

Dear AS/400 User,

When you start feeling frustrated because your job isn't completing properly, this Job Log Overview is the place to start. The Overview is a guide to using job logs on the AS/400. It is part of our ongoing effort to provide you with the very best in product support.

Read the Job Log Overview to find out:

- How to find your job logging defaults
- What the job log default values mean
- How to display the log of a job after it has completed
- How to print the job log
- How to capture and print a job log from an interactive session
- How to change the logging level for a job already in a job queue
- How to read the job log
- How to send us a job log using Help/NET

If you have any questions regarding job logs or would like additional copies of this overview, don't hesitate to call Help/Systems Technical Support at 952-933-0609.

Sincerely,

Armand Cohen
Vice President of Product Support

Finding Your Job Logging Defaults

When you submit a job using the SBMJOB command, the parameters on the command determine how detailed a job log, if any, is produced.

By default, the SBMJOB command uses the logging parameter values from the job description. If you do not specify a job description, the default job description from your user profile is used. The logging parameters are optional; thus, you should be aware of the default values that apply, in case you want to change them for a job.

To see or change your logging levels, enter the **DSPJOB** command. Then, under the Message Logging heading, you can specify Level, Severity, and Text values. You also can specify a value for Log CL program commands.

To find your default job description, specify the user profile name used on the SBMJOB command on the **DSPUSRPRF** command. Page down to see the Job description value.

```
Display User Profile - Basic
User profile . . . . . KIKI
Limit device sessions . . . . . *SYSVAL
Keyboard buffering . . . . . *SYSVAL
Maximum storage allowed . . . . . *NOMAX
Storage used . . . . . 11496
Highest scheduling priority . . . . . 3
Job description . . . . . KIKI
Library . . . . . QGPL
Accounting code . . . . . DOCUMENTATION
Message queue . . . . . KIKI
Library . . . . . QUSRSYS
Message queue delivery . . . . . *BREAK
Message queue severity . . . . . 00
Output queue . . . . . KIKI
Library . . . . . QGPL
Printer device . . . . . *WRKSTH
More...
Press Enter to continue.
F3=Exit F12=Cancel
```

To see the logging values in your default job description, enter the job description name on the command **DSPJOB**. Page down to see the default logging values.

```
Display Job Description
Job description: KIKI Library: QGPL System: CYBRKING
Message logging:
Level . . . . . 4
Severity . . . . . 0
Text . . . . . *NOLIST
Log CL program commands . . . . . *NO
Accounting code . . . . . *USRPRF
Print text . . . . . *SYSVAL
Routing data . . . . . QCMDI
Request data . . . . . *NONE
Device recovery action . . . . . *SYSVAL
More...
Press Enter to continue.
F3=Exit F12=Cancel
```

What the Job Logging Values Mean

After you find your job logging default values, you need to interpret what the values mean and be aware of what you can specify as values on the SBMJOB command. For example, the values shown in the example below specify Level 4 logging for all messages not less than 0 severity with the *NOLIST option. Interpreted, this means that, if the job completes normally, no job log is written, but if the job completes abnormally, the job log contains all available information.

The possible **Level** values are:

- 0** No data is logged.
- 1** Logs every external message greater than or equal to the Severity value.
- 2** Logs every message greater than or equal to the Severity value and its associated request or command.
- 3** Same as 2, except that all requests and commands are logged.
- 4** Same as 3, except all trace messages are logged.

The minimum severity level of the messages logged.

```

Display Job Description
Job description: KIKI          Library: QGPL          System:  CYBRKING
Message logging:
Level           : 4
Severity        : 0
Text           : *NOLIST
Log CL program commands : *NO
Accounting code : *USARRF
Print text      : *SVSUAL

Routing data    : QCMDI

Request data    : *NONE

Device recovery action : *SVSUAL

Press Enter to continue.
F3=Exit  F12=Cancel
More...
  
