



Control-M for z/OS for DJC 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
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 - Messages from related software

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About This Guide

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

The guide is divided into the following chapters:

Chapter 1 – Conceptual Overview

Overview of basic concepts describing the conversion from DJC to CONTROL-M

Chapter 2 – Conversion Process

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 DJC 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.

Conceptual Overview

This chapter includes the following topics:

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Overview

The DJC (Dependent Job Control) facility of the IBM JES3 or the ESP (Execution Scheduling Processor) products is used to execute jobs in a specific order. Groups of jobs that each depend on the processing of the other form a Dependent Job Control network. The JES3 or ESP statement (//*NET) in the JCL of a job is used to indicate the relationship between jobs in the same or other DJC networks. Parameters in the //*NET statement also determine when a job is released (automatically or manually).

DJC networks are comprised of the following job types:

- Predecessor jobs, which must complete before another job can run
- Successor jobs, which cannot execute before certain specific predecessor jobs complete

During conversion to CONTROL-M, the JCL library that contains the DJC //*NET statements is converted to a standard JCL library containing no DJC statements. The DJC statements are converted to CONTROL-M parameters in job scheduling tables, which are described in [Chapter 4, "Conversion Details."](#)

The DJC 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 DJC scheduling elements into functionally equivalent processes in CONTROL-M. For more information on the DJC conversion tool, see ["CONTROL-M DJC conversion tool" on page 16](#).

CONTROL-M DJC conversion tool

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

The conversion tool performs the following functions:

- Creates CONTROL-M scheduling definitions, which are equivalent to the DJC scheduling definitions.
- Creates a new JCL library, excluding the DJC statements, and optionally excluding members that are not part of the DJC net.

- Enables the customer to add special CONTROL-M parameters to the CONTROL-M and CONTROL-M/Restart scheduling definitions.
- Issues messages about problems and errors found in the DJC definitions.

Conversion Process

This chapter includes the following topics:

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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”](#).

This chapter describes the components and flow of the conversion process from the perspective of programs and datasets.

A familiarity with the conversion process flow helps in understanding the conversion logic and the installation and operation steps discussed in [Chapter 3, “Conversion Steps.”](#)

The process consists of a single job, which is described in detail in the following pages.

JOB1

JOB1 creates a CONTROL-M scheduling table library and a new JCL library, excluding

- DJC JCL statements (//*NET statements)
- Members that are not part of a DJC network (optional)

Input

DJC JCL library.

Output

1. An intermediate sequential JCL file, created using IBM utility IEBUPDTE
Default file name: CTM.DJC.SEQJCL
File characteristics: Sequential; record length 81; block size 9072
2. CONTROL-M scheduling tables library
Default file name: CTM.SCHEDTBL
File characteristics: Partitioned dataset (PDS); record length 80; block size 3120

3. CONTROL-M JCL library

Default file name: CTM.PRODJCL

File characteristics: PDS; record length 80; block size 3120

JOB1 invokes program CTMDJCCN to build the CONTROL-M scheduling table library and JCL library. This job must be run for each DJC JCL library at your site. The source code of this program resides in the conversion source library, and can be locally tailored.

NOTE

If a JCL member contains the control statement `./` (used by IEBUPDTE) this control statement is replaced with `@/`. This is done because the conversion program adds `./` cards to separate the various members of the new JCL library. After conversion you must manually replace all `@/` character strings with `./`

If duplicate jobs are encountered (jobs with the same name), only the first job is handled by the conversion tool and an appropriate message is issued.

Conversion Steps

This chapter includes the following topics:

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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 of the conversion tool consists of a series of steps.

BMC Software recommends that you first review the contents of [Appendix D, “Planning The Conversion,”](#) 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 the DEFAULTS member
- 3 Tailor and run the ASMLINK member
- 4 Tailor and run the JOB1 member
- 5 Check the conversion results

Step 1 - Create the Conversion Source and Load Libraries

1. Run job \$SINIT in the IOA CONV library to create the DJC conversion source library and allocate the conversion load library.
2. Tailor the following parameters in the member in accordance with your local conventions.

