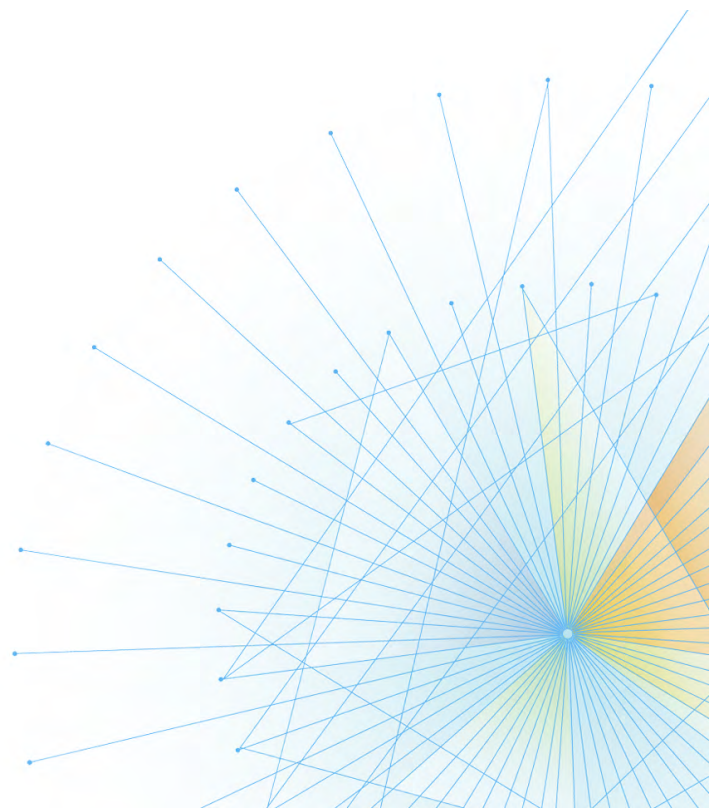




The Mainframe Software Partner For The Next 50 Years

ThruPut Manager JES3 Compatibility Services Guide

Release 18.02



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Introduction

About This Manual

JES3 Compatibility Services supports a JES3 to JES2 conversion without JCL changes with ThruPut Manager. This supplement provides a description of JES3 commands and the JECL statements supported. It also details the DAL/JAL Descriptors for JES3 compatibility on a JES2 platform.

This chapter describes the features and requirements of JES3 Compatibility Services.

Summary of Changes

| | |
|------------------------------|--|
| V1802-7118 (April 2019) | <ul style="list-style-type: none"> No changes |
| V1802-7117 (January 2019) | <ul style="list-style-type: none"> No changes |
| V1802-7116 (October 2018) | <ul style="list-style-type: none"> No changes |
| V1802-7115 (July 2018) | <ul style="list-style-type: none"> No changes |
| V1802-7114 (April 2018) | <ul style="list-style-type: none"> Updated the Implementation Considerations to reflect IBM's z/OS 2.3 support for JES3 JECL statements within JES2. |
| V1802-7113 (January 2018) | <ul style="list-style-type: none"> No changes. |
| V1802-7112 (October 2017) | <ul style="list-style-type: none"> No changes. |
| V1802-7110 (July 2017) | <ul style="list-style-type: none"> Rebranding of MVS Solutions to Compuware. This includes update of cover style, copyright, and changing version release to 18.02. |
| V7R1-7109 (April 2017) | <ul style="list-style-type: none"> No changes. |
| V7R1-7108 (February 2017) | <ul style="list-style-type: none"> No changes. |
| V7R1-7107 (May 2016) | <ul style="list-style-type: none"> No changes. |
| V7R1-7106 (November 2015) | <ul style="list-style-type: none"> No changes. |
| V7R1-7104 (July 2015) | <ul style="list-style-type: none"> No changes. |
| V7R1-7101 (July 2014) | <ul style="list-style-type: none"> This is a base manual for ThruPut Manager Version 7 Release 1.0. |

Features and Requirements

Features of JES3 Compatibility Services™

JES3 Compatibility Services makes it possible to run JES3 batch jobstreams under JES2 without any JCL changes. It eliminates the need for an extensive JCL conversion by automatically invoking equivalent JES2 facilities and provides unique JES3 functions for JES2 systems. JES3 DJC (Dependent Job Control) using `//*NET JECL` is also supported.

Facilities Supported with JES3 Compatibility Services™

- `//*MAIN` Statement Processing: Parameters applicable in a JES2 environment such as `LINES`, `HOLD=YES` and others are honored by JES2. In addition, all parameter values are passed to ThruPut Manager JAL (Job Action Language) and processing can be customized as required.
- Deadline Scheduling Support: A Deadline Scheduling facility for JES2 is provided and is fully compatible with the JES3 facility.
- `//*FORMAT` Statement Processing: Parameters on the statement are applied to the appropriate `SYSOUT` generated by the job.
- Other statements supported are:
 - `//*DATASET`
 - `//*PROCESS`
 - `//*ROUTE XEQ`
 - `//*NET`
 - `//*NETACCT`

Implementation Considerations

As of z/OS 2.3 IBM has partially added support for JES3 JECL statements within JES2. This is accomplished with `"INPUTDEF JES3JECL=PROCESS"`. When this is detected by ThruPut Manager these statements will be ignored allowing IBM to process them instead.

The `//*ROUTE XEQ` can be translated from JES3 to JES2 using the `TMPARM` statement or the information can be passed using a binding agent in JAL. Both options are discussed later with the JECL statement. A `TMPARM` statement must be added to the JES2 initialization statements to customize JES2 to accept the JES3 `//*ROUTE XEQ` statement if this handling option is chosen. Use `TMPARM` with `JECL=` to translate and process the `//*ROUTE XEQ` JES3 JECL statement into a JES2 compatible format as shown in the following example:

```
TMPARM JECL=( *ROUTE , XEQ , IGNORE , JES2XLATE(ROUTE , XEQ) )
```

The JES3 compatibility feature must be enabled to process JES3 JECL statements. The `NET` compatibility feature must be enabled to process the `//*NET` statements. The `TMPARM OPTIONS` statement is used to enable components. The format and syntax of the `TMPARM` statement is described in the Installation Guide and shown in the following examples:

```
TMPARM OPTIONS =(ON(JES3))
```

```
TMPARM OPTIONS =(ON(NET))
```

The JES3 and NET features can also be enabled dynamically using the TM OPTIONS command. Please refer to the *Command Reference Guide*. Examples follow:

```
/TM OPT ENABLE JES3
```

```
/TM OPT ENABLE NET
```

Operator commands stay in effect only until the next JES2 warm start.

Compatibility with JES2 z/OS 2.3 JECL support

If TM detects that the IBM JES3 processing is active (INPUTDEF JES3JECL=PROCESS) then TM ignores all JES3 statements and allows IBM to process them. Additionally a message is issued to the job to indicate this. DTM11118I JES3 JECL ignored due to 'INPUTDEF JES3JECL-PROCESS'.

Support of JES3 JECL Statements

This chapter describes JES3 JECL statements and provides a list of DAL/JAL Descriptors and their functions.

ThruPut Manager supports the presence of JES3 JECL statements in JCL under JES2. DAL/JAL Descriptors detailing the information on these statements have been added. Additionally, some of the functions that the JECL statements provide are supported where noted below.

//*MAIN

ThruPut Manager supports the presence of JES3 JECL statements in JCL under JES2. DAL/JAL Descriptors detailing the information on these statements have been added. Additionally, some of the functions that the JECL statements provide are supported where noted below.

All the keywords coded on a //*MAIN statement can be accessed in DAL/JAL with the appropriately named Descriptors (\$JES3_MAIN_...). Additionally, the following //*MAIN parameters are honored by JES2:

- BYTES
- CARDS
- HOLD=YES
- LINES
- PAGES
- PROC
- SYSTEM
- USER

Note that the data provided in the PROC keyword parameter causes the job to be re-converted if the procedure library named is not the same as the default JES2 PROCLIB.

The system affinity coded in the SYSTEM keyword is set by ThruPut Manager after analysis has completed. The affinity provided by the SYSTEM keyword is only set if the job's affinity has not been set from any other source (JAL/JBS BIND).

Deadline Scheduling

The Deadline Scheduling support is identical to that provided by JES3 except that the ThruPut Manager version adds the ability to release a job from JES2 HOLD status. The JES3 Selectable Option must be on for Deadline Scheduling to function.

Deadline Scheduling is requested by including a //*MAIN statement in the job's JCL with the DEADLINE keyword. The basic syntax of the DEADLINE parameter follows.

Deadline Syntax

```
//*MAIN DEADLINE=(time,type[,date |rel,cycle])
```

time

Is the time by when the job should be complete.

type

Is a single character or number used to identify and select the deadline algorithm predefined with the \$MJ,DEADLINE command.

date

Is the date by when the job should be complete. If omitted, the date of submission is assumed.

rel,cycle

May be used instead of date to indicate the day of year, month or week.

