# Control-M for z/OS for ADC2 9.0.00 Conversion Guide

**July 2015**

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  - 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 conversion guide reviews basic concepts relevant to converting from ADC2 to CONTROL-M, and provides step-by-step instructions on how to use the ADC2 to CONTROL-M conversion tool.

The guide is divided into the following chapters:

### Chapter 1 – Conceptual Overview

Overview of basic concepts relating to conversion from ADC2 to CONTROL-M

### Chapter 2 – Conversion Process Flow

Description and details of the conversion process batch jobs are provided

### Chapter 3 – Conversion Steps

Step-by-step procedure for installing and operating the conversion tool

### Chapter 4 – Conversion Details

Definitions of relevant ADC2 parameters in relation to corresponding CONTROL-M parameters

### Appendix A – Downloading and installing the CONTROL-M Conversion tool

Description of the CONTROL-M Conversion tools, and the procedure for downloading and installing them.

### Appendix B – Conversion Parameters

Various parameters for the conversion process

### Appendix C – Messages

Messages and codes of the conversion process

### Appendix D – Planning the Conversion

Advance planning before carrying out the conversion

### Appendix E – Problem Reporting

Instructions on reporting problems to BMC Software Customer Support

# 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.

Chapter 1

# Conceptual Overview

This chapter includes the following topics:

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Predecessors . . . . . 17
User Documentation . . . . . 17
New Day Processing . . . . . 17
CONTROL-M ADC2 conversion tool . . . . . 18

# Overview

This conceptual overview is intended for production control personnel who are familiar with ADC2 terminology. Experience with CONTROL-M is recommended, but not required.

The ADC2 to CONTROL-M conversion tool is provided by BMC Software to assist in the creation of the primary product elements for CONTROL-M. It is designed to expedite the conversion process by automatically translating the most commonly built ADC2 scheduling elements into functionally equivalent processes in CONTROL-M. For more information on the ADC2 conversion tool, see "CONTROL-M ADC2 conversion tool" on page 18.

# Calendars

ADC2 calendars indicate what type of day each day of the year is to be considered for scheduling purposes. Each day can be specified as a holiday, working day, weekday or weekend. A calendar may have a number of series codes attached to it that define a pattern of repetition. A series code is a name attached to each set of jobs that are processed according to the same schedule or that can be grouped together because they have a common application, processing date, and so on.

A CONTROL-M calendar is built for each ADC2 calendar. An additional calendar is created for each series code attached to each calendar.

The name of the calendar created from an ADC2 series code is inserted in CONTROL-M parameter DCAL, in the corresponding job scheduling definition or definitions. This calendar completely determines basic scheduling criteria for the job or jobs.

Most CONTROL-M calendars are assigned the same name as the corresponding ADC2 calendar or series. If a series name is found in more than one calendar, only the first CONTROL-M calendar created for the series name has the same name as the series. Subsequent CONTROL-M calendars for a series with the same name are assigned a different unique name with the following format:

```
$nnsname
```

where:

- *nn* is a two digit prefix
- *sname* is the first 5 characters of the original series name

The conversion tool creates a cross-reference file of ADC2 calendars and series names, with their corresponding CONTROL-M calendar names. For more information, see "JOB1 - Create the CONTROL-M Scheduling Table Library, Calendar Library and Documentation Library" on page 22.

# Predecessors

In CONTROL-M, job execution sequence is controlled using "prerequisite conditions." A prerequisite condition is a descriptive name given to a certain situation, event, or condition. The prerequisite condition is the basic mechanism used by CONTROL-M to control job execution flow. In CONTROL-M prerequisite condition terminology, an IN condition is specified for a job when the job must wait for the occurrence of an event. A condition may be added to the IOA Conditions file when an event, such as the ending of a job, occurs. Depending on user specification, conditions can be added or deleted after successful or unsuccessful job completion using CONTROL-M parameter OUT. For more information, see the discussion of the prerequisite condition concept in the *CONTROL-M for z/OS User Guide.*

For details on how the conversion tool handles ADC2 predecessor definitions, see "10. Predecessor" on page 37.

# User Documentation

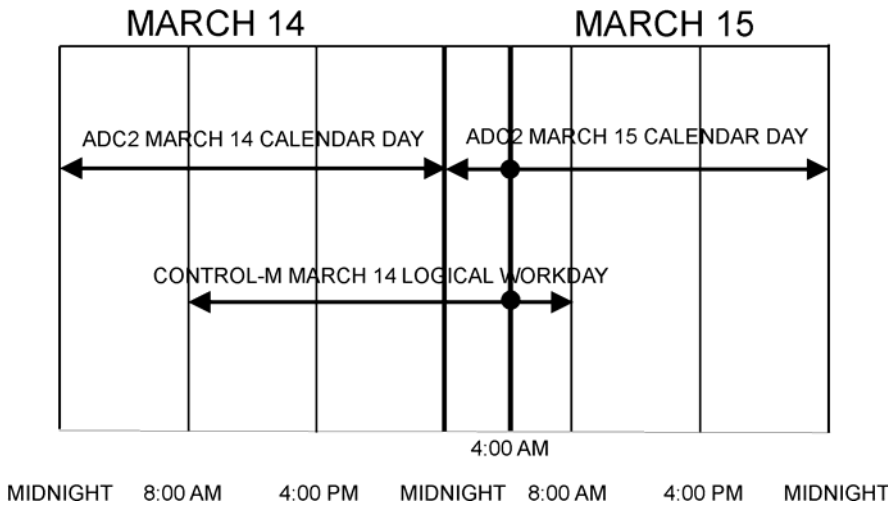
Up to 99 comments and 99 special requirements, each up to 60 characters long, can be attached to an ADC2 job. These comments and special requirements describe the job, specify operational requirements, or contain user-defined information about the job.

The conversion tool uses ADC2 comments and special requirements to determine contents for CONTROL-M parameter DESC and for relevant members in the CONTROL-M Documentation library.

# New Day Processing

CONTROL-M production jobs are scheduled using New Day processing, performed once each day at a predefined time, according to your local site requirements. CONTROL-M, using New Day processing, presumes that workdays do not always begin at the start of a calendar day. Instead, CONTROL-M enables you to define a logical workday that begins at a specified time. Other scheduling products, such as ADC2, begin every workday at the first moment of a new calendar day. The CONTROL-M ADC2 conversion tool is designed to convert ADC2 scheduling data so it can be used in CONTROL-M scheduling.

The following example illustrates how the ADC2 scheduling method is converted to the CONTROL-M scheduling method.




The above example assumes that your logical business date changes at 8:00 A.M. You want to take a job scheduled in ADC2 to begin at 4:00 A.M. on March 15th, and convert it to be run as a CONTROL-M job. The conversion tool converts this ADC2 job to a CONTROL-M job that begins at 4:00 A.M. on the March 14th logical business day.

***NOTE***

CONTROL-M enables you to define logical workdays that begin at a time best suited to the scheduling requirements of your organization, without being subject to the limits that might be imposed by strict adherence to calendar days.

The conversion tool handles this conversion process automatically. For more information, see "Step 6 - Final Adjustments" on page 32.