Table 1 Parameters to Be Adjusted (part 1 of 2)

| Parameter | Description |
|---------------|------------------------------------|
| Job statement | |
| INLIB | IOA CONV library name |
| OUTLIB | DJC conversion source library name |

Table 1 Parameters to Be Adjusted (part 2 of 2)

| Parameter | Description |
|-----------|----------------------------------|
| LOADLIB | DJC conversion load library name |
| UNIT | Unit name of DASD device |
| VOLSER | Volser of DASD device |
| PRODUCT | DJC |

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

Step 2 - Check and Modify Parameters in the DEFAULTS Member

Tailor the CONTROL-M conversion parameters specified in the DEFAULTS member in the conversion source library according to your local site requirements. For a detailed description of these parameters, see [Appendix B, "Conversion Parameters,"](#)

Step 3 - Tailor and Run the ASMLINK Member

The ASMLINK member assembles and link-edits conversion programs using values specified in the DEFAULTS member in the conversion source library (tailored in Step 2).

Tailor the JCL of the ASMLINK member 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 0.

— **NOTE** —

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

Step 4 - Tailor and Run the JOB1 Member

Tailor the following specifications in the JOB1 member in the conversion source library according to your local conventions:

- job statement
- name of the conversion load library (DD statement CTMLOAD in STEP0)
- name and location of the new JCL library (DD statement LIBJCL in STEP0)
- name and location of the scheduling library (DD statement LIBSCHED in STEP0)
- name and location of the intermediate JCL sequential file (DD statement JCLIN in STEP0)

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

The job must finish with condition code 0. Correct any error conditions.

Step 5 - Check the Conversion Results

Enter the CONTROL-M Table List screen (screen 2), and order one of the scheduling tables created in JOB1 (described above in Step 4). You can also use the graphic job flow (Option 2G) to access the job flow of any DJC network as it appears in CONTROL-M.

Batch utilities such as CTMRPLN, CTMRFLW, CTMRNSC, and CTMXRF are also very useful in checking the conversion results. These utilities are fully described in the *INCONTROL FOR z/OS Utilities Guide*.

Conversion Details

This chapter includes the following topics:

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Overview

The conversion tool converts DJC JCL statements into CONTROL-M job scheduling definition parameters.

The following conversion table lists DJC JCL parameters that are converted to CONTROL-M parameters.

Table 2 Conversion of DJC JCL Parameters

| JCL or DJC Parameter | CONTROL-M Job Scheduling Definition Parameter |
|--|---|
| Job name as indicated in the job statement | MEMNAME |
| //*PROCESS | Not supported |
| ABNORMAL (AB) | IN or OUT conditions |
| NETID (ID) | <i>tablename</i> GROUP |
| NETREL (NR) | IN or OUT conditions |
| NHOLD (HC) | IN condition (manual) |
| NORMAL (NC) | IN or OUT conditions |
| OPHOLD (OH) | CONFIRM |
| RELEASE (RL) | IN or OUT conditions |

Dependency Definitions

The following paragraphs describe the way in which DJC dependency definitions are handled during conversion to CONTROL-M.

Assume that jobs JOBA and JOBB are both associated with a NETID (group name) of GROUP, and that JOBA releases JOBB. In such a situation

- JOBA is created with the OUT condition JOBA-JOBB-OK, and JOBB is created with the same IN condition.
- If the DJC definitions state that JOBB has a hold count (HC) greater than the number of jobs that release it, JOBB is created with the following manual IN conditions:

JOBB-MAN x -G0

where x ranges from 1 to the excess hold count.

- If the DJC definition of a job does not specify HC, or the hold count is less than the actual number of predecessors (IN conditions) defined for the job, the HC parameter is ignored and the job is NOT prematurely released by CONTROL-M.
- All jobs with the same NETID are placed into the same job scheduling table. The NETID name is used as both the table name and the GROUP name.
- Jobs that do not contain a `//*NET` statement, that is, those that are not part of a dependency network, are placed in a job scheduling table with a table name and GROUP name of `$NONETS$`.
- Jobs that contain a `//*NET` statement but do not specify a NETID are placed in a job scheduling table with a table name and GROUP name of `$NOID$`.
- When the NORMAL or ABNORMAL parameters are specified, the conversion results depend on the parameter values.
 - When the specification is `NORMAL=D` and `ABNORMAL=R` (the default values for these parameters), the conversion program processes conditions in the manner already described.
 - When `NORMAL=R` is specified for JOBB, the usual OUT condition (JOBA-JOBB-OK) is not created in the job definition of any job that releases JOBB.
 - When `ABNORMAL=D` is specified for JOBB, the following is created in the job definition of any job (JOBx) that releases JOBB:


```
ON PGMST ANYSTEP CODES NOTOK
DO COND JOBx-JOBB-OK
```
 - When the specification is `NORMAL=F` and/or `ABNORMAL=F`, the conversion program ignores these parameters
- `OPHOLD=YES` is converted to the CONTROL-M job scheduling parameter `CONFIRM Y`.