Deadline Examples

```
//*MAIN DEADLINE=(1400,A,12/31/2020)
```

The job must be complete by 2 p.m. on the 31st of December using algorithm type "A" as shown in the preceding example.

```
//*MAIN DEADLINE=(0030,A,25,MONTHLY),HOLD=YES
```

The job must be complete by 12:30 a.m. on the 25th of the current month if submitted before the 25th, otherwise by the 25th of next month using algorithm type "B" as shown in the preceding example.



Before Deadline Scheduling can be used, the types of deadline algorithms must be defined. If a job is submitted that requests an undefined algorithm, it results in a JECL error. The algorithms are defined with \$MJ,DEADLINE command and kept in the JES2 checkpoint dataset until a JES2 cold start.

\$MJ Deadline Command Syntax

```
$MJ,DEADLINE,type=(prty1,leadtime[,prty2,incrtime])
```

```
$MJ,DEADLINE=type
```

type

Identifies the deadline algorithm defined as a character A-Z or a number 0-9 that controls how the job's priority is increased.

prty1

Is a 1 or 2 digit priority to be assigned to the job when the lead time occurs. If prty1 is preceded by a "+", then the value is added to the existing priority. If prty1 is followed by an "R", then the job is released from JES2 HOLD when the lead time occurs. "R" can be specified in place of prty1, in which case, the job is released and the priority is not modified.

leadtime

Is the amount of time prior to the job's deadline that the prty1 value of this algorithm should be applied. It can be specified in minutes (e.g. 30M) or hours (e.g. 2H) or hours and minutes (e.g. 0235). Regardless of how it is specified, the maximum lead-time is 24 hrs.

prty2

Is a 1 or 2 digit priority to be assigned to the job when incertime occurs. If prty2 is preceded by a "+", then the value is added to the existing priority. The increments continue until the job starts executing or the job's priority reaches 15.

incertime

Is the amount of time after the initial priority adjustment and/or release that the prty2 value of this algorithm should be applied. It can be specified in minutes (e.g. 30M) or hours (e.g. 2H) or hours and minutes (e.g. 0235). Regardless of how it is specified, the maximum incertime is 24 hrs.

\$MJ Deadline Command Examples

```
$MJ,DEADLINE,A=(+2,30M,+1,10M)
```

Add 2 to the job's current priority 30 minutes before the deadline, thereafter add 1 to the job's priority every 10 minutes as shown in the example above. This creates the type "A" algorithm.

```
$MJ,DEADLINE,B=(+1R,1H,12,30M)
```

Add 1 to the job's current priority. "R" releases it from JES2 HOLD 1 hour before the deadline, 30 minutes later the priority is set to 12 as shown in the example above. This creates the type "B" algorithm.

```
$MJ,DEADLINE
```

The \$MJ,DEADLINE command can also be used to display the existing definitions and the jobs awaiting execution that have requested Deadline Scheduling. Entering the command with no operands, as shown in the example above, displays all deadline types and all deadline jobs.

```
$MJ,DEADLINE=A
```

Entering the command in the format of \$MJ,DEADLINE=type displays all the jobs of the requested type ("A") as shown in the previous example.



If Deadline Scheduling is installed in a Multi Access Spool environment, ensure that the support is installed and active in all members of the MAS before defining any algorithms. Definitions can be lost if this precaution is not taken.

//*DATASET

The //*DATASET processing requires the installation to add a procedure called DATASET to the standard PROCLIB. This procedure can be found in the INSTALL dataset delivered with this function. It involves a simple get/put program called DTMJ3DS which copies the data following the //*DATASET statement to the required SYSOUT file. JCL within the //*DATASET stream is not supported. The //*DATASET statement cannot be continued. This restriction is also present in JES3.

//*FORMAT

The //*FORMAT statements are automatically processed. There is no need for an SOS DAL. The keywords listed on the //*FORMAT statement are applied to the appropriate SYSOUT generated by the job.

//*PROCESS

The //*PROCESS support introduced with ThruPut Manager support of JES3 JECL statement requires the installation to add a procedure to the PROCLIB for every DSP (Dynamic Support Program) parameter expected to be used in a //*PROCESS. The procedures CI, MAIN, OUTSERV and PURGE are exceptions as they are ignored by ThruPut Manager. Any parameter that the DSP is expecting is passed as a single statement in the SYSIN file.

//*ROUTE XEQ //*NET

The //*ROUTE XEQ processing is handled in one of two ways:

1. It is translated to JES2 //*ROUTE XEQ. A TMPARM statement is required for this option. If the statement is translated, the data is not captured in the JAL Descriptor (i.e. \$JES3_ROUTE_XEQ has no value).
2. It is captured and the routing effected by adding a binding agent in JAL based on the \$JES3_ROUTE_XEQ Descriptor. The information on the //*ROUTE XEQ statement is passed to JAL for decision-making processes.

Please refer to the Base Product: System Programming Guide for a description of the handling of //*ROUTE XEQ and JBS Job Binding Services.

The //*NET statement is honored by JES2 if the TMPARM feature NET has been enabled.

//*NETACCT

All parameters on //*NETACCT are honored by JES2. Other JES3 JECL statements are allowed but they are ignored.

JES3 Descriptors

The JES3 Descriptors represent the same named fields in JES3 and are described as DAL/JAL or DAL only and by unique, logic, character or range type.

\$JES3_DATASET

JES3 DATASET Descriptor

Type: Unique Descriptor.

Maximum Value: Not applicable.

This Descriptor identifies the //*DATASET JECL statement.

| | |
|-------------------------|--|
| \$JES3_DATASET property | DDNAME(ddname) MODE(E C) J(YES NO) CLASS(NO MSGCLASS class) |
|-------------------------|--|

property

Property name.

DDNAME

Specifies the name of the output file.

ddname

1-8 characters.

MODE

Specifies file-reading mode.

E

Default used for EBCDIC validated disk and tape files.

C

Used only for card-image.

J

Indicates the method used to identify the end of the in-stream dataset.

NO

Default used to specify that the next JOB statement ends the in-stream dataset.

YES

Indicates the use of `//*ENDDATASET` to end an in-stream file starting with `//*DATASET`.

CLASS

Identifies the output class for the file.

NO

By default, the system assigns the class.

MSGCLASS

Indicates that the class is the `MSGCLASS` parameter on the JOB statement.

class

A specific class is given to the output file.

Usage:

This Descriptor can be used in the Definition Section of DAL.

Table of DAL/JAL Logic Descriptors

| DAL/JAL Logic Descriptors | | |
|---------------------------|-------------|--------|
| Name | Description | Length |

| | | | |
|-----------------------|--|--------|-----|
| \$JES3_MAIN_EXPDTCHK | Expiration date of file verified | Values | N/A |
| | | YES | |
| | | NO | |
| \$JES3_MAIN_HOLD | Indicates that the job entered the system in operator-hold status to be withheld from processing until the operator releases it. | Values | N/A |
| | | YES | |
| | | NO | |
| \$JES3_MAIN_JOURNAL | Indicates whether or not JES3 is to create a job journal for the job. | Values | N/A |
| | | YES | |
| | | NO | |
| \$JES3_MAIN_RINGCHK | Indicates whether or not JES3 is to check the status of the tape reel ring for tape devices set up by JES3. | Values | N/A |
| | | YES | |
| | | NO | |
| \$JES3_NET_DEVPOOL | Identifies devices dedicated to this JES3 DJC job | Values | N/A |
| | | YES | |
| | | NO | |
| \$JES3_NET_OPHOLD | Indicates that the job is to be processed normally without operator intervention. | Values | N/A |
| | | YES | |
| | | NO | |
| \$JES3_FORMAT_PR_OVFL | Specifies whether the printer program (JES3 output writer) should check for forms overflow (by sensing channel 12 as defined in the FCB that is used for printing the output). | Values | N/A |
| | | YES | |
| | | NO | |