```

The possible **Text** values are:

- *MSG** Only message text is logged.
- *SECLVL** Both message text and help text are logged.
- *NOLIST** The job log is kept only for jobs that terminate abnormally (the end-of-job code is greater than 20). If kept, both message text and help text are logged.

The possible values are:

- *NO** CL program commands are not logged.
- *YES** CL program commands are logged.

Displaying the Job Log for a Completed Job

When a job does not complete successfully, you should look at its job log to determine what went wrong. The job log should be available as a spooled file. You can display the job log using the following methods:

1. You can select the job log from a list of the spooled files for the user who ran the job. Enter the command **WRKSPLF** with the user profile name used on the SBMJOB command. Find the job log in the list and enter **option 5** to display the job log.

To see your spooled files, enter the command **WRKSPLF** with your user profile name.

To view the job log, select it with **option 5**, Display.

If you use the Basic assistance level, the display does not show all this information. Press **function key 21** to change the assistance level.

```

Work with All Spooled Files

Type options, press Enter.
 1=Send  2=Change  3=Hold  4=Delete  5=Display  6=Release  7=Messages
 8=Attributes  9=Work with printing status

  Opt  File      User      Device or  User Data  Sts  Total  Cur  Copy
    -  -         -         Queue     -         -    -      -    -
    -  QSVSPRT  THERESA  THERESA   PRTPCFIL  RDY   905    1    1
    -  QPDSPLIB THERESA  THERESA   -         RDY    1      1    1
    -  QPDSPLIB THERESA  THERESA   -         RDY    1      1    1
    -  QPDSPLIB THERESA  THERESA   -         RDY    1      1    1
    5  QPJOBLOG  THERESA  WRKJOBLOG RDY    22     1     1    1
    -  QPDSPJOB THERESA  THERESA   -         RDY    6      1    1
    -  QPDSPJOB THERESA  THERESA   -         RDY    6      1    1
    -  QPDSPJOB THERESA  THERESA   -         RDY    6      1    1
    -  QPDSPLIB THERESA  THERESA   -         RDY   13     1    1
                                     More...

Parameters for options 1, 2, 3 or command
====>
F17=Top  F18=Bottom  F21=Select assistance level  F24=More keys
  
```

2. If you know the output queue on which the job log is placed (usually queue QPJOBLOG), you can find the job log in the list of spooled files on that output queue. Enter the command **WRKOUTQ** and the name of the output queue. Find the job log in the list and enter **option 5** to display it.

To see the spooled files on an output queue, enter **WRKOUTQ** with the output queue name.

To see the job log, enter **option 5**, Display.

```

Work with Output Queue

Queue:  WRKJOBLOG      Library:  THERESA      Status:  RLS

Type options, press Enter.
 1=Send  2=Change  3=Hold  4=Delete  5=Display  6=Release  7=Messages
 8=Attributes  9=Work with printing status

  Opt  File      User      User Data  Sts  Pages  Copies  Form Type  Pty
    -  -         -         -         -    -      -      -      -
    5  QPJOBLOG  THERESA   -         RDY   22     1     *STD    5

                                     Bottom

Parameters for options 1, 2, 3 or command
====>
F3=Exit  F11=View 2  F12=Cancel  F20=Writers  F22=Printers
F24=More keys
  
```

3. If you know the job name that the job ran under, you can find the job log by using the **WRKJOB** command. Display the command prompt panel and fill in the job name and the job number, if you know it. If you don't know the job number, the **WRKJOB** command displays a list of all jobs with that name that are still on the system. Select the appropriate job and then select **option 4** to work with the spooled files for the job.

Printing the Job Log

You can print the job log if you wish. If the spooled file is in **HLD** status, first release it by selecting **option 6**, Release.

Then, enter **option 9**, Work with Printing Status. Change the printing status as needed to print the file.

Enter **option 9** for the spooled job log to display the Work with Printing Status panel.

If the panel says the spooled file is not assigned to a printer, enter **option 2** to change its status.