# CONTROL-M ADC2 conversion tool

The conversion consists of a sequence of batch jobs. Although these jobs run independently of ADC2 and CONTROL-M, CONTROL-M must be installed in order to perform the conversion.

The conversion performs the following functions:

- creates the CONTROL-M Scheduling Table and Calendar libraries, which are equivalent to the ADC2 scheduling definitions and series, respectively

- creates a CONTROL-M Documentation library that contains the ADC2 job comments and special requirements
- enables the customer to automatically add unique CONTROL-M scheduling definition parameters
- issues messages about problems and errors found in the ADC2 definitions

The conversion tool is delivered in source format. If special requirements exist, the conversion tool can be tailored locally.

Chapter 2

# Conversion Process Flow

This chapter includes the following topics: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Input . . . . . 22
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JOB2 - Reorganize the CONTROL-M Scheduling Table Library According to ADC2 Group Name (Optional) . . . . . 24
Description . . . . . 24
Input . . . . . 25
Parameters . . . . . 25
Output . . . . . 25

# Overview

This chapter contains a detailed description of the jobs, programs and datasets that are used during the conversion process. A familiarity with the conversion process flow helps in understanding conversion logic and the installation and operation steps discussed in Chapter 4, "Conversion Details."

The process is comprised of the following jobs:

**Table 1 Jobs in the Conversion Process**

| Job | Description |
|---|---|
| JOB1 | Creates the CONTROL-M Scheduling Table library, Calendar library and Documentation library. |
| JOB2 | Reorganizes the CONTROL-M Scheduling Table library according to ADC2 Group Name (Optional). |

# JOB1 - Create the CONTROL-M Scheduling Table Library, Calendar Library and Documentation Library

## Description

JOB1 creates the following:

- a cross-reference of ADC2 schedule names and their respective calendar names
- the CONTROL-M Calendar library, Scheduling Tables library and Documentation library

## Input

ADC2 batch commands @CAL, @AUTOBB, and @LISTS S are included as input for ADC2 batch program ADC2BTCH. This program is invoked by JOB1 to produce the ADC2 batch reports used by the conversion tool. Verify that the prefix for these commands is the same as the prefix specified in your ADC2 installation.

*NOTE*

As shown above, the default prefix for these ADC2 batch commands is @

## Output

1. The ADC2 file cross-referencing schedule and calendar, produced using ADC2 command @AUTOBB
   Default file name: CTM.ADC2.SCHEDCAL
   File attributes: sequential; record length 80; block size 800

   The layout of each record is:

**Table 2 JOB1 Schedule Names Record Layout**

| Columns | Content |
|---|---|
| 1 – 8 | ADC2 schedule name |
| 9 – 16 | ADC2 calendar name |

   This file helps the conversion program uniquely identify an ADC2 series.

   ADC2 schedule definitions specify only the series name. This may be less than is needed to uniquely identify a series if series names are not unique at your site, that is, if the same series name is found in more than one calendar. The series for each schedule can be uniquely identified using this cross-reference and the Calendar and Series cross-reference described below.

   If no corresponding schedule entry is found in the cross-reference for the ADC2 calendar or series, an error message is issued. In response to this message, correct the problem and rerun JOB1.

2. A cross-reference between ADC2 Calendar and Series names and corresponding CONTROL-M calendar-names
   Default file name: CTM.ADC2.CALNAMES
   File attributes: sequential; record length 24; block size 2400

   The layout of each record is:

**Table 3 JOB1 Calendar Names Record Layout (part 1 of 2)**

| Columns | Content |
|---|---|
| 01 – 08 | Name of ADC2 calendar |

**Table 3 JOB1 Calendar Names Record Layout (part 2 of 2)**

| Columns | Content |
|---|---|
| 09 – 16 | Name of ADC2 series (or same as above) |
| 17 – 24 | Name of CONTROL-M calendar |

Rows referencing an ADC2 calendar contain the ADC2 calendar name in columns 1 through 8, and again in columns 9 through 16.

3. The CONTROL-M Calendar library
   Default file name: CTM.ADC2.NEWCAL
   File attributes: PDS; record length 80; block size 3120

4. The CONTROL-M Scheduling Tables library
   Default file name: CTM.ADC2.NEWSCHED
   File attributes: PDS; record length 80; block size 3120

5. The CONTROL-M Documentation library
   Default file name:CTM.ADC2.DOC
   File attributes: PDS; record length 80; block size 3120

6. The CONTROL-M INCLUDE library containing job names for which an ADC2 Alt Mem member name has been specified, that is, jobs for which the JCL member name differs from the ADC2 job name
   Default file name: CTM.ADC2.INCLIB
   File attributes: PDS; record length 80; block size 3120

# JOB2 - Reorganize the CONTROL-M Scheduling Table Library According to ADC2 Group Name (Optional)

## Description

JOB2 creates a CONTROL-M Scheduling Table library with an alternate grouping structure. The jobs are grouped in scheduling tables according to ADC2 Group name and the &GRPLEN conversion parameter. For more information on this conversion parameter, see "&GRPLEN" on page 50.

## Input

The CONTROL-M Scheduling Table library created in JOB1

## Parameters

The expected maximum number of lines in a scheduling table must be specified in the JCL PARM field of the EXEC statement in Step1 of this job. Default: 30000.

## Output

The CONTROL-M Scheduling Table library reorganized according to the ADC2 Group name and conversion parameter &GRPLEN
Default file name: CTM.ADC2.SCHED2
File attributes: PDS; record length 80; block size 3120

Chapter 3

# Conversion Steps

This chapter includes the following topics:


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Step 2 - Check and Modify Parameters in Member DEFAULTS . . . . . 29
Step 3 - Modify and Run Member ASMLINK . . . . . 29
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Step 5 - Modify and Run Member JOB2 (Optional) . . . . . 31
Step 6 - Final Adjustments . . . . . 32
Step 7 - Check Conversion Results . . . . . 32

# Overview

**NOTE**

If you have not yet downloaded and installed the CONTROL-M conversion tools, do so now according to the instructions in Appendix A, "Downloading and installing the CONTROL-M conversion tools".

Installation and operation if the conversion tool consists of a series of steps.

BMC Software recommends that you first review the contents of Appendix C, "Messages," then read through the remainder of this chapter before performing the steps. It is important to follow the outlined sequence of the steps to ensure a successful conversion.

The following is a summary checklist of the steps:

1 Create the conversion source and load libraries

2 Check and modify parameters in member DEFAULTS

3 Modify and run member ASMLINK

4 Modify and run member JOB1

5 Modify and run member JOB2 (Optional)

6 Final adjustments

7 Check conversion results

# Step 1 - Create the Conversion Source and Load Libraries

1. Run job $$INIT in the IOA CONV library to create the ADC2 conversion source library and allocate the conversion load library.

2. Tailor the following parameters in the member in accordance with your local conventions:

**Table 4 Conversion Source and Load Libraries**

| Parameter | Description |
|---|---|
| Job statement | |
| INLIB | IOA CONV library name |
| OUTLIB | ADC2 conversion source library name |
| LOADLIB | ADC2 conversion load library name |
| UNIT | Unit name of DASD device |
| VOLSER | Volser of DASD device |
| PRODUCT | ADC2 |

3. Submit the job for execution. The job must finish with a completion code of 0.

# Step 2 - Check and Modify Parameters in Member DEFAULTS

Tailor the CONTROL-M conversion parameters specified in the DEFAULTS member in the conversion source library according to the requirements of your site. A detailed description of these parameters is in Appendix C, "Messages."