Table of DAL/JAL Character Descriptors

| DAL/JAL Character Descriptors | | |
|-------------------------------|---|--------|
| Name | Description | Length |
| \$JES3_MAIN_ACMAIN | Gives routing of sysout data sets to a processor and user | 1-8 |

| | | | |
|---------------------------|--|---------------|-----|
| \$JES3_MAIN_BYTES_ACTION | Action if BYTES range is exceeded. NOTE: See related Descriptor \$JES3_MAIN_BYTES. | Values | N/A |
| | | WARNING | |
| | | W | |
| | | CANCEL | |
| | | C | |
| | | DUMP | |
| \$JES3_MAIN_CARDS_ACTION | Action if CARDS range is exceeded. NOTE: See related Descriptor \$JES3_MAIN_CARDS. | Values | N/A |
| | | WARNING | |
| | | W | |
| | | CANCEL | |
| | | C | |
| | | DUMP | |
| \$JES3_MAIN_CLASS | Specifies the classname for the job. | | 1-8 |
| \$JES3_MAIN_DEADLINE_CYCL | Gives the Deadline Cycle used. | Values | N/A |
| | | WEEKLY | |
| | | MONTHLY | |
| | | YEARLY | |
| \$JES3_MAIN_DEADLINE_DATE | Gives the Deadline Date used in format mm/dd/ yyyy. | | 10 |
| \$JES3_MAIN_DEADLINE_TYPE | Gives the Deadline Type used. | Values | 1 |
| | | A-Z | |
| | | 1-9 | |

| DAL/JAL Character Descriptors | | |
|-------------------------------|-------------|--------|
| Name | Description | Length |

| | | | |
|--------------------------|--|---------------|-----|
| \$JES3_MAIN_FAILURE | Indicates the job recovery option used if the system fails. | Values | N/A |
| | | RESTART | |
| | | CANCEL | |
| | | HOLD | |
| | | PRINT | |
| \$JES3_MAIN_FETCH | Indicates the fetch messages issued to the operator. | Values | N/A |
| | | ALL | |
| | | NONE | |
| | | SETUP | |
| \$JES3_MAIN_IORATE | Indicates the I/O-to-processor ratio for the job. | Values | N/A |
| | | LOW | |
| | | MED | |
| | | HIGH | |
| \$JES3_MAIN_LINES_ACTION | Action if LINES range is exceeded NOTE: See related Descriptor \$JES3_MAIN_LINES. | Values | N/A |
| | | WARNING | |
| | | W | |
| | | CANCEL | |
| | | C | |
| | | DUMP | |
| | | D | |
| \$JES3_MAIN_NHOLD | Indicates that the job entered the system without operator-hold status. | | 1-8 |
| \$JES3_MAIN_ORG | Indicates that the job's sysout data sets are to be directed to the named group or network node. | | 1-8 |

| DAL/JAL Character Descriptors | | |
|-------------------------------|-------------|--------|
| Name | Description | Length |

| | | | |
|--------------------------|--|---------------|-----|
| \$JES3_MAIN_PAGES_ACTION | Action if PAGES range is exceeded. NOTE: See related Descriptor \$JES3_MAIN_PAGES. | Values | N/A |
| | | WARNING | |
| | | W | |
| | | CANCEL | |
| | | C | |
| | | DUMP | |
| | | D | |
| \$JES3_MAIN_PROC | Names the procedure library that the system searches for cataloged procedures called by EXEC statements in the job. | | 1-8 |
| \$JES3_MAIN_SETUP | Requests job setup, which is allocation of all JES3-managed devices required in the job before the job executes | Values | N/A |
| | | JOB | |
| | | HWS | |
| | | THWS | |
| | | DHWS | |
| \$JES3_MAIN_SETUP_DDNAME | specifies explicit setup, which is allocation of the volumes needed for a DD statement before the job executes. | | 1-8 |
| \$JES3_MAIN_SPART | Indicates the spool partition in which JES3 is to allocate spool space to this job. | | 1-8 |
| \$JES3_MAIN_SYSTEM | Indicates the processor that is to execute this job. | | 1-8 |
| \$JES3_MAIN_THWSSEP | Indicates whether or not you want scratch tape requests and specific tape requests separated and whether you want scratch tapes of different media types separated during high watermark or peak processing. | Values | N/A |
| | | IGNORE | |
| | | PREFER | |
| | | REQUIRE | |
| \$JES3_MAIN_TYPE | TYPE parameter on the /**MAIN statement must specify the system running on the requested processor. | Values | N/A |
| | | ANY | |
| | | VS2 | |
| \$JES3_MAIN_UPDATE | Identifies the procedure library data set(s) that this job is to update. | | 1-8 |

| DAL/JAL Character Descriptors | | |
|-------------------------------|--|--------|
| Name | Description | Length |
| \$JES3_MAIN_USER | Sysout data sets to be sent to a userID attached to the specified processor. | 1-8 |

| | | | |
|---------------------------|---|--------|-----|
| \$JES3_NET_ABCMP | Action if job abends. | Values | N/A |
| | | NOKP | |
| | | KEEP | |
| \$JES3_NET_ABNORMAL | Action if predecessor completes abnormally. | Values | N/A |
| | | D | |
| | | F | |
| | | R | |
| \$JES3_NET_NETID | Specifies the name of the JES3 DJC network. | | 1-8 |
| \$JES3_NET_NETREL_JOBNAME | Identifies a predecessor job name in another JES3 DJC network. | | 1-8 |
| \$JES3_NET_NETREL_NETID | Indicates that this job must be executed before the named job in another JES3 DJC network can be executed. | | 1-8 |
| \$JES3_NET_NORMAL | Action if predecessor completes normally. | Values | N/A |
| | | D | |
| | | F | |
| | | R | |
| \$JES3_NET_NRCMP | Indicates that a network job that completed normally is being resubmitted and that JES3 must erase all references to the job before the job reenters the network. | Values | N/A |
| | | HOLD | |
| | | NOHO | |
| | | FLSH | |
| \$JES3_NET_RELEASE | Indicates that this job must be executed before the named job(s) in this JES3 DJC network can be executed. | | 1-8 |
| \$JES3_NET_RELSCHCT | Supported but ignored. | | N/A |
| \$JES3_NETACCT_ACCT | Specifies accounting information that JES3 is to transmit with a job to another node in the network. | | 1-8 |
| \$JES3_NETACCT_BLDG | Specifies routing information that JES3 is to transmit with a job to another node in the network. | | 1-8 |

| DAL/JAL Character Descriptors | | |
|-------------------------------|--|--------|
| Name | Description | Length |
| \$JES3_NETACCT_DEPT | Specifies dept information that JES3 is to transmit with a job to another node in the network. | 1-8 |

| | | |
|----------------------|---|------|
| \$JES3_NETACCT_PNAME | Specifies the programmer name that JES3 is to transmit with a job to another node in the network. | 1-20 |
| \$JES3_NETACCT_ROOM | Specifies room information that JES3 is to transmit with a job to another node in the network. | 1-8 |
| \$JES3_OPERATOR | Specifies the text in a message to operator. | 1-67 |
| \$JES3_PROCESS | Specifies special DSPs invoked. DSP name. | 1-8 |
| \$JES3_ROUTE_XEQ | Gives network node for job routing. | 1-8 |

Table of DAL/JAL Range Descriptors

| DAL/JAL Range Descriptors | | |
|---------------------------|--|------------|
| Name | Description | Value |
| \$JES3_MAIN_BYTES | Indicates the maximum amount of output, in thousands of bytes, to be printed for this job's sysout data sets. | 1-999999 |
| \$JES3_MAIN_CARDS | Indicates the maximum amount of output, in cards, to be punched for this job's sysout data sets. | 1-9999 |
| \$JES3_MAIN_DEADLINE_REL | Gives the Deadline Relative value. | 1-366 |
| \$JES3_MAIN_DEADLINE_TIME | Gives the Deadline Time used. | 0000-2400 |
| \$JES3_MAIN_LINES | Indicates the maximum number of lines of data, in thousands, to be printed from this job's sysout data sets. | 1-9999 |
| \$JES3_MAIN_LREGION | Specifies the approximate size of the largest step's working set in real storage during execution. | 1-1024K |
| \$JES3_MAIN_PAGES | Indicates the maximum number of pages to be printed for this job's sysout data sets. | 1-16777215 |
| \$JES3_MAIN_TRKGRPS_PRIM | Specifies the number of primary track groups to be assigned to the job. A track group is a number of spool space allocation units. | 1-9 |
| \$JES3_MAIN_TRKGRPS_SEC | Specifies the number of secondary track groups to be assigned to the job. A track group is a number of spool space allocation units. | 1-9 |

Table of DAL Character Descriptors

| DAL Character Descriptors | | |
|---------------------------|-------------|--------|
| Name | Description | Length |

| | | | |
|---|--|-----------------|------------------------|
| \$JES3_FORMAT_PR_CARRIAGE | A specific carriage control tape was requested. | Values | tapename 1-8 |
| | | '6' or tapename | |
| \$JES3_FORMAT_PR_CGROUP_1 \$JES3_FORMAT_PR_CGROUP_2 \$JES3_FORMAT_PR_CGROUP_3 \$JES3_FORMAT_PR_CGROUP_4 \$JES3_FORMAT_PR_CGROUP_5 | Specifies that the sysout data set belongs to an output group. The data sets in an output group are processed together in the same location and time. Data sets to be grouped should have similar characteristics: the same output class, destination, process mode, and external writer name. | | groupname 1-8 |
| \$JES3_FORMAT_PR_CHARS_1 \$JES3_FORMAT_PR_CHARS_2 \$JES3_FORMAT_PR_CHARS_3 | Specifies the name of one or more character-arrangement tables for printing the sysout data set on a 3800 Printing Subsystem. | Values | tablename 1-4 |
| | | STANDARD | |
| | | | |
| \$JES3_FORMAT_PR_COMPACT | Specifies the compaction table for JES3 to use when sending a systems network architecture (SNA) print data set to a SNA remote terminal. | | 1-8 |
| \$JES3_FORMAT_PU_COMPACT | Specifies the compaction table for JES3 to use when sending a systems network architecture (SNA) punch data set to a SNA remote terminal. | | 1-8 |
| \$JES3_FORMAT_PR_CONTROL | Indicates either that the data records control printing or that the output is to be printed with single, double, or triple spacing. | Values | N/A |
| | | PROGRAM | |
| | | SINGLE | |
| | | DOUBLE | |
| | | TRIPLE | |
| \$JES3_FORMAT_PR_DEST | Specifies a destination for a printed sysout data set. The DEST parameter can send a sysout data set to a remote or local terminal, a node, a node and remote work station, a local device or group of devices, or a node and userID. | Values | name 1-8 number 1-4 |
| | | ANYLOCAL | |