For more information, see “[&DELCOND](#)” on page 37.

Unique CONTROL-M and CONTROL-M/Restart Parameters

Several unique CONTROL-M and CONTROL-M/Restart job scheduling definition parameters that do not have corresponding DJC features can be set by the conversion tool during creation of the CONTROL-M scheduling tables.

The DEFAULTS member 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,”](#) the *CONTROL-M for z/OS User Guide*, and the *CONTROL-M/Restart User Guide*.

DO SYSOUT

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

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

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

The &TOCLASS conversion parameter specifies the output class to which CONTROL-M requeues the job output. For more information, see “&TOCLASS” on [page 39](#).

The &RELEASE conversion parameter instructs CONTROL-M whether to release the output of the job for printing on the system spool. The default is Y (Yes). For more information, see “&RELEASE” on [page 38](#).

FROM *Time Limit*

By using parameter FROM in a job scheduling definition, you can instruct CONTROL-M to attempt to submit the job only when the specified time has passed. For more information, see “&FROMT” on [page 38](#).

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 2-digit parameter accepts values from 00 through 99 and is specified by means of the &MAXWAIT conversion parameter, which is described in “&MAXWAIT” on page 38. Default: 03.

PREVENT-NCT2

This CONTROL-M/Restart parameter prevents NOT CATLG 2 errors, by setting the PREVENT-NCT2 job scheduling parameter. For more information, see “&CTR” on page 37.

RETRO

This CONTROL-M parameter specifies if a job must be scheduled for execution after its original scheduling date has passed. Parameter RETRO can be set to either Y (Yes) or N (No) using the &RETRO conversion parameter, which is described in “&RETRO” on page 38. Default: Y.

SHOUT

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

The conversion tool supports one SHOUT situation. When a job fails, the WHEN NOTOK subparameter instructs CONTROL-M to send a SHOUT message.

The &SHOUT conversion parameter specifies SHOUT message text for failed jobs. The default message text is:

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

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*.

The &SHOUTD conversion parameter, which is described in “&SHOUTD” on page 38, specifies the destination of SHOUT messages for failed jobs.

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 TRSMMAIN program. If you do not have TRSMMAIN 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=TRSMAN,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 site local requirements. The parameters are described below in alphabetical order.

Table 3 CONTROL-M DJC Conversion Parameters (part 1 of 3)

| Parameter | Description |
|-----------|--|
| &CTR | CONTROL-M/Restart parameter. Valid values are: <ul style="list-style-type: none"> ■ Y (Yes) - CONTROL-M/Restart is implemented with CONTROL-M. PREVENT-NCT2=Y is specified in the job scheduling definitions. Default. ■ N (No) - CONTROL-M/Restart is not implemented with CONTROL-M. No CONTROL-M/Restart statements are set. |
| &DATEMEM | CONTROL-M DCAL calendar name. Default: WORKDAYS |
| &DELCOND | Whether IN conditions triggering the submission of a job are deleted using an OUT condition in the scheduling definition of that job. Valid values are: <ul style="list-style-type: none"> ■ Y (Yes) - Create the necessary OUT condition so that IN conditions are deleted. ■ N (No) - Do not delete IN conditions. Default. |
| &DELNONT | Whether members from the original JCL library that are not part of the DJC net, that is, non-JCL members or members without a NET statement, are deleted from the new JCL library. <ul style="list-style-type: none"> ■ Y (Yes) - Members that are not part of a DJC network are not included in the new JCL library. ■ N (No) - All members from the original JCL library are inserted in the new library. Default. |