# Step 3 - Modify and Run Member ASMLINK

Member ASMLINK assembles and link-edits conversion programs using values specified in member DEFAULTS, tailored in Step 2.

Tailor the JCL of member ASMLINK according to the following local conventions:

- job statement
- conversion source library name (parameter SRCLIB) created in Step 1
- conversion load library name (parameter LOADLIB) created in Step 1
- IOA LOAD library name (parameter IOALOAD)
- IOA MAC Library name (parameter IOAMAC)

Submit the job for execution and check the sysout for condition code and error messages.

The job must finish with condition code of 0.

***NOTE***

Rerun this job if changes are made to the parameters in member DEFAULTS, or if a source fix is applied to any module.

# Step 4 - Modify and Run Member JOB1

JOB1 creates the CONTROL-M Scheduling Table library, Calendar library, and Documentation library.

Edit member JOB1 in the conversion source library. Adjust the following specifications according to your local conventions:

- job statement
- name of the ADC2 LOAD library (specified in STEP0, DD statement ADC2LOAD)
- name of the conversion load library (specified in STEP0, DD statement CTMLOAD)
- name of the IOA LOAD library (specified in STEP0, DD statement IOALOAD)
- name of the IOA PARM library (specified in STEP0, DD statement IOAPARM)
- name and location of the ADC2 schedule and calendar cross-reference file (specified in STEP0, DD statement SCHEDCAL)
- name and location of the CONTROL-M calendar library (specified in STEP0, DD statement NEWCAL)
- name and location of the ADC2 and CONTROL-M calendar names cross-reference file (specified in STEP0, DD statement CALNAMES)
- name and location of the CONTROL-M Scheduling Table library (specified in STEP0, DD statement NEWSCHED)
- name and location of the CONTROL-M Documentation library (specified in STEP0, DD statement DADOC)
- name and location of the library for the JCL INCLUDE members (specified in STEP0, DD statement INCLIB)

Before submitting the job, ensure that the prefix of the ADC2 commands is specified in the job stream. The default @ is the same as the prefix specified in your ADC2 installation. This prefix must be the same as the prefix specified using conversion parameter &ADC2C, described in "&ADC2C" on page 49.

Submit the JOB and check the sysout for condition code and error messages. If errors are encountered in ADC2 definitions, appropriate messages are issued. These messages are explained in Appendix B, "Conversion Parameters," Correct the problems in ADC2, and rerun this job.

JOB1 must finish with a condition code of 0. If an empty schedule was found in ADC2, STEP12 ends with a condition code of 4.

***NOTE***

The ADC2BTCH program may end with a non-zero return code due to warning messages. Check and correct any errors indicated by these messages.

# Step 5 - Modify and Run Member JOB2 (Optional)

Edit member JOB2 in the conversion source library. Adjust the following specifications according to your local conventions:

- job statement
- name of the IOA LOAD library (specified in STEP0, DD statement IOALOAD)
- name of the conversion load library (specified in STEP0, DD statement CTMLOAD)
- name of the CONTROL-M Scheduling Table library (specified in STEP0, DD statement CTMIN)
- name and location of the CONTROL-M Scheduling Table library organized according to ADC2 group name (specified in STEP0, DD statement CTMOUT)

Submit the job and check the sysout for condition code and error messages. For explanations of these message, see Appendix B, "Conversion Parameters," The job must finish with a condition code of 0.

# Step 6 - Final Adjustments

1. CONTROL-M normally considers steps that finish with condition code 4 or less as having ended OK. You can optionally change this default so that CONTROL-M considers only steps ending with condition code 0 as OK by setting parameter MAXCCOK to 0 in member CTMPARM in the IOA PARM library.

2. Set SCHPREVD to Y in member CTMPARM in the IOA PARM library. SCHPREVD affects jobs scheduled between midnight and the CONTROL-M New Day time. The parameter causes these jobs to shift to the previous day to avoid date discrepancies. The parameter is operative when the CONTROL-M job scheduling parameter SAC is set to P. For more information, see "New Day Processing" on page 17.

3. Ensure that the JCL library specified by DD statement INCLIB, as described in "Step 4 - Modify and Run Member JOB1" on page 30, is specified first in the DALIB concatenation of the CONTROL-M procedure.

# Step 7 - Check Conversion Results

1. Enter the CONTROL-M environment and order one of the scheduling tables that was just created. You can use the Graphic Job Flow option (Screen 2.G) to view the job flow of any ADC2 schedules as they appear in CONTROL-M. You can also use the P (Plan) option of the Job List screen to show a calendar of the days a job is scheduled.

2. Execute CONTROL-M utilities CTMRFLW, CTMRPLN, CTMROGR, CTMXRF, and so on, and compare the reports produced from the conversion results with the ADC2 schedule definitions. For more information on these utilities, see the *INCONTROL for z/OS Utilities Guide*.

***NOTE***

If error message IOAE33E (Insufficient Storage) is displayed during an attempt to view a job scheduling table online, split the job scheduling table into multiple tables.

Chapter 4

# Conversion Details

This chapter includes the following topics:


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# Overview

This chapter details the conversion of ADC2 components into corresponding CONTROL-M job scheduling definition parameters, and also describes unique CONTROL-M parameters that can be specified using conversion parameters. Conversion parameters are described in detail in Appendix B, "Conversion Parameters,"

# Component Conversion Summary

The conversion table shown below lists ADC2 components that are converted to corresponding CONTROL-M parameters.

***NOTE***

The item number (Item No.) in the chart below refers to the topic number in this chapter.

**Table 5 ADC2 Component Conversion**

| ADC2 Component | CONTROL-M Job Scheduling Definition Parameter | Item No. |
|---|---|---|
| Schedule | Scheduling table name | 1 |
| Jobname | MEMNAME | 2 |
| Alt Mem | %%INCLIB, %%INCMEM | 3 |
| Read-time | FROM time, DESC | 4 |
| End-time | DUE OUT time,<br>SHOUT WHEN LATESUB * | 5 |
| Job-group | GROUP name, IN and OUT conditions | 6 |
| Calendar Series code | DCAL | 7 |
| Last user/Logon-ID | OWNER | 8 |
| Workstation | Manual IN condition | 9 |
| Predecessor | IN and OUT condition | 10 |
| Accept CC | ON PGMST ANYSTEP CODES nnn DO COND | 11 |
| Comment | DESC and DOCMEM member | 12 |
| Special requirement | DOCMEM member | 13 |
| Auto Init=No | CONFIRM=Y | 14 |
| On Hold | Manual IN condition | 15 |
| IFSC=Y | Maybe IN condition | 16 |

# Component Conversion Detail

## 1. Schedule

An ADC2 schedule is a file used to store a set of jobs for repeated use. Each schedule contains jobs with something in common. For example, a schedule may contain jobs of a particular application or jobs that run during a certain period.

In CONTROL-M, group scheduling definitions are stored in PDS libraries as members called scheduling tables. Each scheduling table contains one or more related jobs.