| DAL Character Descriptors | | | |
|---------------------------|---|---------------|---------------------------|
| Name | Description | | Length |
| \$JES3_FORMAT_PU_DEST | Specifies a destination for a punched sysout data set. The DEST parameter can send a sysout data set to a remote or local terminal, a node, a node and remote work station, a local device or group of devices, or a node and userID. | Values | name 1-8 number 1-4 |
| | | ANYLOCAL | |

| | | | |
|-------------------------|---|---------------|----------------|
| \$JES3_FORMAT_PR_EXTWTR | Identifies an external sysout device for printed datasets. | | 1-8 |
| \$JES3_FORMAT_PU_EXTWTR | Identifies an external sysout device for punched datasets. | | 1-8 |
| \$JES3_FORMAT_PR_FCB | The forms control buffer (FCB) image JES is to use to guide printing of the sysout data set by a 1403 Printer, 3211 Printer, 3203 Printer Model 5, 3800 Printing Subsystem, 4245 Printer, or 4248 Printer, or by a printer supported by systems network architecture (SNA) remote job entry | Values | image name 1-4 |
| | | 6 | |
| | | FCB2.... | |
| | | FCB3.... | |
| \$JES3_FORMAT_PR_FLASH | FLASH parameter to identify the forms overlay to be used in printing the sysout data set on a 3800 Printing Subsystem. | Values | name 1-4 |
| | | STANDARD | |
| \$JES3_FORMAT_PR_FORMS | Identifies the forms on which a sysout data set is to be printed. | Values | name 1-8 |
| | | STANDARD | |
| \$JES3_FORMAT_PU_FORMS | Identifies the forms on which a sysout data set is to be punched. | Values | name 1-8 |
| | | STANDARD | |
| \$JES3_FORMAT_PR_MODIFY | Specifies a copy-modification module that tells JES how to print the sysout data set on a 3800 Printing Subsystem. The module can specify where and on which copies the data such as legends and column headings is to be printed. | Values | name 1-8 |
| | | STANDARD | |

| DAL Character Descriptors | | | |
|---------------------------|---|---------------|-----|
| Name | Description | Length | |
| \$JES3_FORMAT_PR_STACKER | Requests a stacker for 3800 Printing Subsystem output. | Values | N/A |
| | | STANDARD | |
| | | S | |
| | | C | |
| \$JES3_FORMAT_PR_TRAIN | Indicates the printer train to be used in printing the sysout data set. | 1-8 | |

Table of DAL Range Descriptors

| DAL Range Descriptors |
|-----------------------|
|-----------------------|

| Name | Description | Value |
|---------------------------|---|------------|
| \$JES3_FORMAT_PR_CHNSIZE | Gives the number of logical records to be transmitted to a work station as a systems network architecture (SNA) chain and indicates whether normal output checkpoints are to be taken for this printed sysout data set. | 1-255 |
| \$JES3_FORMAT_PU_CHNSIZE | Gives the number of logical records to be transmitted to a work station as a systems network architecture (SNA) chain and indicates whether normal output checkpoints are to be taken for this punched sysout data set. | 1-255 |
| \$JES3_FORMAT_PR_COPIES | Specifies how many copies of the sysout data set are to be printed. The printed output is in page sequence for each copy. | 1-255 |
| \$JES3_FORMAT_PU_COPIES | Specifies how many copies of the sysout data set are to be punched. The punched output is in page sequence for each copy. | 1-255 |
| \$JES3_FORMAT_PR_FLASH_CT | Optionally, specify the number of copies on which the forms overlay is to be printed. | 0-255 |
| \$JES3_FORMAT_PR_MODIFY_T | Identifies which table-name in the CHARS parameter is to be used. | 0, 1, 2, 3 |
| \$JES3_FORMAT_PR_PRTY | Specifies the priority at which the sysout data set enters the output queue. | 0-255 |
| \$JES3_FORMAT_PR_THRESHL | Specifies the maximum size for the sysout data set. | 1-99999999 |

Messages and Codes

This chapter describes system messages.

System Messages

The following messages show status for information or action in response to \$MJ,DEADLINE commands and a full description can be found in the *Messages* manual.

DTM1260I *MAIN CLASS='classname' IS NOT A VALID JOB CLASS -Class ignored or using DEFAULT Class

Explanation: This message is issued when a job has a JES3 *MAIN statement with a CLASS= parameter and the CLASS is not recognized as a valid class. The CLASS cannot be used since it is not a valid class.

System Action: The job will be processed normally but JES3 support will ignore the CLASS= parameter.

User Response: When the problem has been corrected, all affected jobs can be released by using the ThruPut Manager command "MHS_TM RELEASE JOBS BAD_CLASS".

Programmer Response: Determine if the CLASS was supposed to be valid.

DTM2320I NO DEADLINE DATA FOUND

Explanation: No data has been defined.

System Action: Processing continues.

User Response: None.

Programmer Response: None.

DTM2321I DEADLINE ACTIVE, NEXT TIMER hh:mm

Explanation: Deadline processing is active and the next timer will expire at hh:mm.

System Action: Processing continues.

User Response: None.

Programmer Response: None.

DTM2322I DEADLINE=X,(prty1,time1,prty2,time2)

Explanation: Deadline algorithm X has the listed values.

System Action: Processing continues.

User Response: None.

Programmer Response: None.

DTM2323I JOB12345,NAME1234 AWAITING EXECUTION,HELD CLASS=X,PRTY=XX,DEADLINE=(tttt,x,date)

Explanation: The job is listed with Deadline characteristics.

System Action: Processing continues.

User Response: None.

Programmer Response: None.

Appendix A.

JES3 Commands

This chapter describes supported JES3 commands.

The following commands are supported for JES3 compatibility and are documented here for convenience only. Please refer to the publication *IBM JES3 Commands*.

MODIFY,N | F,N

Modify NET Status

This command is supported for JES3 compatibility.

Use the *F,N command to alter the JES3 DJC network status.

Scope: JESplex

Duration: One time effect.

| | |
|-----|--|
| F,N | <pre>[? HELP] ,ID=djcnet,C ,ID=djcnet,CO ,ID=djcnet,F ,ID=djcnet,H ,ID=djcnet,J=jobno1[,jobno2,...],C ,ID=djcnet,J=jobno1[,jobno2,...],CO ,ID=djcnet,J=jobno1[,jobno2,...],D ,ID=djcnet,J=jobno1[,jobno2,...],H ,ID=djcnet,J=jobno1[,jobno2,...],I ,ID=djcnet,J=jobno1[,jobno2,...],R ,ID=djcnet,R</pre> |
|-----|--|

? | HELP

Requests the command syntax from HELP.

ID=djcnet

Specifies the JES3 DJC network to be altered.

djcnet

Identifies a JES3 DJC network.

The following descriptions apply only when no jobs are specified:

C

Specifies that the entire JES3 DJC network be canceled from the system, regardless of the status of successor jobs, sub-networks, or the pending count.

C0

Specifies that the JES3 DJC network is to be canceled and all data sets, including any data sets on the output service hold queue, which are ready for output processing, are to be processed.

F

Specifies that the entire JES3 DJC network be flushed.

H

Specifies that the entire JES3 DJC network be placed in hold status. Scheduling of all jobs within the net is suspended.

J=jobno1[, jobno2, ...]

Specifies the job in the JES3 DJC network that is to be altered. If this parameter is omitted, all jobs in the DJC network are affected.

jobno1[, jobno2, ...]

Is one or more valid JES2 job numbers.

The following descriptions apply only when at least one job is specified:

C

Specifies that the designated job is to be canceled. Any output data sets ready for printing are printed. JES3 does not print data sets that are waiting on the output service hold queue.

C0

Specifies that the designated job(s) is to be canceled and all data sets, including any data sets on the output service hold queue, which are ready for output processing, are to be processed.

D

Specifies that the number of predecessor jobs that must complete before the indicated job is released for scheduling (NHOLD) is to be decreased by one. This parameter will not change the value of NHOLD if NHOLD is currently zero or if the job has already completed.

H

Specifies that the designated job is to be placed in JES3 DJC operator hold status. Scheduling of the job is suspended. Normally completed jobs cannot be held.

I

Specifies that the number of predecessor jobs that must complete before the indicated job is released for scheduling (NHOLD) is to be increased by one. This parameter will not change the value of NHOLD if NHOLD is currently zero or if the job has already completed. Use the H parameter to hold a job that has an NHOLD count of zero.