Table 3 CONTROL-M DJC Conversion Parameters (part 2 of 3)

| Parameter | Description |
|-----------|---|
| &FROMC | Which of the held sysout classes must be requeued. Default: ' ' (Blank) Specify ' ' (Blank) if all held sysouts must be requeued. When TOCLASS is ' ' this parameter is ignored. |
| &FROMT | FROM time in hhmm format. Default is ' ' (Blank), meaning jobs are submitted at the beginning of the working day as determined by the CONTROL-M New Day procedure. |
| &MAXNET | The maximum number of // *NET statements in the DJC JCL library. Default: 15000 |
| &MAXWAIT | Number of extra days a job must wait in the Active Jobs file to be executed, after which the job is deleted. Default: 3 Note: When &MAXWAIT is set greater than 00 and the &FROMT conversion parameter is not set to ' ' (Blank, the conversion tool sets the CONTROL-M UNTIL TIME job scheduling parameter to '>'. For more information, see the <i>CONTROL-M for z/OS User Guide</i> . |
| &MEMLIB | Name of the JCL library. The default is GENERAL. The JCL library is specified in DD statement DALIB in the JCL of the CONTROL-M procedure. |
| &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: <ul style="list-style-type: none"> ■ Y (Yes) - Release sysouts for print. Default. ■ N (No) - Do not release sysouts. |
| &RETRO | Retroactive scheduling specifies whether to schedule a job when its original scheduling date has passed. Valid values are: <ul style="list-style-type: none"> ■ Y (Yes) - Schedule the job even though its original scheduling date has passed. Default. ■ N (No) - Do not schedule the job when its original scheduling date has passed. |
| &SHOUTD | Destination for SHOUT messages when a job failed. The following may be specified: <ul style="list-style-type: none"> ■ OPER - Issue the SHOUT message to the console. ■ OPER2 - Issue the SHOUT message to the console as highlighted and unrollable. ■ TSO-<i>userid</i> - Issue the SHOUT message to a specific TSO user ID, where <i>userid</i> is a specific user ID (up to seven characters). Default. The default user ID is CTM. For additional options, see the SHOUT parameter description in the <i>CONTROL-M for z/OS User Guide</i> . |

Table 3 CONTROL-M DJC Conversion Parameters (part 3 of 3)

| Parameter | Description |
|-----------|---|
| &SHOUTT | Job failed SHOUT message. Specify the text (a maximum of 50 characters) for the SHOUT WHEN NOTOK message that is sent when a job fails. Specify ' ' (Blank) to suppress the message. Default: %%JOBNAME J%%JOBID ENDED NOTOK! |
| &TOCLASS | The class to which the sysout must be changed. The default, ' ' (Blank), specifies that no reroute be performed. &TOCLASS='*' specifies requeuing the sysout to the original JCL MSGCLASS. |
| &USERID | This conversion parameter sets the CONTROL-M parameter OWNER. Valid values are: <ul style="list-style-type: none"> ■ 'JOBNAME' - the first <i>n</i> characters of the jobname of the job, where the value of <i>n</i> is set by conversion option &USERLEN. Default ■ xxxxxxxx - a fixed value of 1 through 8 characters. |
| &USERLEN | Sets the number of characters used by the conversion parameter &USERID in setting the CONTROL-M parameter OWNER. Valid values are: 1 through 8. Default: 8 |

Messages

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

A message code usually consists of the following parts:

CTMADC`aa-nnx`

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

| Item | Explanation |
|------|--|
| aa | 2-character identifier for the program or programs that produced the message |
| nn | 2-character numeric identifier for the message |
| x | 1-character alphabetic identifier for the severity of the message Valid values are: <ul style="list-style-type: none"> ■ A - Action ■ E - Error ■ I - Information ■ S - Severe ■ 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.

**SYNTAX ERROR OR UNSUPPORTED PARAMETER IN THE ABOVE NET CARD. MEMBER
*memname***

Explanation: In the member *memname*, a syntax error or unsupported parameter was encountered in the *//*NET* statement above, or the *//*NET* statement was incomplete.

The first line of this message consists of the statement in which the error was detected. The second line of this message indicated that there was an error and the name of the member in which it was found.

User Response: Correct the statement and rerun JOB1.

CONVERSION SUCCESSFULLY COMPLETED.

Explanation: Conversion was successfully completed.

User Response: None.

UNUSED RL DEFINITIONS

Explanation: This is a header message for the following message.

This message serves as a header for the information in the next message (that is, JOB *predjob* DEFINED TO RELEASE JOB *nextjob*. NOT DEFINED TO CTM).

JOB *predjob* DEFINED TO RELEASE JOB *nextjob*. NOT DEFINED TO CTM.

Explanation: The DJC definition for job *predjob* specifies that it releases job *nextjob*, but the conversion tool did not find job *nextjob* in the JCL library and could not create a job scheduling definition for it.