Each ADC2 schedule is converted into a CONTROL-M scheduling table containing definitions of all jobs in the schedule. Each CONTROL-M scheduling table is assigned the same name as the corresponding ADC2 schedule.

For an alternate method that can be used to group jobs and to name CONTROL-M scheduling tables, see "6. Job Group" on page 36.

## 2. Jobname

The ADC2 jobname is the name by which ADC2 and the MVS operating system identify a job. This name is used as the value for CONTROL-M parameter MEMNAME in the relevant job scheduling definition.

## 3. Alt Mem

If the name of the JCL member containing an ADC2 job is not the same as the jobname, the name of the JCL member is specified in the ADC2 Alt Mem field. In this case the conversion tool creates a member in the INCLUDE library with the same name as the ADC2 job, referred to in "JOB1 - Create the CONTROL-M Scheduling Table Library, Calendar Library and Documentation Library" on page 22
The member contains a CONTROL-M AutoEdit control statement (%%INCLIB, %%INCMEM) that is used to copy the JCL from the member name specified in the ADC2 Alt Mem field.

# 4. Read Time

The ADC2 Read Time field indicates the time at which a job is read into the JES input queue. The conversion tool converts this time to the CONTROL-M TIME FROM parameter. If N/A is specified in the Read Time field, blanks are placed into TIME FROM, that is, no TIME FROM is specified.

When the FROM TIME of a job is between midnight and the CONTROL-M New Day time, the conversion sets the CONTROL-M job scheduling DESC parameter to SCHEDULE-PREV-DAY. For more information, see "Step 6 - Final Adjustments" on page 32.

# 5. End Time

The ADC2 End Time field indicates the time by which a job is expected to complete execution. Expected end time is for information only and does not affect performance of the job or force it to end at a certain time. However, when both ADC2 End Time and ADC2 End Date are specified, these values cause ADC2 to notify the operator when the job must be started.

The conversion tool uses this field to implement the CONTROL-M Deadline Scheduling feature. The specified end time is copied to CONTROL-M parameter DUE OUT and a SHOUT WHEN LATESUB * statement is also added to the relevant job scheduling definition. For more information on Deadline Scheduling, see the *CONTROL-M for z/OS User Guide*.

If N/A is specified for the ADC2 End Time, blanks are specified for CONTROL-M parameter DUE OUT, that is, no deadline scheduling is specified.

# 6. Job Group

For reporting purposes ADC2 assigns a Job Group name to each ADC2 job. An ADC2 Job Group name can be from 1 through 8 characters in length.

The conversion tool uses the first 1 through 7 characters of the Job Group name as a value for CONTROL-M parameter GROUP. Conversion parameter &GRPLEN is used to determine how many characters are used for the GROUP parameter.

***NOTE***

If conversion parameter &IFSC is specified as non-blank, then &GRPLEN must not be more than 6.

The Job Group prefix is also used as a prefix for IN and OUT condition names created by the conversion tool.

If no Job Group name is specified for an ADC2 job, a user-specified default name is inserted in the CONTROL-M GROUP parameter. For more information, see "&GROUP" on page 50.

If conversion job JOB2 is executed, the ADC2 Job Group prefix is used as grouping criteria for creating the CONTROL-M scheduling tables. For more information, see "JOB2 - Reorganize the CONTROL-M Scheduling Table Library According to ADC2 Group Name (Optional)" on page 24.

## 7. Calendar Series Code

The ADC2 Calendar Series Code is inserted in CONTROL-M parameter DCAL. For more information on calendars and series codes, see "Calendars" on page 16.

## 8. Last User and Logon ID

The conversion tool uses either the ADC2 Last User field or the ACF2 Logon ID field as the value for CONTROL-M parameter OWNER. For more information about determining a value for CONTROL-M parameter OWNER, see "&OWNER" on page 51 and "&OWNLEN" on page 51.

## 9. Workstation

An ADC2 workstation is a task such as keypunching, bursting, or collating, that must be performed either before or after a specific job has been processed. Any number of workstations can be assigned to a job. The conversion tool converts each workstation to a CONTROL-M manual IN condition with the following format:

```
workstationname-jobname
```

## 10. Predecessor

Predecessors are jobs that must be completed before the current job can be processed. The conversion tool handles ADC2 predecessor definitions using prerequisite (IN) conditions in the relevant CONTROL-M job scheduling definitions.

The actual method used to convert predecessor information depends on the condition code that was specified for the ADC2 predecessor job, as shown in the following table:

**Table 6 Prerequisite Condition Codes (part 1 of 2)**

| Code | Description |
|---|---|
| OK | Jobs that end OK in CONTROL-M create OUT conditions in the `groupname-jobname` ODAT+ format, where:<br>■ *groupname* is the name of the group to which the job belongs<br>■ *jobname* is the name of the job that ended<br>A job is considered to be ended OK if it ended with condition code 0 in all its steps. |
| 0 | If an ADC2 job definition states that the predecessor job must end with condition code 0, the conversion tool defines the *groupname-predjob* ODAT IN condition in the job scheduling definition of the successor job, where:<br>■ *groupname* is the name of the group to which the predecessor job belongs<br>■ *predjob* is the name of the predecessor job |
| non-zero | If an ADC2 definition states that the predecessor job must end with a specific non-zero condition code the statements `ON PGMST ANYSTEP CODES <C(nnnn+1)` DO COND *groupname-jobname-nnnn* ODAT+ are added to the job scheduling definition of the predecessor job, where *nnnn* is the condition code required to trigger the successor job.<br>In addition, the IN condition<br>*groupname-predjob-nnnn*<br>is added to the job scheduling definition of the successor job. |
| | **Note:** Condition code 0999 has a specific meaning in ADC2 that indicates that the job can end with any non-abend condition code. If this code is specified in an ADC2 job, the above mentioned ON PGMST statement is modified to become:<br>`ON PGMST +EVERY CODES C****` |

**Table 6 Prerequisite Condition Codes (part 2 of 2)**

| Code | Description |
|---|---|
| abend or any condition | If an ADC2 definition states that the predecessor job can end with any condition code or abend code, the statements<br><br>`ON PGMST ANYSTEP CODES *****`<br>DO COND *groupname-predjob*-ANY ODAT+ are added to the job scheduling definition of the predecessor job.<br><br>In addition the IN condition *groupname-predjob*-ANY<br><br>is added to the job scheduling definition of the successor job. |
| | **Note:** The ADC2 Accept CC field, described in the following item, Item 11, can be used to limit the range of condition codes that can trigger the successor job. |
| | **Note:** Converted ADC2 predecessor jobs retain the logic indicated in ADC2 definitions and therefore need not necessarily end OK in order to trigger successor jobs. |

## 11. Accept CC

The ADC2 Accept CC field indicates the highest (=) or lowest (>) condition code that a predecessor job can return to trigger a successor job. For more information on conversion of ADC2 predecessor jobs, see the preceding item.

## 12. Comment

The ADC2 Comment field is used to store a free text description of the job and relevant considerations.

The first comment line in the ADC2 job is copied to the CONTROL-M parameter DESC. In addition, all comments and Special Requirements described in the following item are copied to the DOCMEM member of the job in the CONTROL-M Documentation library.