R

Specifies that the job is to be released from JES3 DJC operator hold status.

See Also: [INQUIRY,N<XREF>](#).

Examples:

Place JES3 DJC network CNTL1 in operator hold status:

```
/F,N,ID=CNTL1,H
```

Flush JES3 DJC network PURC30 from the system:

```
/F,N,ID=PURC30,F
```

Cancel job 1017 from DJC network COST10:

```
/F,N,ID=COST10,J=1017,C
```

Place job 626 in JES3 DJC network TEST in operator hold status:

```
/F,N,ID=TEST,J=626,H
```

Increase by 1 the NHOLD count of job 529 in JES3 DJC network INVEN:

```
/F,N,ID=INVEN,J=529,I
```

INQUIRY,N | I,N

Display NET Status

Use the /INQUIRY,N command to list or display the status of all active DJC networks. If none of the optional parameters is specified, this command provides statistics for each defined DJC network in the JES3 system. The statistics include network ID, total number of jobs in the DJC network, the number of completed jobs in the DJC network (including jobs which have abended) and the number of jobs which have abended and are eligible for re-submission. The display also indicates whether there are missing successor jobs or sub-networks.

Scope: *System*

Duration: One time effect.

| | |
|---------------|---|
| INQUIRY,N I,N | <pre>[? HELP] ,ID=djcnet1[,djcnet2,...] ,ID=djcnet1[,djcnet2,...],J=jobname1[,jobname2,...] ,ID=djcnet1[,djcnet2,...],J=jobno1[,jobno2,...] ,ID=djcnet1[,djcnet2,...],LIST</pre> |
|---------------|---|

? | HELP

Requests the command syntax from HELP.

```
ID=djcnet1[,djcnet2,...]
```

Specifies that the status of the designated DJC networks is to be displayed; if omitted, the status of all DJC networks is displayed.

```
djcnet1[,djcnet2,...]
```

Identifies one or more DJC networks.

J=jobname1[,jobname2,...]
 J=jobno1[,jobno2,...]

Specifies that the status of the designated job in the designated DJC network is to be displayed. The status information provided includes:

- DJC network identification.
- Job name and job number.
- Hold/release count for the job; that is, the number of predecessor jobs still pending for the specified job. Successor job count; that is, the number of successor jobs awaiting the completion of the specified job.
- Release-schedule count for the job; that is, the count of the number of predecessor jobs remaining before DJC releases a job to main service processing. Main device scheduling occurs, but the job is not released for processing until all predecessor jobs are complete.
- Status of the job indicated as follows:
 - Completed (C)
 - Abnormally completed (AC)

LIST

- In network hold (H)
- Failed at converter/interpreter (F)
- In DJC operator hold (OH)
- Null job no longer an active or participating member of the DJC network (N)
- Job eligible for scheduling and might be active (E)

jobname1[,jobname2,...]

Is one or more valid MVS job names.

jobno1[,jobno2,...]

Is one or more valid JES2 job numbers.

Specifies that status of each job in each of the specified DJC networks is to be displayed.

See Also: [MODIFY,N | E,N](#)

Examples:

Display status for DJC networks PAYROLL1 and ACCT1:

```
/INQUIRY,N,ID=(PAYROLL1,ACCT1)
```

Display status for job OVERTIME in DJC network PAYROLL1:

```
/I,N,ID=PAYROLL1,J=OVERTIME
```

Appendix B.

JES3 Control Statements

This chapter describes JES3 Control Statements as documented in the *IBM z/OS JCL Manual*.

//*MAIN

JES3 MAIN Statement

The MAIN statement defines processor requirements for the current job. Many of the parameters are used to override JES3 STANDARDS parameters.

| | |
|---------|--|
| //*MAIN | <p>parameter[,parameter]...</p> <p>The parameters are:</p> <p>ACMAIN=processor-id BYTES=(<i>[nnnnnn]</i>[,bytes-option][,mmm]) CARDS=(<i>[nnnn]</i>[,cards-option][,mmm]) CLASS=classname</p> <p>DEADLINE=(<i>[(time,type[,date])][(time,type[,rel,cycle])]</i>) EXPDTCHK=NO</p> <p>FAILURE=fail-option</p> <p>FETCH=[fetch-option][/][<i>[(ddname[,ddname]...]</i>]</p> <p>HOLD=YES</p> <p>IORATE=iorate-option JOURNAL=journal-option LINES=(<i>[nnnn]</i>[,lines-option][,mmm]) LREGION=nnnnK</p> <p>ORG=group-nodename[.remote] PAGES=(<i>[nnnnnnnn]</i>[,pages-option][,mmm]) PROC=xx</p> <p>RINGCHK=NO</p> <p>SETUP=[setup-option][/][<i>[(stepname[,procstepname].ddname</i> <i>[,stepname[,procstepname].ddname]...]</i>]</p> <p>SPART=partition-name</p> <p>SYSTEM=[processor-type][/][<i>[(main-name[,main-name]...]</i>] THWSSEP=thw-option</p> <p>TRKGRPS=(primary-qty,second-qty)</p> <p>TYPE=VS2</p> <p>UPDATE=(<i>[dsname[,dsname]...]</i>) USER=userid</p> |
|---------|--|

ACMAIN=processor-id

Identifies the job with the specified processor, even though the job was not submitted from or run on that processor. It allows sysout data sets to be sent to a userID attached to the specified processor named in the USER parameter. This will apply to all sysout datasets for the job.

processor-id

Requests a processor in the complex.

BYTES=(*nnnnnn*[,bytes-option][,mmm])

Specifies the maximum number of bytes of data permitted as spooled output for this job and what action to be taken if the maximum is exceeded.

nnnnnn

The number of bytes in thousands is specified in a range from 1 to 999999.

bytes-option

The action to be taken if the range of sysout bytes is exceeded is indicated by the following keywords:

WARNING or **W** requests a warning be sent to the operator and the job continues.

CANCEL or **C** requests JES3 to cancel the job.

DUMP or **D** requests JES3 to cancel the job with a storage dump.

mmm

When the **WARNING** or **W** bytes-option is chosen, a percentage range from 10 to 100 in multiples of 10 can be specified. This will issue the operator warning message each time the maximum byte sysout range is exceeded by the percentage as the job continues. Messages are sent until the job ends or is canceled by the operator. For example, BYTES=(100,W,10) will issue a warning message when sysout bytes reaches 100000, 110000, 120000 and will continue until the end of job.

CARDS=(*nnnn*[,cards-option][,mmm])

Specifies the maximum number of cards or records permitted as punched sysout for this job and what action to be taken if the maximum is exceeded.

nnnn

The number of cards in hundreds specified in a range from 1 to 9999.

cards-option

The action to be taken if the range of card output is exceeded is indicated by the following keywords:

WARNING or **W** requests a warning be sent to the operator and the job continues.

CANCEL or **C** requests JES3 to cancel the job.

DUMP or **D** requests JES3 to cancel the job with a storage dump.

mmm

When the **WARNING** or **W** cards-option is chosen, a percentage range from 10 to 100 in multiples of 10 can be specified. This will issue the operator warning message each time the maximum card range is exceeded by the percentage as the job continues. Messages are sent until the job ends or is canceled by the operator. For example, CARDS=(100,W,10) will issue a warning message when punched cards reaches 10000, 11000, 12000 and will continue until the end of job.

CLASS=classname

Specifies the job class for this job where classname is 1 through 8 characters.

DEADLINE=[(time,type[,date])][(time,type[,rel,cycle])]

Specifies when the job is required.

time

Specifies the deadline time using the following notations:

nM where n is 1 to 4 numbers from 0 to 1440 **Minutes**.

nH where n is 1 or 2 numbers from 0 to 24 **Hours**.

hhhh represents the 24-hour clock time from 0000 to 2400.

type

Identifies the installation-defined deadline algorithm which controls how the job's priority is increased and is one character A to Z or 0 to 9. The algorithms are defined using the

\$MJ,DEADLINE command.

date

Specifies the date when the time parameter takes effects. If date is omitted, the current date is assumed. One of the following formats is used:

mmddy where **mm** is from 01 to 12, **dd** is from 01 to 31 and **yy** is from 01 to 99. The century is 19 by default.

mm/dd/yyyy where **mm** is from 01 to 12, **dd** is from 01 to 31 and **yyyy** is the year. This format must be used for dates after January 1, 2000.

rel

Specifies on which date within a cycle the deadline falls. **Rel** is 1 to 3 numbers from 1 to 366. The value of **rel** depends on the cycle.

cycle

Identifies the length of a cycle as coded by the following keywords:

WEEKLY: Sunday is day 1; Saturday is day 7. If **rel** is greater than 7, **rel** defaults to 7.

MONTHLY: Day 1 is the first day of month. Days 28, 29, 30 and 31 are treated as the last day of the month. If **rel** is greater than 31, **rel** defaults to the last day of the month.

YEARLY: Day 1 is the first day of the year. Days 365 and 366 are treated as the last day of the year. If **rel** is greater than 366, **rel** defaults to the last day of the year.