Enter the name of a printer. Press **function key 4** to select from a list of printers.

```

Work with Printing Status

Job ..... : QPRTJOB      File ..... : QPJOBLOG
User ..... : THERESA     Number ..... : 4
Number ..... : 019990    User data ..... :

Type options, press Enter.
2=Change status 5=Display detailed description

Opt  Status Description
 2  .....
-----
                                Change Status
                                .....
                                Type choice, press Enter.
                                .....
                                Printer to print the file ..... PRT03      Name, F4=List
                                .....
Com :
=== F4=Prompt  F6=Display details  F12=Cancel
F3=
    
```

Select an option. In this example, **option 1** moves the spooled file from the WRKJOBLOG output queue to PRT03.

```

Work with Printing Status

Jo .....
-----
                                Change Status
                                .....
Printer ..... : PRT03
Ty : Output queue of printer writer ..... : PRT03
   : Library ..... : QUSRSYS
   : Output queue of file ..... : WRKJOBLOG
Op : Library ..... : THERESA
 2 : ..... Bottom
   : Select one of the following:
   :
   : 1. Move file to output queue of printer writer
   : 2. Change printer writer to use output queue of file
   :
   : Selection
   : 1
Co :
== : F12=Cancel
F3 :
    
```

Capturing and Printing a Job Log for an Interactive Session

If you are running a job interactively and want to capture all messages, you should change your logging level immediately after you sign on. Enter the **CHGJOB** command on a command line, press **function key 4** to display the command prompt panel, and then press Enter. Press **function key 10** to display Additional Parameters and page down until you see the Message Logging parameters. To capture all the information, change your job Message Logging values to Level=4, Severity=00, Text=*SECLVL, and Log CL program commands=*YES.

Change the Message Logging and Log CL program commands parameters to capture messages for your interactive job.

```

Change Job (CHGJOB)

Type choices, press Enter.

Message logging:
Level . . . . . 4          0-4, *SAME
Severity . . . . . 00      0-99, *SAME
Text . . . . . *SECLVL    *SAME, *MSG, *SECLVL, *NOLIST
Log CL program commands . . . *YES  *SAME, *YES, *NO
Inquiry message reply . . . . *RQD  *SAME, *RQD, *DFT, *SVSRPVL
Break message handling . . . . *NORMAL *SAME, *NORMAL, *NOTIFY...
Status message . . . . . *NORMAL *SAME, *USRPRF, *SVSVAL...
DDM conversation . . . . . *KEEP  *SAME, *KEEP, *DROP
Schedule date . . . . . *SAME    Date, *SAME, *CURRENT...
Schedule time . . . . . *SAME    Time, *SAME, *CURRENT
Job date . . . . . 112000    Date, *SAME
Date format . . . . . *MDY     *SAME, *SVSVAL, *YMD, *MDY...
Date separator . . . . . '/'     *SAME, *SVSVAL, *BLANK, /...
Time separator . . . . . ':'     *SAME, *SVSVAL, *BLANK, :...
Job switches . . . . . 00000000 Character value, *SAME
                                     None...

F3=Exit  F4=Prompt  F5=Refresh  F12=Cancel  F13=How to use this display
F24=More keys
  
```

To print a job log from your interactive session without signing off, enter the **DSPJOBLOG** command and press **function key 4** to display the command prompt. Change the Output parameter to ***PRINT**. This creates a spooled file of your interactive session, capturing any errors that have occurred at the logging level of your job. To locate the spooled file, enter the **WRKJOB** command and press Enter. Then, select **option 4**, Work with Spooled Files. The job log should be listed as a spooled file.