# 13. Special Requirements

ADC2 Special Requirements describe standard information about the execution of a job. All Special Requirements are copied to the DOCMEM member of the job in the CONTROL-M Documentation library, following the job comments.

# 14. Auto Init=No

The ADC2 Auto Init field indicates whether a job must be automatically initiated. If NO is specified for this field, the conversion tool sets the CONTROL-M CONFIRM parameter to Y in the relevant job scheduling definition.

# 15. On Hold

The ADC2 On Hold field indicates whether a job has been put on manual hold. If YES has been specified for this field, the conversion tool defines a manual IN condition with the following format in the relevant job scheduling definition:

```
HOLD-jobname  ODAT
```

# 16. IFSC=Y

The ADC2 IFSC=Y specification can be used to indicate that the predecessor of a job is a conditional predecessor.

The CONTROL-M Maybe Jobs feature can be used to simulate this conditional handling of predecessor prerequisites. For more information on this feature, see the discussion of the Manual Conditions File and Maybe Jobs in the *CONTROL-M for z/OS User Guide*.

The conversion tool facilitates use of the Maybe Jobs feature by creating IN conditions in the *prefix-groupname-predjob* ODAT format, where *prefix* is set by conversion parameter &IFSC. For more information, see "&IFSC" on page 50.

This format enables KSL script ADDMNCND to recognize conditions of this type by using the special character specified as the prefix.

For more information on predecessor job dependencies, see "10. Predecessor" on page 37.

# Unique CONTROL-M and CONTROL-M/Restart Parameters

Several unique CONTROL-M and CONTROL-M/Restart job scheduling definition parameters can be automatically set by the conversion tool during creation of the CONTROL-M scheduling tables.

Parameters member DEFAULTS in the conversion source library contains the default settings for these parameters, and must be reviewed and modified to specify your local CONTROL-M and CONTROL-M/Restart preferences. For more information regarding these parameters, see Appendix B, "Conversion Parameters," and the *CONTROL-M for z/OS User Guide*.

Unique CONTROL-M and CONTROL-M/Restart parameters are:

## AUTO-ARCHIVE

This CONTROL-M/Restart parameter archives the three SYSDATA files of the job for CONTROL-M/Restart use and online viewing. The archive parameters, such as retention period or archive dataset type, are determined by CONTROL-M/Restart installation parameters.

This parameter has a subparameter, SYSDB, which is set to Y (Yes). Each job scheduling definition archives the three SYSDATA files to a common dataset, instead of a unique dataset.

## DO SYSOUT

This CONTROL-M parameter specifies how the job output is handled.

At job completion, CONTROL-M analyzes the job output. To enable CONTROL-M to locate the job output on the system spool, CONTROL-M modifies the JCL MSGCLASS parameter of the job at time of submission to the automatically held output class. After analyzing the sysout, CONTROL-M may be ordered to requeue the sysout. For more information regarding DO SYSOUT options, see the *CONTROL-M for z/OS User Guide*.

The conversion tool can be instructed to specify various actions, using the CONTROL-M DO SYSOUT parameter.

Conversion parameter &TOCLASS specifies the output class to which CONTROL-M requeues the job output. For more information, see "&TOCLASS" on page 53.

The &RELEASE conversion parameter controls whether CONTROL-M releases the job output for printing on the system spool. The default is Y (Yes). For more information, see "&RELEASE" on page 51

Conversion parameter &FROMC specifies the output class from which CONTROL-M requeues the job output. For more information, see "&FROMC" on page 49.

## MAXWAIT

This CONTROL-M parameter specifies the number of extra days a job must wait in the Active Jobs file to be executed. If the job is not executed within that time, it is discarded. This two-digit parameter accepts values from 00 through 99 and is specified in conversion parameter &MAXWT, which is described in "&MAXWAIT" on page 50. Default: 03.

## PREVENT-NCT2

This CONTROL-M/Restart parameter prevents NOT CATLG type 2 errors, by setting the PREVENT-NCT2 job scheduling parameter. For more information, see "&CTR" on page 49.

## SHOUT

This CONTROL-M parameter specifies messages to be sent, or shouted, to different destinations on different occasions.

The conversion tool supports the following situations:

**Table 7 SHOUT Situations**

| Message | Description |
|---|---|
| WHEN NOTOK | Instructs CONTROL-M to send a SHOUT message when a job fails. |
| WHEN LATESUB * | Instructs CONTROL-M to send a SHOUT message when a job is not submitted on time (Deadline Scheduling). |

Conversion parameter &SHOUTT specifies the SHOUT message text for failed jobs. The default message text is:

```
%%JOBNAME J%%JOBID ENDED NOTOK!
```

Conversion parameter &SHOUTL specifies the SHOUT message text for late submitted jobs. The default message text is:

```
MEMBER %%$MEMNAME NOT SUBMITTED ON TIME!
```

A variety of addresses can be specified as CONTROL-M SHOUT message destinations. For more information, see the *CONTROL-M for z/OS User Guide*.

Conversion parameters &SHOUTD and &SHOUTDL specify the destination of the SHOUT message texts for failed and late-submitted jobs.

For more information, see "&SHOUTD" and "&SHOUTDL" on page 52.

# TIME UNTIL

This CONTROL-M parameter specifies the time until which a specific job can be submitted by CONTROL-M. For more information, see "&UNTILT" on page 53.

# Downloading and installing the CONTROL-M conversion tools

***NOTE***

Ensure that CONTROL-M for z/OS is installed before proceeding with this installation.

1 Prepare your system.

Do one of the following actions:

– Download the CONTROL-M Conversion tools from the EPD site at https://webapps.bmc.com/signon/content/logon.jsp.

– Copy the file from the product CD.

Transfer the image file to the mainframe as a binary file. For more information about the space requirements, see the Release Notes that accompany the CONTROL-M Conversion tools. The DCB information for the image file is as follows:

RECFM = FB, LRECL=1024,BLKSIZE=6144

2 Uncompress the image file.

The image file is compressed using the IBM TRSMAIN program. If you do not have TRSMAIN on your mainframe, instructions for downloading and installing it can be found at the following URL:

http://techsupport.services.ibm.com/390/trsmain.html

Once the image file has been uploaded to your mainframe, make the necessary changes in the following UNTERSE job to uncompress the image file.

*ppp,ss,dd* represents the space requirements for the UNTERSE file. For more information, refer to the Release Notes that accompany the CONTROL-M Conversion tools.

```
***************************** Top of Data ******************************
//UNTERSE JOB                   <=== tailor job card to local standards
//*
//UNTERSES  EXEC PGM=TRSMAIN,PARM=UNPACK
//SYSPRINT DD   SYSOUT=*
//INFILE   DD DISP=SHR,DSN=uploaded.image.file.from.step1    <===UPDATE
//OUTFILE  DD   DISP=(NEW,CATLG,DELETE),
//       UNIT=disk_unit,VOL=SER=disk_volser,                 <===UPDATE
//       DSN=basepref.CONVLIB,                               <===UPDATE
//       SPACE=(CYL,(ppp,ss,dd))                             <===UPDATE
***************************** Bottom of Data ***************************
```

In the preceding UNTERSE job, *basepref* represents your choice of prefix for the base libraries, which are described in the Installation and Customization Engine (ICE) chapter in the *INCONTROL for z/OS Installation Guide*. This parameter must be specified again later in the installation process.