EXPDTCHK=NO

By default, this parameter value is **YES** to verify that the expiry date on IBM standard labeled scratch output tapes has passed.

FAILURE=fail-option

Indicates the job recovery option to be used if the system fails. If omitted, the JES3 default failure option is used which is defined during JES3 initialization. The FAILURE parameter will be ignored if automatic restart management is used.

fail-option

RESTART requests that JES3 restart the job when the failing processor is restarted.

CANCEL requests that JES3 print then cancel the job.

HOLD requests that JES3 hold the job for restart.

PRINT requests that JES3 print and hold the job for restart.

FETCH=[fetch-option][/][(ddname[,ddname]...)]

Determines the fetch messages that will be issued to the operator for disk and tape volumes for this job.

fetch-option

ALL requests that JES3 issue fetch messages to the operator for all removable volumes specified in DD statements that request JES3-setup devices. This does not apply to permanently resident volumes.

NONE requests that JES3 not issue fetch messages.

SETUP requests that JES3 issue fetch messages to the operator for all volumes specified in DD statements identified in the **//*MAIN SETUP** parameter. **FETCH=SETUP** without coding the **//*MAIN SETUP** is the equivalent of **FETCH=ALL**.

/ddname

The slash may be translated as 'except for' so that JES3 fetch messages are not issued for any volumes specified in DD statement ddname.

ddname

Requests that JES3 issue fetch messages only for the volumes specified in DD statement ddname.

HOLD=YES

By default, jobs enter the system with **HOLD=NO**. This parameter requests that JES3 put the job in operator hold status. The operator must request it's release.

IORATE=iorate-option

Indicates the I/O-to-processor ratio for the job. This parameter is used to balance jobs selected for execution using the following ratio keywords:

iorate-option is **LOW**, **MED** or **HIGH**.

JOURNAL=journal-option

Indicates whether or not JES3 is to create a job journal for the job.

journal-option is **YES** or **NO**. The default is defined at initialization. Automatic restart management does not use the job journal when restarting jobs.

LINES=([nnnn] [, lines-option] [,mmm]

Indicates the maximum number of lines of data to be printed from this job's sysout data sets and the action to be taken if the maximum is exceeded.

nnnn

The number of lines in thousands specified in a range from 1 to 9999.

lines-option

The action to be taken if lines is exceeded is indicated by the following keywords: **WARNING** or **W** requests a warning be sent to the operator and the job continues. **CANCEL** or **C** requests JES3 to cancel the job.

DUMP or **D** requests JES3 to cancel the job with a storage dump.

mmm

When the **WARNING** or **W** lines-option is chosen, a percentage range from 10 to 100 in multiples of 10 can be specified. This will issue the operator warning message each time the maximum lines range is exceeded by the percentage as the job continues. Messages are sent until the job ends or is canceled by the operator. For example, **LINES=(100,W,10)** will issue a warning message when lines reaches 100000, 110000, 120000 and will continue until the end of job.

LREGION=nnnnK

Specifies the approximate size of the largest step's working set in real storage during execution where **nnnn** is a decimal which specifies the logical region size in kilobytes (1K = 1 kilobyte = 1024 bytes).

ORG=group-nodename[.remote]

Indicates that the job's sysout data sets are to be directed to the named group or networknode. If omitted, sysout data sets are directed to the group of devices or node from which the job originated. **ORG** statements can be overridden using the **DEST** parameter on a **//*FORMAT, OUTPUT JCL**, or **DD** statement.

group specifies the name of an origin group.

nodename specifies a network node named as 1 through 8 characters.

remote specifies a remote work station or VM userID named as 1 through 8 characters and must be separated from the **nodename** by a **period**.

PAGES=([nnnnnnnn] [, pages-option] [, mmm])

Specifies the maximum number of printed pages permitted as spooled output for this job and what action to be taken if the maximum is exceeded. Once a warning message has been issued, the **STANDARD** initialization statement or system defaults will override the value for maximum number of printed pages allowed.

nnnnnnnn

The number of pages to be printed is specified in a range from 1 to 16777215.

pages-option

The action to be taken if the range of pages is exceeded is indicated by the following keywords:

WARNING or **W** requests a warning be sent to the operator and the job continues.

CANCEL or **C** requests JES3 to cancel the job.

DUMP or **D** requests JES3 to cancel the job with a storage dump.

mmm

When the **WARNING** or **W** pages-option is chosen, a percentage range from 10 to 100 in multiples of 10 can be specified. This will issue the operator warning message each time the maximum printed pages range is exceeded by the percentage as the job continues. Messages are sent until the job ends or is canceled by the operator. For example, **PAGES=(1000,W,10)** will issue a warning message when printed pages reaches 1000, 1100, 1200 and will continue until the end of job.

PROC=xx

Names the procedure library that the system is to search for cataloged procedures called by EXEC statements in the job.

xx

Identifies the last 2 characters of the ddname of a procedure library. xx is defined by the installation (IATPLBxx) in the procedure used to start JES3. If this parameter is coded, only the specified library is searched. SYS1.PROCLIB is not searched. By default, **PROC=ST** for batch jobs uses SYS1.PROCLIB.

RINGCHK=NO

Indicates whether or not JES3 is to check the status of the tape reel ring for tape devices. The default is **RINGCHK=YES**.

SETUP=[setup-option][/][(stepname[.procstepname].ddname[,stepname[.procstepname].ddname]...)]

Modifies the standard setup algorithm used in assigning devices to a job before it's execution.

setup-option

JOB requests that JES3 allocate all of JES3 managed devices before the job executes.

HWS requests that JES3 do a high watermark setup allocating the minimum number of devices required for the step using the greatest number of devices of each type.

THWS requests that JES3 do a high watermark setup for tapes only.

DHWS requests that JES3 do a high watermark setup for disks only.

/stepname.procstepname.ddname

The slash may be translated as 'except for' so that JES3 does not request device allocation for the explicit ddname.

stepname.procstepname.ddname

Requests that JES3 request device allocation only for the explicit ddname.

SPART=partition-name

Indicates the spool partition in which JES3 is to allocate spool space to this job.

partition-name

Specifies the name of the spool partition as 1 through 8 characters.

SYSTEM=[processor-type][/][(main-name[,main-name]...)]

Indicates the processor that is to execute this job. If the processor is named specifically, it must also be specified on the CLASS initialization statement for the job class. If the SYSTEM parameter is used, it must agree with other parameter assignments as in **//*MAIN** using CLASS or TYPE, DSP requested with **//*PROCESS** and all devices specified must be available.

processor-type

ANY indicates any global or local system that satisfies the job's requirements.

JGLOBAL indicates that the job is to run on the global processor only.

JLOCAL indicates that the job is to run on a local processor only.

`/main-name`

Indicates that the job is not to run on the named processor or processors.

`main-name`

Indicates that the job is to run only on the named processor or processors.

`THWSSEP=thw-option`

Indicates whether or not scratch tape requests and specific tape requests are separated and whether or not tapes of different media types are separated during high watermark processing. This is valid only if high watermark setup has been specified on the `SETUP` parameter.

`thw-option`

IGNORE specifies that both scratch and specific tape requests are allocated on the same tape drive.

PREFER requests that JES3 try to allocate separate tape drives without allocating additional devices.

REQUIRE specifies that scratch and specific tapes be allocated on separate drives even if additional devices are required.

`TRKGRPS=(primary-qty,second-qty)`

Specifies the number of track groups to be assigned to the job. A track group is a number of spool space allocation units defined in the `GRPSZ` parameter on the `JES3 BUFFER` or `SPART` initialization statements. `/*MAIN TRKGRPS` overrides a `TRKGRPS` parameter on the `CLASS` or `MAINPROC` initialization statements. The `TRKGRPS` parameter on a `DD` statement overrides the `/*MAIN TRKGRPS`.

`primary-qty`

Specifies the number of track groups to be initially allocated from 1 to 9.

`second-qty`

Specifies the number of additional track groups to be allocated when more space is needed.

`TYPE=VS2`

Indicates the control program that is to execute this job. By default, `TYPE=ANY`.

`UPDATE=(dsname)`

Identifies the procedure library data set that this job is to update and will cause all jobs trying to allocate this data set to be held.

dsname specifies the name of an unconcatenated data set.

`USER=userid`

Identifies the job with the specified TSO/E user named in **userID** as 1 to 8 characters.

/*DATASET

JES3 DATASET Statement

The `DATASET` statement is used to mark the beginning of an in-stream data set named by the `ddname`. The `/*ENDDATASET` marks the end of the data set.

JCL within the `/*DATASET` stream is not supported in JES3 or a JES2 compatibility mode.

| | |
|----------------------|--|
| <pre>/*DATASET</pre> | <pre>DDNAME=ddname[,parameter][,parameter]... The parameters are: MODE=C J=YES CLASS=class</pre> |
|----------------------|--|

DDNAME=ddname

Specifies the name of the in-stream data that follows the `/*DATASET`.

ddname

Is 1 through 8 characters; the first must be alphabetic.

