



ERXJES

JES support for REXX

Version 1.0

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I ERXJES - JES support for REXX

I.1 Overview

The ERXJES function provides a subset of SDSF services for the currently running job. This allows, for example, the completion codes and dataset names for specified DDnames for previous steps to be retrieved.

The following services are currently provided:

- **GetStepCC** Retrieve the step completion codes for the previous steps of the currently running job
- **GetFirstDDN** Retrieve the dataset name for the first occurrence of the specified DDname
- **GetStepDDN** Retrieve the dataset name for the specified DDname for the specified step name
- **BrowseSpool** Read a spool (SYSOUT) file

These services provide some of the capabilities provided by REXX SDSF (the ISFEXEC service) but have three advantages:

- The licensed SDSF product is not required.
- They are much easier to use, just a single call rather than programmed logic.
- They avoid the delay that SDSF requires to make the data available.

I.2 Invocation

```
frc = ERXJES (service
              [, ddname | dsname]
              [, stepname])
```

service The name of the service to be invoked (**GetStepCC**, **GetFirstDDN**, **GetStepDDN** or **BrowseSpool**).

ddname The DDname for which the dataset name is to be retrieved (required for the **GetFirstDDN** and **GetStepDDN** services).

dsname The dataset name to be read (required for the **GetBrowseSpool** service).

stepname The step for which the dataset name is to be retrieved (required for the **GetStepDDN** service).

I.2.1 Return value

ERXJES sets the return value (<frc> above) to indicate the processing results:

- | | |
|----|------------------------|
| 0 | OK |
| 8 | DDname not found |
| 12 | Dataset name not found |
| 24 | Argument length error |
| 28 | Invalid argument |
| 32 | Argument missing |



I.3 REXX Control Variables

Using the following control variables is optional

_TRACE Program tracing (input): 1 = enable, 0 = disable (default).

Note: **_TRACE** is used only for debugging purposes.

I.4 REXX Result Variables

_STEP.0 The number of returned step completion codes (**GetFirstDDN** and **GetStepDDN** services).

_STEP.n The step completion code for step n (**GetFirstDDN** and **GetStepDDN** services).
The returned value has the form:
cc:stepname

where *cc* can have the following values:

- 1 step not found
 - 2 step not run (for example, bypassed because of condition code processing)
 - 3 step still running
- otherwise the step completion code.

Note: *stepname* may be blank.

_REC.0 The number of read spool records (**BrowseSpool** service).

_REC.n Read spool record n (**BrowseSpool** service).

_DSN The dataset name for the specified DDname. Because a SYSOUT file has a generic dataset name (that includes a ?), standard allocate services cannot be used to allocate a file; the **BrowseSpool** service must be used in this case (see Example 2).

I.5 Error Processing

If an error is detected, ERXJES will terminate with the appropriate return code set (the ERXJES return value) and a short explanatory message written to the joblog (JESMSG LG).



1.6 Sample Implementation JCL (via IRXJCL)

```
//S01      EXEC PGM=IEFBR14
//          EXEC PGM=IEFBR14,COND=(ONLY)
//S03      EXEC PGM=IEBGENER
//SYSUT1   DD DSN=SO FAR.OBJECT,DISP=SHR
//SYSPRINT DD SYSOUT=*
//SYSUT2   DD DUMMY
//SYSIN    DD DUMMY
//S04      EXEC PGM=IRXJCL,PARM='RXJES'
//STEPLIB DD DSN=SO FAR.LOAD,DISP=SHR
//SYSEXEC DD DSN=SO FAR.EXEC,DISP=SHR
//SYSUT1   DD DSN=SO FAR.JCL,DISP=SHR
//SYSTSPRT DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
```

1.6.1 RXJES member of DD:SYSEXEC

The RXJES member shows examples how the ERXJES services are invoked.

```
/* REXX */
frc = ERXJES('GETSTEPDDN','SYSUT1','S04')
SAY 'GETSTEPDDN RC:' frc /* 0 */
SAY _DSN

frc = ERXJES('GETSTEPDDN','SYSUT1','S01')
SAY 'GETSTEPDDN RC:' frc /* 8 */

frc = ERXJES('GETFIRSTDDN','SYSUT1')
SAY 'GETFIRSTDDN RC:' frc /* 0 */
SAY _DSN

frc = ERXJES('GETSTEPCC')
SAY 'GETSTEPCC RC:' frc /* 0 */
IF frc = 0 THEN DO i = 1 TO _STEP.0
  SAY _STEP.i
END

frc = ERXJES('GETSTEPDDN','SYSPRINT','S03')
IF frc = 0 THEN DO
  frc = ERXJES('BROWSEPOOL',_DSN)
  IF frc = 0 THEN DO n = 1 TO _REC.0
    SAY _REC.n
  END
END
END
```