Submit the above job and review the output of the job. Ensure that the return code is 0.

**3** Install the Conversion tools.

To install the Conversion tools, do the following:

— Select Customization from the ICE main menu.
— Specify product CTM.
— Select step 8 (Conversion installation).
— Select minor step 1 (Conversion installation).
— Submit the job.

This job consists of 5 steps:

**A** ADDDEF

This step adds SMP/E DDDEFs for the conversion target and distribution libraries.

**B** ALLOCT

This step allocates the conversion libraries.

- The target conversion library name is *ilprefa*.CONV.
- The distribution conversion library name is *spdpref*.ACONV.

**C** RCVAPLC

This step performs the RECEIVE and APPLY CHECK operations for the conversion FMID and PTFs. The FMID and PTFs are located in the CONVINST member in the *basepref*.CONVLIB library.

**D** APLACC

This step performs the APPLY and ACCEPT CHECK operations for the conversion FMID and PTFs.

**E** ACCEPT

This step performs the ACCEPT operation for the conversion FMID and PTFs.

**4** Find any relevant updates.

Look for Solution SLN000000197255 (List of APARs required for conversion to CONTROL-M) in the Knowledge Base on the BMC Customer Support Site for the latest fixes and instructions.

# Conversion Parameters

CONTROL-M conversion parameters are defined in the DEFAULTS member in the conversion source library. These conversion parameters must be modified to fit your local site requirements. The parameters are described below.

**Table 8 CONTROL-M Conversion Parameters (part 1 of 5)**

| Parameter | Description |
|---|---|
| &#JOBS | Number of jobs in the ADC2 database. The number specified for this parameter must be greater than or equal to the actual number of jobs in the ADC2 database. Default: 10000 |
| &#WORKS | Number of workstations in the ADC2 database. The number specified for this parameter must be greater than or equal to the actual number of workstations in the ADC2 database. Default: 20 |
| &ADC2C | ADC2 command prefix. Default: @ |
| &CTR | CONTROL-M/Restart parameter. Valid values are:<br><br>■ Y (Yes) – CONTROL-M/Restart is implemented with CONTROL-M. Default. When Y is specified for this parameter, CONTROL-M parameters SYSDB, AUTO-ARCHIVE and PREVENT-NCT2 are set to Y in the job scheduling definitions produced by the conversion program.<br><br>■ N (No) – CONTROL-M/Restart is not implemented with CONTROL-M. Instructs the conversion tool not to set any CONTROL-M/Restart statements. |
| &FROMC | Held sysout classes to be requeued. Specify ‘ ’ (blank) if all held sysouts must be requeued. Default: ‘ ’ (blank)<br><br>If a blank is specified for conversion parameter &TOCLASS, this parameter is ignored. |

**Table 8 CONTROL-M Conversion Parameters (part 2 of 5)**

| Parameter | Description |
|---|---|
| &GROUP | Default group name to be inserted in CONTROL-M parameter GROUP when no ADC2 group name is defined in the schedule header. A group name from 1 through 7 characters can be specified. Default: BASGRP |
| &GRPLEN | The number of characters of the ADC2 group name to be used as a value for CONTROL-M parameter GROUP and as a prefix for IN and OUT condition names.<br><br>If optional job JOB2, described in "JOB2 - Reorganize the CONTROL-M Scheduling Table Library According to ADC2 Group Name (Optional)" on page 24, is executed, job scheduling definitions are grouped according to this ADC2 group name prefix. This prefix is also used as the name for the scheduling table member in which the jobs are grouped. Valid values for this parameter are 1 through 7. If parameter &IFSC is coded as non-blank, the value specified in &GRPLEN must not exceed 6. Default: 6 |
| &IFSC | Specifies the prefix for 'maybe' conditions when IFSC=Y is coded for ADC2 predecessor jobs. This parameter must be set to blank if IFSC=Y is to be ignored by the conversion tool. For more information, see "16. IFSC=Y" on page 40.<br>Default: ¢ |
| &INCLIB | The name of the JCL library containing the INCLUDE members for jobs whose job names differ from their member names, that is, those jobs that have an Alt Mem specified. Default: CTM.ADC2.INCLIB |
| &INIT | Specifies a quantitative resource of quantity 1 to be added to every job scheduling definition. Specify blank to indicate that no quantitative resources are to be added to the job definitions. Default: INITIATOR |
| &MAXWAIT | The number of extra days a job must wait in the Active Jobs file to be executed, after which the job is deleted. A value from 00 through 99 can be specified. Default: 3. If 99 is specified, jobs wait indefinitely. |
| &MEMLIB | The dataset name of the library from which alternate JCL members, specified in the ADC2 Alt Mem field, are copied using the %%INCLIB AutoEdit statement. For jobs that do not specify Alt Mem, the GENERAL library, that is, the JCL library defined in the CONTROL-M monitor procedure (DD statement DALIB), is searched for the JCL member. For more information, see "3. Alt Mem" on page 35.<br>Default: GENERAL |

**Table 8 CONTROL-M Conversion Parameters (part 3 of 5)**

| Parameter | Description |
|---|---|
| &OWNER | Value to be inserted in CONTROL-M parameter OWNER. The OWNER parameter is often used for implementing security checks using various CONTROL-M components. Valid values are:<br><br>■ JNAME – First *n* characters of the ADC2 job name.<br>■ LID – First *n* characters of the ACF2 logon ID.<br>■ USERID – First *n* characters of the last user-ID. Default.<br><br>*xxxxxxxx* – A specific OWNER name, 1 through 8 characters in length, to be inserted in the OWNER parameter in every CONTROL-M job scheduling definition.<br><br>For more information, see "&OWNLEN" on page 51. |
| &OWNLEN | When JNAME LID or USRID is specified for conversion parameter &OWNER, this value indicates the number of characters to supply as a value for CONTROL-M parameter OWNER. A value from 1 through 8 can be specified.<br><br>Default: 8 |
| &PRED# | Number of predecessors, system-wide. The number specified for this parameter must be greater than or equal to the number of predecessors in the ADC2 database.<br><br>Default: 8000 |
| &RELEASE | Sysout release. Specifies whether the sysouts of the job must be released for printing after they are analyzed by CONTROL-M. Valid values are:<br>■ Y (Yes) – Release sysouts for printing. Default.<br>■ N (No) – Do not release sysouts. |
| &SCHED# | Number of ADC2 schedules. The number specified for this parameter must be greater than or equal to the number of schedules in the ADC2 database. Default: 1000 |
| &SERIES# | Number of ADC2 calendars and series codes. The number specified for this parameter must be greater than or equal to the number of calendars and series codes in the ADC2 database. Default: 1500 |