MODE=C

J=YES

Defines card-reading mode used only for card-image. By default, `MODE=E` which is used for EBCDIC validated disk and tape files.

Indicates how JES3 is to recognize the end of the in-stream data set. By default, `J=NO` which means a `JOB` statement ends the data set. `YES` indicates a `/*ENDDATASET` statement ends the data set.

CLASS=class

Identifies the output class JES3 is to use for the data set. By default or if omitted, `CLASS=NO` and the system will assign an output class.

class

MSGCLASS uses the `MSGCLASS` parameter on the `JOB` statement or a specific output class can be coded.

/*FORMAT

JES3 FORMAT Statement

The `FORMAT PR` statement permits special processing of sysout data sets that are printed. The `FORMAT PU` statement permits special processing of sysout data sets that are punched.

| | |
|------------------|--|
| <p>/**FORMAT</p> | <p>PR or PU</p> <p>,DDNAME=[[stepname.][procstepname.]ddname][,parameter]...</p> <p>The parameters are: CARRIAGE=carriage-tape-name FCB=image-name</p> <p>CHARS=[[table-name[,table-name]...]]</p> <p>CHNSIZE=[[nnn[,mmm]]]</p> <p>COMPACT=compaction-table-name CONTROL=control-option</p> <p>COPIES=(nnn,(group-value[,group-value]...)) DEST=[(type,)[device-name-number][group-name-number]</p> <p>[nodename[.REMOTE]][]]</p> <p>EXTWTR=extwtr-name FCB=image-name</p> <p>FLASH=[overlay-name[,count]] FORMS=[forms-name]</p> <p>INT=YES</p> <p>MODIFY=(module-name[,trc])</p> <p>OVFL=OFF</p> <p>PRTY=nnn STACKER=forms-stacker THRESHLD=limit TRAIN=train-name</p> |
|------------------|--|

PR or PU

PR for printed sysout. **PU** for punched sysout.

,DDNAME=

This keyword is required and a file can be named or not. If null, then parameters apply to all sysout data sets except ones with another **/**FORMAT PR** or **/**FORMAT PU** statement. For example, **/**FORMAT PR,DDNAME=,DEST=ANYLOCAL** will print all sysout data sets in this job on any local printer.

stepname.procstepname.ddname

Identifies the DD statement that defines the file to be printed or punched using as many or as few qualifiers as required.

JESYSMSG instead of a named file, requests printing of JCL statements and messages for this job.

JESMSGGLG instead of a named file, requests printing of JES3 and operator messages for this job.

CARRIAGE

Requests a specific carriage tape for printing. **CARRIAGE** and **FCB** parameters cannot be coded on the same **/**FORMAT PR** statement.

6

Specifies the carriage tape for the 3211, 3203-5 or 1403 printer.

`carriage-tape-name`

Identifies the name of the carriage tape as 1 through 8 characters. SYS1.IMAGELIB must contain a module for each carriage tape name for the 3211 and 3203-5 printers.

CHARS

Requests one or more character-arrangement tables for printing sysout on a 3800 Printing Subsystem.

STANDARD

Requests the standard character-arrangement table specified at JES3 initialization.

`table-name`

Each character-arrangement table is named as 1 through 4 alphanumeric or national (\$, #, @) characters. Parentheses are required around a list of table names. Null positions are invalid.

CHNSIZE

Gives the number of logical records to be transmitted to an SNA work station as an SNA chain and indicates whether normal output checkpoints are to be taken for this printed or punched sysout data set.

DS

CHNSIZE default sends the sysout data set as a single SNA chain without normal JES3 checkpoints.

nnn

Specifies the SNA chain size in pages from 1 to 255. The size of a page is determined by the value of mmm and the carriage control characters in the data that skip to channel 1.

mmm

Specifies the number of logical records in a page, from 1 to 255, when the data contains no carriage control characters.

COMPACT

Specifies the compaction table for JES3 to use when sending an SNA data set to be printed or punched to an SNA remote terminal as defined during JES3 initialization.

`compaction-table-name`

The name of the compact table is 1 through 8 alphanumeric characters.

CONTROL

Indicates that carriage control for a printed data set is controlled by the data records or by this parameter.

`control-option`

One of four keywords as follows:

PROGRAM

Indicates that each logical record begins with a carriage control character. Other carriage control options that are part of the logical records are available using the DCB macro and coded in the JCL statement.

SINGLE

Requests single spacing when carriage control is not present in the logical records.

DOUBLE

Requests double spacing when carriage control is not present in the logical records.

TRIPLE

Requests triple spacing when carriage control is not present in the logical records.

COPIES

Indicates how many copies of the sysout data set are to be printed. The default is 1.

nnn

The number of copies from 1 to 254 in page sequence.

group-value

Used only on the 3800 Printing Subsystem to specify how many copies of each page are to be printed before the next page. Up to 8 group values from 1 to 255 but the total of all groups must not exceed 255. Group values override nnn.

DEST

Routes the output from the sysout data set to a printer. This parameter overrides the `//*MAIN` statement `ORG` parameter. By default, the first available originating printer is used.

ANYLOCAL

Any local printer is used as specified in the output class in the `SYSOUT` parameter on the `DD` statement.

device-name

Requests a local printer by a symbolic name as 1 through 8 alphanumeric or national (`$`, `#`, `@`) characters defined during JES3 initialization.

device-number

Requests a local printer by a 3 or 4 digit hexadecimal number. A slash may precede a 3 digit number. A slash must precede a 4 digit number.

group-name

Identifies a group of local printers, an individual remote station or a group of remote stations by a symbolic name as 1 through 8 alphanumeric or national (`$`, `#`, `@`) characters.

nodename

Identifies a node by a symbolic name defined during JES3 initialization as 1 through 8 alphanumeric or national (`$`, `#`, `@`) characters.

.REMOTE

Identifies a remote work station or VM userID to which the receiving node directs output.

type

Indicates a device classification. `type` is in the form of (`gggsss`) where `ggg` is the general device classification and `sss` is the specific device classification. The type must be enclosed in parentheses. The type must be defined during JES3 initialization. For example, type for a 3800 is (`PRT3800`).

EXTWTR

Identifies the external writer that is to process the sysout data set at the destination node.

`extwtr-name`

A name from 1 to 8 alphanumeric characters which identifies a module defined to the remote JES3 node that is to execute the job. NJERDR is reserved for JES3.

FCB

Specifies the forms control buffer image JES3 is to use to guide printing by a 1403, 3211, 3202-5, 4245, 4248 or 3800 Printing Subsystem.

`image-name`

Identifies the FCB image name as xxxx being 1 through 4 alphanumeric or national (\$, #, @) characters and are the last characters of a SYS1.IMAGELIB member name.

FCB2xxxx member for a 3211, 3203-5 or printer supported by SNA.

FCB3xxxx member for a 3800.

FCB4xxxx member for a 4248.

FLASH

Identifies the forms overlay to be used in printing the sysout data set on a 3800 Printing Subsystem and optionally, to specify the number of copies.

STANDARD

Requests JES3 to use the standard forms overlay specified at JES3 initialization.

`overlay-name`

Identifies the forms overlay frame that the operator is to insert into the printer before printing begins as 1 through 4 alphanumeric or national (\$, #, @) characters.

`count`

Specifies a number from 0 to 255 of copies that JES3 is to flash with the overlay. 0 to flash all copies.

FORMS

Indicates the forms on which the sysout data set is to be printed.

STANDARD

Indicates the standard form defined during JES3 initialization.

`forms-name`

Names the print forms as 1 through 8 alphanumeric characters.

INT

Specifies whether or not punched output is to be interpreted.

YES

Requests that JES3 interpret the punched sysout data set on a 3525 Card Punch with a Multiline Card Print feature. The default is NO.

MODIFY

Specifies a copy modification module that tell JES3 how to print the sysout data set on a 3800 Printing Subsystem replacing blanks or data in the data set.

`module-name`

Identifies a copy modification module in SYS1.IMAGELIB as 1 through 4 alphanumeric or national (\$, #, @) characters.

`trc`

Identifies which table-name in the CHARS parameter is to be used. This table reference character is 0 for the first table-name, 1 for the second, 2 for the third or 3 for the fourth.

OVFL

Indicates whether or not the printer program should test for forms overflow.

`OFF`

Forms overflow control is not to be used. ON is default.

PRTY

Specifies the priority at which the sysout data set enters the output queue.

`nnn`

A decimal number from 0 to 255 where 0 is the lowest priority and 255 is the highest.

STACKER

Requests a stacker for 3800 Printing Subsystem output.

`forms-stacker`

STANDARD indicates the standard installation default specified at JES3 initialization.

S indicates output is burst into separate sheets.

C indicates continuous fanfold forms stacking.

THRESHLD

Specifies the maximum size for the sysout data set calculated as number of records multiplied by number of copies. When the threshold is exceeded, printing may be done on multiple printers.

`limit`

Maximum records for a single sysout data set from 1 through 99999999.

TRAIN

Indicates the printer train to be used.

`train-name`

Specifies an installation-supplied printer train. **STANDARD** is the default.