The associated REXX output

```
GETSTEPDDN RC: 0
SOFAR.JCL
GETSTEPDDN RC: 8
GETFIRSTDDN RC: 0
SOFAR.OBJECT
GETSTEPCC RC: 0
0:S01
-2:
0:S03
-3:S04
```

```
DATA SET UTILITY - GENERATE
REC:IEB352I WARNING: ONE OR MORE OF THE OUTPUT DCB PARMS COPIED FROM INPUT
REC:PROCESSING ENDED AT EOD
```

1.6.2 GETSTEPCC processing with human-readable text

```
frc = ERXJES('GETSTEPCC')
IF frc = 0 THEN DO i = 1 TO _STEP.0
  PARSE VAR _STEP.i cc ':' sname
  SELECT
    WHEN cc = -2 THEN msg = 'step not run'
    WHEN cc = -3 THEN msg = 'step still running'
    OTHERWISE msg = 'completion code' cc
  END
  SAY sname msg
END
```

The associated REXX output

```
S01      completion code 0
         step not run
S03      completion code 0
S04      step still running
```

1.6.3 Get first ddname processing with SDSF

To illustrate the simplicity of the **GETFIRSTDDN** processing, the equivalent code that uses REXX SDSF (ISFEXEC service) to find the occurrence of the first DD:SYSUT1.

```
rc = ISFCALLS('ON')
ADDRESS SDSF

/* <jobid> = current jobID */

"ISFEXEC ST"
DO ix = 1 TO jname.0
  IF jobid.ix = jobid THEN LEAVE
END

"ISFACT ST TOKEN('"TOKEN.ix"') PARM(NP ?) (PREFIX ds_"
```



```

/* Read JCL (DD:JESJCL) */
ddn = 'JESJCL'
rc = readfile(ddn, '', 'jcl.') /* DDN:JESJCL */
IF rc > 0 THEN DO
    SAY ddn 'not found'
    EXIT 8
END

/* Find first DD:SYSUT1 */
rec = '' /* initialise */
DO i = 1 TO jcl.0
    PARSE VAR jcl.i . '//' . 'SYSUT1 ' rec
    IF rec <> '' THEN LEAVE
END

/* Get DSN for DD:SYSUT1 */
PARSE VAR rec . 'DSN=' dsn
PARSE VAR dsn dsnut ', ' .
IF dsnut = '' THEN DO
    SAY 'No SYSUT1 found'
    EXIT 8
END

rc = ISFCALLS('OFF')
EXIT

readfile:
    PARSE ARG ddn,procs,stem
    /* Find DDNAME:PROCS -> internal DDname */
    /* Read file into specified stem variable (default: rec.) */
    DO jx = 1 TO ds_DDNAME.0
        IF (ds_DDNAME.jx = ddn & ds_PROCS.jx = procs) THEN LEAVE
    END
    "ISFACT ST TOKEN('"ds_TOKEN.jx"') PARM(NP SA) "

    IF stem = '' THEN stem = 'rec.'
    IF rc = 0 THEN
        ADDRESS MVS "EXECIO * DISKR" ISFDDNAME.1 "(STEM" stem "FINIS"
    RETURN rc

```



I.7 Example 2 - Combined Use of GetStepDDN and BrowseSpool

This example shows how `GetStepDDN` and `BrowseSpool` can be used in combination to read a `SYSPRINT` that may be assigned either to the `SYSOUT` file or to a dataset.

An example of a spool dataset name: `SOFAA.SOFAA7.JOB00093.D0000101.?`

REXX snippet to obtain the dataset name for a step-ddname and determine whether it is a spool dataset (indicated by the presence of a `?` in the dataset name). The appropriate service is used to read the `SYSPRINT` output into `_REC.` stem variables.

```
sname = 'LINK'
ddn = 'SYSPRINT'
rc = ERXJES('GETSTEPDDN',ddn,sname)
IF rc = 0 THEN DO /* OK, dataset name retrieved */
  dsn = STRIP(_DSN) /* remove any pad blanks */
  IF (POS('?',dsn) > 0) THEN DO /* spool */
    rc = ERXJES('BROWSESPPOOL',dsn)
  END
ELSE DO /* not spool, read normally */
  ADDRESS TSO "ALLOC F(DD) DA('"dsn"') SHR REUS"
  ADDRESS MVS "EXECIO * DISKR DD (STEM _REC. FINIS"
END
END
```