System Action: No CONTROL-M job scheduling definition is created for job *nextjob*.

User Response: Define job *nextjob* in the DJC library and rerun JOB1.

THE ABOVE IS NOT THE FIRST NET CARD IN THE JOB, CARD IGNORED

Explanation: Multiple *//*NET* statements were found in a DJC job.

System Action: The conversion tool processes only 1 (the first) *//*NET* statement per job.

User Response: Verify that the correct *//*NET* statement was processed by the conversion program.

JOB *jobname* APPEARS MORE THAN ONCE. ONLY FIRST JOB PROCESSED

Explanation: Multiple JCL members containing jobs with the same job name are not processed.

System Action: Only the first such job is processed.

User Response: Examine the jobs in question and rename them or delete them as necessary. Rerun JOB1.

THIS APPEARANCE OF HC/ID PARAMETER IGNORED BECAUSE FIRST HC/ID PARAMETER HAS ALREADY BEEN ANALYZED.

Explanation: Parameter HC/ID appears more than once on a `//*NET` statement.

System Action: Only the first occurrence is processed.

User Response: Correct the `//*NET` statement and rerun JOB1.

INSUFFICIENT STORAGE TO RUN CONVERSION.

Explanation: The conversion program (JOB1) did not have sufficient storage for execution.

System Action: JOB1 is terminated.

User Response: Rerun JOB1, with REGION=0K specified on STEP3.

THE ABOVE CARD IS NOT HANDLED AUTOMATICALLY. MEMBER *memname*

Explanation: The specified JES3 or ESP JCL statement cannot be converted by the conversion tool.

User Response: Any necessary handling for this JCL statement must be performed manually.

System Action: The JES3 or ESP JCL statement is ignored and processing continues.

./ CHANGED TO @/ IN ORIGINAL MEMBER *memname* JOBNAME *jobname*

Explanation: The conversion tool replaced the `./` characters in JCL members with `@/`.

The conversion tool inserts `./` characters so that IBM utility IEBUPDTE, which is called by the conversion program, can function properly. To prevent confusion, previously existing occurrences of character string `'./'` (in columns 1 - 2) in all JCL members are modified to `@/`.

User Response: You must manually change back all these character strings to `'./'` after the conversion is complete.

MAXNET CONVERSION OPTION EXCEEDED

Explanation: The number of `//*NET` statements or dependency relationships exceeds the number specified using the `&MAXNET` conversion parameter in the DEFAULTS member.

System Action: The conversion program (JOB1) is terminated.

User Response: Increase the value of the `&MAXNET` conversion parameter in the DEFAULTS member in the conversion source library, and rerun JOB1.

JOB *jobname* HC= GREATER THAN NUMBER OF JOBS RELEASING IT, MANUAL COND(S) ADDED.

Explanation: The DJC hold count (HC) of a job was greater than the number of jobs that release it.

System Action: The conversion tool creates the scheduling definition of the job with the following manual IN conditions: *jobname*-MAN*x*-GO where *x* ranges from 1 to the excess hold count.

User Response: None.

JOB *jobname*, PREDECESSOR *predjob* NOT DEFINED TO CTM, A MANUAL COND IS ADDED.

Explanation: A predecessor job *predjob* has no NETID and was not defined to CONTROL-M.

System Action: Job *jobname* that requires job *predjob* as a prerequisite is created with a manual IN condition *jobname*-MAN-GO.

User Response: None.

THIS APPEARANCE OF *xx* PARAMETER IGNORED BECAUSE AN ID PARAMETER WAS NOT PREVIOUSLY SPECIFIED

Explanation: The conversion tool ignored DJC parameter *xx* in a *//*NET* statement, where *xx* is NC, AB, or OH, because an ID parameter had not yet been specified.

System Action: The NC, AB, or OH parameter is not converted.

User Response: Code an ID parameter prior to the NC, AB, or OH parameter in the *//*NET* statement, 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
 - DJC
 - 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 DJC 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 DJC 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 DJC (such as 7.2) from which you are converting
- the latest PTF applied to the conversion tool
- a copy of the DEFAULTS member
- the full text of all job log messages, in addition to all error messages in the error files, DAPRINT, SYSRINT, 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 the DEFAULTS Member,”](#) and [“Step 3 - Tailor and Run the ASMLINK Member”](#).

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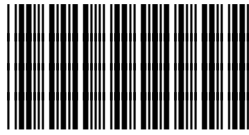
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