//*PROCESS

JES3 PROCESS Statement

The PROCESS statement controls how JES3 processes a job by calling a Dynamic Support Program or DSP. CI, MAIN, OUTSERV and PURGE are ignored in a JES2 compatibility mode. A series of

/**PROCESS statements is terminated by a /**ENDPROCESS statement.

| | |
|------------|---|
| /**PROCESS | dsp [parameter[,parameter]...] The dsp's are: CI MAIN OUTSERV PURGE CBPRNT DISPDJC DISPLAY DJCPROC DR ISDRVR JESNEWS xxx |
|------------|---|

dsp

Specifies a called DSP. Parameters used in the DSP can be found in IBM JES3 Commands.

CI

Supported but not applicable. JES3 Converter/Interpreter Service to interpret JCL and create control blocks.

MAIN

Supported but not applicable. Main Service to process the program.

OUTSERV

Supported but not applicable. Output Service to process the job's output.

PURGE

Supported but not applicable. Purge Service to purge the job. Automatically created by JES3.

CBPRNT

Control Block Print.

DISPDJC

Display JES3 Dependent Job Control.

DJCPROC

Invoke JES3 Dependent Job Control Updating.

DR

Disk Reader.

ISDRVR

Input Service Driver for JES3 Control Statement Processing.

JESNEWS

Use JESNEWS Facility.

xxx

User-written DSP.

//*ROUTE XEQ

JES3 ROUTE XEQ Statement

The ROUTE XEQ statement sends a following input stream to a network node where the job is executed.

| | |
|--------------|---|
| //*ROUTE XEQ | The parameters are: nodename[.vmguestid] |
|--------------|---|

nodename

Indicates the node as an MVS JES2 system, an MVS JES3 global system, a VSE POWER node, or a VM system.

.vmguestid

Identifies a guest system running in a virtual machine (VM); for example, an MVS system running under VM.

//*NET

JES3 NET Statement

The NET statement is used to specify accounting information that is transmitted with a job to another node in the network a JES2 compatibility mode.

Use the //*NET statement to define the dependencies between jobs in a JES3 dependent job control (DJC) network. JES3 sets up a network of dependent jobs and executes them in a specific order. (Once set up, the structure of a JES3 DJC network cannot be changed unless all of the jobs in the network are resubmitted.)

| | |
|--------------------|---|
| <pre> /*NET </pre> | <pre> {NETID ID}=name[,parameter]... The parameters are: ABCMP AC= NOKP KEEP ABNORMAL AB = D F R NORMAL NC = D F R DEVPOOL={({ANY NET}[,device-name,n]...[,SDGxx]...) DEVRELEASE={YES NO} NETREL NR=(netid, jobname) NHOLD HC=n NRCMP PC={HOLD NOHO FLSH} OPHOLD OH={NO YES} RELEASE RL=(jobname[,jobname]...) RELSCHCT RS=n </pre> |
|--------------------|---|

NETID=name

Specifies the name of the JES3 DJC network for this job.

name

Is 1 through 8 characters; the first must be alphabetic. All jobs entering the system with the same NETID name form a JES3 DJC network. To add a job to an existing JES3 DJC network, specify the NETID name for that job.

ABCMP=NOKP | KEEP

Indicates what action the JES3 DJC is to take if the job abnormally terminates.

NOKP

Indicates that DJC is to purge the DJC network if the job abnormally terminates and has not been resubmitted by the time the other jobs in the network have completed.

DJC purges the network unless successor jobs or subnetworks are missing. If the ABCMP parameter is omitted, NOKP is the default.

KEEP

Indicates that the JES3 DJC network is to be kept in the system until (1) the job is resubmitted and completes normally or (2) the operator forces the network from the system.

Use KEEP to make sure that the network is not purged until the operator takes proper action.

Note: If the job abnormally terminates, you can resubmit it to the JES3 DJC network, and the network will be retained until the job completes.

ABNORMAL = D | F | R
NORMAL = D | F | R

Indicates the action JES3 DJC is to take for this job when any predecessor job completes execution normally or abnormally.

If the ABNORMAL parameter is omitted, the default is R, and, if the NORMAL parameter is omitted, the default is D.

D

Requests that JES3 DJC decrease this job's NHOLD count, which indicates the number of predecessors for this job. When the NHOLD count becomes zero, JES3 DJC can release this job.

F

Requests that JES3 DJC flush this job and its successor jobs from the system. JES3 DJC cancels the job and cancels all successor jobs presently in the system, regardless of their normal or abnormal specifications. However, JES3 DJC admits into the system all successor jobs that enter after the JES3 DJC network has been flushed. To flush those jobs, the operator must cancel the jobs or the network.

R

Requests that JES3 DJC retain this job in the system and not decrease the NHOLD count. R suspends the job and its successor jobs from being released until either the predecessor job is resubmitted or the operator decreases the NHOLD count.

```
DEVPOOL=(ANY[,device-name,n]...[,SDGXX]...)
```

```
DEVPOOL=(NET[,device-name,n]...[,SDGXX]...)
```

This keyword is supported for compatibility purposes only. If DEVPOOL is coded, it is ignored. Note that opening and closing brackets are required but the text inside the brackets is not parsed.

```
DEVRELSE=YES | NO
```

This keyword is supported for compatibility purposes only. If DEVRELSE is coded it is ignored.

```
NETREL=(netid,jobname)
```

Indicates that this job must be execute before the named job in another JES3 DJC network can be executed. The NETREL parameter can be specified only once for each job of a JES3 DJC network.

```
netid
```

Identifies the NETID for the successor job.

```
jobname
```

Names the JOB statement for the successor job.

```
NHOLD=n
```

Indicates the number of predecessor job completions required before this job can be released for scheduling. The predecessor number can include jobs from another JES3 DJC network.

```
n
```

is a number from 0 from 32767. When the predecessor number reaches 0, the job is scheduled for execution. The system reduces this number:

- When each predecessor job completes execution. By operator command.
- When a program in a predecessor job issues an assembler DJC WTO macro.
- If you specify NHOLD=0 or omit the NHOLD parameter, this job has no predecessor jobs. No hold is applied.
- If the NHOLD is incorrect, the following can occur:
 - If n is greater than the actual number of predecessor jobs, DJC does not release the job for execution when all its predecessor jobs complete execution.
 - If n is less then the actual number of predecessors jobs, DJC prematurely releases the job for execution.

NRCMP=HOLD | NOHO | FLSH

Indicates that a network job that completed normally is being resubmitted and that DJC must erase all references to the job before the job reenters the network.

HOLD

Indicates that DJC is to hold the job until it is released by the operator.

NOHO

Indicates that DJC is to allow the job to be scheduled.

FLSH

Indicates that DJC is to flush the job from the system.

OPHOLD=NO | YES NO

Indicates that the job is to be processed normally without operator intervention. If OPHOLD is omitted, NO is the default.

YES

Indicates that JES3 DJC is to hold the job until it is released by the operator.

RELEASE=(jobname[,jobname]...)

Indicates that this job must be executed before the named job(s) in this JES3 DJC network can be executed.

RELEASE is the only parameter on the `//*NET` statement that can be split and continued on the next statement. To continue the RELEASE parameter, end the statement with a comma following a jobname and continue the next statement with the next jobname. The left parenthesis appears at the beginning of the jobname list and right parenthesis appears at the end of the list. For example:

```
//*NET NETID=EXP1,RELEASE=(JOB35,JOB27Z,MYJOB,
```

```
//*WRITJB,JOBABC)
```

jobname

Names the JOB statement for a successor job. You can specify from 1 through 50 successor jobnames.

RELSCHCT=n

This keyword is supported for compatibility purposes only. If RELSCHCT is coded it is ignored.

Examples:

```
//*NET NETID=NET01,NHOLD=0,RELEASE=NET02
```

This statement defines a DJC network named NET01. The network contains no predecessor jobs. This job must be executed before job NET02

```
//*NET NETID=N1,RELEASE=B,NETREL=(N2,B2)
```

This statement adds a job to the DJC network named N1. This job must be executed before job B, which is in N1, and before job B2, which is in the JES3 DJC network named N2.

//*NETACCT

JES3 NETACCT Statement

The NETACCT statement is used to specify accounting information that JES3 is to transmit with a job to another node in the network.

| | |
|-----------------------|---|
| <pre>/**NETACCT</pre> | <pre>parameter[,parameter]...</pre> <p>The parameters are: PNAME=programmer's-name ACCT=number BLDG=address DEPT=dept ROOM=room USERID=userid</p> |
|-----------------------|---|

PNAME

Identifies the programmer.

programmer's-name

Programmer's name is 1 through 20 characters.

ACCT

Gives the network account number.

number

1 through 8 characters.

BLDG

Give the programmer's building address.

address

1 through 8 characters.

DEPT

Gives the programmer's department number.

dept

1 through 8 characters.

ROOM

Gives the programmer's room number.

room

1 through 8 characters.

USERID

Give the programmer's network userid.

userid

1 through 8 characters.

