definition member **rpt** contains more lines than specified in conversion routine CTDCAD01, constants #CARDS, and AREALEN.

**System action:** The member is processed only to the specified line limit. The remaining lines are skipped. Processing continues with the next report.

**User response:** Increase the value of the parameter, rerun job ASMLINK, and rerun CADIDMIS.

### **CTDCAD06E GETMAIN FOR AREA FAILED**

**Explanation:** A memory acquisition MVS function failed. The value specified for JCL parameter REGION is not large enough.

**User response:** Increase the value of parameter REGION and rerun the failing job.

### **CTDCAD07E FREEMAIN OF AREA FAILED**

**Explanation:** Allocated memory cannot be freed.

**System action:** The conversion routine terminates with a non-zero return code.

**CTDCAD08E DD CARD *ddname* COULD NOT BE OPENED**

**Explanation:** A required DD statement is probably missing from the JCL of job CADJDECM.

**User response:** Supply the missing DD statement and rerun the job.

**CTDCAD09S ERROR PROCESSING DIRECTORY**

**Explanation:** This WTO message is generated by routine CADSMEM, which handles PDS operations. The Control-D REPORTS library reached its directory limit.

**User response:** Re-allocate the REPORTS file with a larger number of directory blocks and resubmit job CADIDMIS.

**CTDCAD10S DEFAULT COPIES NUMBER IS GREATER THEN THE MAX COPIES NUMBER. 98 IS ASSUMED**

**Explanation:** The default value of parameter DEFAULT COPIES in member CADDEFDM is greater than the value specified for parameter MAX COPIES.

**User response:** Specify compatible values for parameters DEFAULT COPIES and MAX COPIES.

**CTDCAD11E APAPARM MEMBER *memname* IS OUT OF SPACE. PROCESSING NEXT REPORT**

**Explanation:** Report definition member *memname* contains more lines than specified in the main conversion routine CTDSAPAP, constants #CARDS, AREALEN, #CARDSV, AREAVLEN, #CARDSQ, SIZEREG, SIZEV, SIZELV, SIZELO, and AREAQLN.

**System action:** The member is processed only to the specified limit. The rest of the information is skipped.

**User response:** Increase the value of the relevant parameters, rerun job ASMLINK, and rerun job CADJAPAP.

**CTDCAD12E *internal-mem* LIST IS OUT OF SPACE**

**Explanation:** While processing a Universal Writer report or a Unique report, the corresponding internal member list (either the Universal or Unique list) ran out of space.

The maximum number of entries for each list is specified in all three conversion programs (CADSOUTP, CADSAPAP, CADSDJDE). This list is used as an index for the existing Universal/Unique members in each printing parameters library.

**System action:** When reaching the specified limit of the list, processing stops, the files are closed and the job terminates.

**User response:** Enlarge the value specified in constant LISTVLEN (for Universal) or LISTQLEN (for Unique) in all three programs. Rerun job ASMLINK and rerun the failing job.

**CTDCAD13E OUTPARMS MEMBER *memname* IS OUT OF SPACE. PROCESSING NEXT REPORT**

**Explanation:** Report member definition *memname* contains more lines than specified in main conversion routine CADSOUTP, constants #CARDS, AREALEN, #CARDSV, AREAVLEN, #CARDSQ, SIZEREG, SIZEV, SIZELV, SIZELO, and AREAQLN.

**System action:** The member is processed only to the specified limit. The rest of the information is skipped.

**User response:** Increase the value of the relevant parameters, rerun job ASMLINK, and rerun job CADJOUTP.

**CTDCAD14E DJDEPARM MEMBER *memname* IS OUT OF SPACE. PROCESSING NEXT REPORT**

**Explanation:** Report member definition *memname* contains more lines than specified in main conversion routine CTDSJDE, constants #CARDS, AREALEN, #CARDSV, AREAVLEN, #CARDSQ, SIZEREG, SIZEV, SIZELV, SIZELQ and AREAQLN.

**System action:** The member is processed only to the specified limit. The rest of the information is skipped.

**User response:** Increase the value of the relevant parameters, rerun job ASMLINK, and rerun job CADJDE.



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