**Table 8 CONTROL-M Conversion Parameters (part 4 of 5)**

| Parameter | Description |
|---|---|
| &SHOUTD | Destination for SHOUT messages when a job failed.<br>The following can be specified:<br><br>■ OPER – Issue the SHOUT message to the console. Default.<br>■ OPER2 – Issue the SHOUT message to the console as highlighted and unrollable.<br>■ TSO-*uid* – Issue the SHOUT message to a specific TSO user ID, where *uid* is a specific user ID of 1 through 7 characters.<br>■ blank – Suppress the message.<br><br>For additional options refer to the description of the SHOUT parameter in the *CONTROL-M for z/OS User Guide*. |
| &SHOUTDL | Destination for SHOUT messages when a job is submitted late as calculated by Deadline Scheduling, using DUE OUT time, meaning the ADC2 END time. The following can be specified:<br><br>■ OPER – Issue the SHOUT message to the console. Default.<br>■ OPER2 – Issue the SHOUT message to the console as highlighted and unrollable.<br>■ TSO-*uid* – Issue the SHOUT message to a specific TSO user ID, where *uid* is a specific user ID of 1 through 7 characters.<br><br>■ blank – Suppress the message.<br><br>For more options see the description of the SHOUT parameter in the *CONTROL-M for z/OS User Guide*. |
| &SHOUTL | Text to be shouted when jobs are submitted late according to the ADC2 END time.<br><br>Default: MEMBER %%$MEMNAME NOT SUBMITTED ON TIME! |
| &SHOUTT | Job failed SHOUT message. Specify the text, up to a maximum of 50 characters, for the SHOUT WHEN NOTOK message that is sent when a job fails. Specify ‘ ’ (blank) to suppress the message.<br>Default: %%JOBNAME J%%JOBID ENDED NOTOK! |

**Table 8 CONTROL-M Conversion Parameters (part 5 of 5)**

| Parameter | Description |
|---|---|
| &TOCLASS | New output class to which CONTROL-M must requeue the JCL MSGCLASS sysouts of the job. Valid values are:<br><br>' ' (blank) – requeue is not required.<br><br>* – the MSGCLASS sysouts of the job must be requeued to the original MSGCLASS of the job after being analyzed by CONTROL-M. Default: A |
| &UNTILT | Value for CONTROL-M parameter TIME UNTIL, in hhmm format. Default: 9999, meaning no UNTIL time. |

# Messages

This list contains messages produced by the components of the conversion tool, except those issued by utility CTMBLT. Messages issued by utility CTMBLT are described in the *INCONTROL for z/OS Messages Manual*.

A message code usually consists of the following parts:

```
CTMADCaa-nnx
```

where CTMADC indicates that the message pertains to the CONTROL-M ADC2 conversion tool, and where:

| Item | Explanation |
|---|---|
| *aa* | A 2-character identifier for the program or programs that produced the message |
| *nn* | A 2-character numeric identifier for the message |
| *x* | A 1-character alphabetic identifier for the severity of the message<br><br>Valid values are:<br><br>■ A – Action<br>■ E – Error<br>■ I – Information<br>■ S – Severe<br>■ W – Warning |

Message descriptions contain any or all of the following:

*Explanation:* Description of the cause of the message, and other related information.

*System action:* System action when this message is issued.

*User response:* Recommended actions to correct the problem.

**CTMADC*x*** **NO SCHEDULES FOUND - CHECK THE INPUT**

*Explanation:* No schedule name was found in an ADC2 report. This message may be issued by program CTMADC1, CTMADC2, or CTMADC3.

CTMADC1: no schedule name was found in the @LISTS S report.

CTMADC2: no schedule name was found in the @DH S report.

CTMADC3: no schedule name was found in the @DI S report.

*System action:* The program ends with a return code of 8.

*User response:* Check the output of program ADC2BTCH for errors. Verify that the relevant ADC2 report was properly produced.

**CTMADC1*x*** **NO CALENDAR/SERIES FOUND - CHECK INPUT.**

*Explanation:* For programs CTMADC1, CTMADC2, or CTMADC3: no calendar and/or series name was found in an ADC2 report.

For program CTMADC11: no calendar and/or series name was found in the @CAL report.

For program CTMADC12: no calendar and/or series name was found in the @CAL *name* report.

For program CTMADC13: no calendar and/or series name was found in the @CAL report or @LIST SER *name* report.

*System action:* The program ends with a return code of 8.

*User response:* Check the output of program ADC2BTCH for errors. Verify that the relevant ADC2 report was properly produced.

**CTMADC*xx*** **GETMAIN FAILED - INCREASE THE REGION SIZE**

*Explanation:* The program could not obtain sufficient storage.

*System action:* The program ends with a return code of 8.

*User response:* Increase the REGION parameter in the JCL for the affected program.

**CTMADC2** **UNSUPPORTED DSORG FOUND FOR SCHEDULE *schedname***

*Explanation:* The specified schedule is of a user-defined file type. The conversion tool does not support user-defined file types.

*System action:* The program ends with a return code of 8.

*User response:* The specified schedule must be manually converted.

**CTMADC3-01W** **NO JOBS FOUND FOR SCHEDULE *schedname***

*Explanation:* An empty ADC2 schedule was detected.

*System action:* No corresponding CONTROL-M schedule table is created.

*User response:* None.

**CTMADC3-02W** **JOB *jobname* IN SCHEDULE *schedname* REFERS TO THE NON-EXISTING SERIES (CALENDAR) *sername***

*Explanation:* The specified ADC2 job refers to a non-existing series.

*System action:* No CONTROL-M calendar is specified in CONTROL-M parameter DCAL. As a result, this job cannot be properly ordered through CONTROL-M until a calendar is specified.

*User response:* Either define the required ADC2 series and rerun JOB1, or specify a valid calendar name for parameter DCAL in the relevant job scheduling definition.

**CTMADC3-03W** **PREDECESSOR *predname* FOR JOB *jobname* IN SCHEDULE *schedname* - DOES NOT EXIST**

*Explanation:* An ADC2 job refers to a non-existing predecessor.

*System action:* An IN condition with the missing predecessor name is created for the job.

*User response:* Define the required ADC2 predecessor for the job and rerun JOB1. If this is not done the predecessor is treated as a manual IN condition.

**CTMADC3-04I** **JOBS *jobname* IN SCHEDULE *schedname* MUST BE DEFINED AS ONE SINGLE CYCLIC JOB**

*Explanation:* Identical ADC2 jobs were detected (with the same name, but with different version numbers).

*System action:* The conversion tool creates a separate job scheduling definition for each of these jobs. Processing continues normally.

*User response:* These jobs can be manually combined into a single cyclic job, which is a unique CONTROL-M feature.

**CTMADC3-05I** **ADC2 SCHEDULE *original-sched-name* IS CREATED AS *new-sched-name***

*Explanation:* The first character of the schedule name is not valid for a PDS member name. The conversion tool ensures that the schedule's name is a valid PDS member name.

*System action:* The invalid character is replaced with a dollar sign ($).

*User response:* None.

**CTMADC13** **UNABLE TO BUILD UNIQUE CALENDAR NAME**

*Explanation:* A series name is found in more than one calendar but a unique CONTROL-M calendar name could not be created for it.

*System action:* The program ends with user abend code U666.

*User response:* Contact BMC Software Customer Support. Please have all ADC2 calendar reports available for analysis.

**CTMADC21** **AUTOBB REPORT IS EMPTY - VERIFY**

*Explanation:* The @AUTOBB report does not contain any schedule name/calendar cross-reference entries. The Automatic Command file, from which this report is produced, was not created, allocated, or initialized.

*System action:* The ADC2 schedule name and calendar name cross-reference file cannot be generated. The program ends with a return code of 8.

*User response:* Ensure that the Automatic Command file is created, allocated, and initialized, and rerun JOB1.

# Planning The Conversion

To assist the smooth running of the conversion process, BMC Software recommends that you carry out a number of steps before starting the conversion itself. These steps are set out in this appendix.

This appendix outlines the key Business Integrated Scheduling (BIS) functions and environmental metrics required to determine the initial level of effort associated with the migration of business processing to CONTROL-M.

## 1: Organize the Conversion Team

1. Identify those who will be involved in the conversion process. They should participate in planning the conversion and implementing the steps in this appendix before beginning the conversion.

   Include in this list those who support the current environment and who require training or retraining and/or mentoring, such as operators, production control administrators, product administrators, production analysts, application support and programming personnel, security administrators, and so on.

2. Ensure that the conversion team has sufficient knowledge of

   - the features and operation of
     - ADC2
     - CONTROL-M
     - the conversion utilities
   - your existing scheduling information and its operation procedures
   - your site rules on dataset organization, naming conventions, and so on
   - your expectations from the conversion project

3. Identify the exact release or version number of ADC2 that you are currently using.

4. Identify the operating system and platforms to be supported by CONTROL-M in the target environment. In relation to each platform, identify the release level, number of systems, and physical location.

# 2: Analyze Your Hardware

Consider the configuration of the system currently in use at your site, and whether you are making the best use of your hardware resources.

Obtain sufficient information to respond to the issues raised in this section. Record the answers carefully, because they will be of importance during and after the conversion to CONTROL-M.

- What resources, such as tape drives, initiators, and so on, do you use at your site?

- What MVS images, that is, CPUs, LPARs, and/or Sysplexes, will be available to CONTROL-M when running production jobs?

- How are your MVS images connected? Is the connection by

  — coupling facility
  — shared spool
  — NJE
  — some other method

  Are the systems managed separately or collectively? Is there job flow between systems?

- Do you currently have multi-system dependencies, either on the same platform type, or using different platforms? If so,

  — how many?
  — how are they managed?

# 3: Consider Current Practices

Consider the current practices at your site. The relevant issues include at least the questions set out in this section. Do not hesitate to ask others for information they may be able to provide. Take all software and hardware platforms into account when answering. Record the answers carefully, because they will be of importance during and after the conversion to CONTROL-M.

1. How is production scheduling currently handled on your computers?

2. Who currently uses your system?

   - Is there a single production department or are there several?
   - Who are the end users of the system?

3. Consider the typical application flows at your site. The following are useful questions to ask:

   - Which are the three key applications, in terms of size, complexity, or value to your business?

   - How are those applications scheduled?

   - How are their internal dependencies managed?

   - Are there currently any performance bottlenecks or constraints in scheduling implementation?

4. List any products you use to support production scheduling, such as console automation, job restart products, and so on.

   - What function does each such product perform?
   - Will CONTROL-M replace that function?

   If you think that CONTROL-M will not make some product redundant, obtain as much information as possible about that product, to enable you to decide how the product will interface with CONTROL-M.

5. List all your applications, interfaces, user or system exits, reports, and similar material, that

   — operators, system programmers, and other third parties have customized, and
   — form part of the implementation of your current production scheduling

Include interfaces used to submit jobs from an internal front-end process, as well as any interface used to issue commands and/or perform tasks using batch utility programs.

Consider whether you can use CONTROL-M to implement these functions and/or features.

6. Do you manually schedule any jobs or their logical successors on demand, instead of allowing the system to schedule jobs? If you do,

   - list each job and record the way you deal with it
   - consider whether CONTROL-M can be used to schedule these jobs automatically

7. Do your jobs run automatically, on rigid scheduling, or do you frequently modify job schedules and/or dependencies to meet needs as they arise?

8. Consider your job concurrency requirements, and the way you meet those requirements. Examples of questions to ask are the following:

   - Do you use job triggering, so that the completion of one job causes another job to be submitted or ordered?

   - Do you use job dependencies, meaning that one job (the "waiting job") does not start until another has finished, even though the waiting job is submitted or ordered in some other way?

   - Do you use negative job dependencies, meaning that if a job fails, another job starts?

9. How do you manage such resources as tape drives, initiators, and so on?

10. Consider the following questions about the jobs your systems currently perform:

    - How many jobs do you currently have defined?
    - How many jobs are run on a daily, weekly, or monthly basis?
    - How many jobs run on peak days, for example, end of year processing?
    - How many jobs run "on request", that is, demand jobs (see Question 6)?
    - Are your existing job definitions satisfactory in every respect?
    - Do you use all your existing job definitions, or are many now obsolete?
    - How many jobs use JCL automation features? Identify the type of automation used.
    - How many jobs are scheduled using dataset triggering?
    - How many jobs require manual intervention prior to submission?

11. How many jobs use JCL automation features? Identify the type of automation used.

12. How many jobs are scheduled using dataset triggering?

13. How many jobs require manual intervention prior to submission?

# 4: Read the Conversion Guide

Read through this conversion guide. While doing so, consider the following points.

1. Identify any "special" situations. These can arise where

   - the conversion will not be performed automatically
   - your existing system is otherwise incompatible with CONTROL-M, for example, where calendar generation may serve as a substitute for some scheduling parameters

   Are the proposed solutions acceptable in all cases? If not, identify alternative solutions, such as the use of the supplied user exits.

2. Is there any aspect of the way you use ADC2 that may not be reflected in the reports and parameter files used by the conversion program?

3. Prepare the names to be used for libraries, table names, job names, conditions, resources, and so on, in the output of the conversion, in order to reflect the way you want the CONTROL-M environment to appear to users.

4. Consider whether at this stage you are converting the entire production environment, or just one application? If you are only converting one application, determine

   - how typical it is of the work done at your site
   - what are the principal differences between this application and other applications

Consider whether you can yet identify any other pitfalls ahead, and if so, how to avoid the problems they appear to present.

# Problem Reporting

Please supply all the information requested below when reporting a problem related to the conversion tool.

- the version number of CONTROL-M (such as 6.1.00) and the MVS operating system, such as z/OS 1.1
- the release number of ADC2 (such as 2.3) from which you are converting
- the last PTF applied to the conversion tool
- a copy of the DEFAULTS member
- the full text of all JobLog messages, in addition to all error messages in the error files, DAPRINT, SYSPRINT, and so on
- any source fixes or zaps applied to the conversion tool
  Also, check if REFRESH LLA was done after changes were applied.

If an abend has occurred, send the symptom dump to BMC Software Customer Support, and have a full dump (SYSUDUMP) available for use by Customer Support staff.

Whenever a change is made to the DEFAULTS member, or a source fix is applied, you should re-perform Chapter 3, “Step 1 - Create the Conversion Source and Load Libraries,” “Step 2 - Check and Modify Parameters in Member DEFAULTS,” and “Step 3 - Modify and Run Member ASMLINK”.

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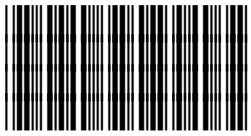

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