Enter ***PRINT** for the Output parameter on the **DSPJOBLOG** command. This creates a spooled file of your interactive session. Then, use the **WRKJOB** command to locate the spooled file and select **option 9**, Work with printing status, to print the job log.

```

Display Job Log (DSPJOBLOG)

Type choices, press Enter.

Job name . . . . . *          Name, *
User . . . . .              Name
Number . . . . .            000000-999999
Output . . . . . *PRINT     *, *PRINT, *APIDFN, *OUTFILE
  
```

```

Work with Job Spooled Files

Job: QPADEU0013  User: KIKI  Number: 103981

Type options, press Enter.
1=Send 2=Change 3=Hold 4=Delete 5=Display 6=Release 7=Messages
8=Attributes 9=Work with printing status

  Opt  File      Device or      Total  Current
  _    QPJOBLOG  QE2JOBLOG     QPADEU0013  RDY    Pages  Page  Copies
  _    _        _             _         _      _     _
  
```

Changing a Job that is on the Job Queue

Another way to change a job's logging level to capture more data is to place the job queue the job normally runs through on Hold and then change the job parameters. Use the **WRKJOBQ** command to place the job queue on hold. Run the command or menu option you normally use to submit the job. After you submit the job, display the jobs in the job queue using the **WRKJOBQ job_queue_name** command. Select the job with **option 2**, Change, to change the job parameters. To capture the most data from the job run, change Message Logging to Level=4, Severity=00, Text=*SECLVL, and Log CL program commands=*YES. After the job has completed, find its job log using one of the methods described earlier in this guide.

Change the Message Logging and Log CL program commands parameters.

```
Change Job (CHGJOB)

Type choices, press Enter.

Message logging:
Level ..... 4_____ 0-4, *SAME
Severity ..... 00_____ 0-99, *SAME
Text ..... *SECLVL_____ *SAME, *MSG, *SECLVL, *NOLIST
Log CL program commands ..... *YES_____ *SAME, *YES, *NO
Inquiry message reply ..... *RQD_____ *SAME, *RQD, *DFT, *SYSRPLY
Break message handling ..... *NORMAL_____ *SAME, *NORMAL, *NOTIFY...
Status message ..... *NORMAL_____ *SAME, *USRPRF, *SYSUAL...
DDM conversation ..... *KEEP_____ *SAME, *KEEP, *DROP
Schedule date ..... *SAME_____ Date, *SAME, *CURRENT...
Schedule time ..... *SAME_____ Time, *SAME, *CURRENT
Job date ..... 112000_____ Date, *SAME
Date format ..... *MDY_____ *SAME, *SYSUAL, *YMD, *MDY...
Date separator ..... /_____ *SAME, *SYSUAL, *BLANK, /...
Time separator ..... :_____ *SAME, *SYSUAL, *BLANK, :...
Job switches ..... 00000000_____ Character value, *SAME
More...

F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
F24=More keys
```

Reading a Job Log

The job log first identifies the job and then lists every request and message issued for the job. Every message has an identifier, severity, and type. The job log also lists the information specified on the SBMJOB command that submitted the job.

```

5769551 04R4M0 990521
Job name : ABREPUNDL
Job description : QBATCH
MSGID TYPE SEV DATE TIME FROM PGM LIBRARY INST TO PGM LIBRARY INST
CPF1124 Information 00 08/15/00 21:23:40 QWTFI1PP QSYS 05E5 *EXT *H
Message : Job 631107/QPGR/ABREPUNDL started on 08/15/00 at
21:23:40 in subsystem APSC in TU0BJP. Job entered system on 08/15/00 at
21:23:40.
CPF1125 Information 00 08/15/00 21:23:40 QWTFI1PP QSYS 029F *EXT *H
Message : Job 631107/QPGR/ABREPUNDL submitted.
Cause : Job 631107/QPGR/ABREPUNDL submitted to job queue APSC in
SCSYSP from job 629748/QPLUD059/DSP02. Job 631107/QPGR/ABREPUNDL was
started using the Submit Job (SBMJOB) command with the following job
attributes: JOBPTY(5) OUTPTY(5) PRTTXT( ) RTGDTA(QCNDB) SYSLIBL(RBTSYSLIB
SVSCOSYS QSYS QSYS2 QHLPSYS QUSASYS TU0BJP SCSYSP)
CURLIB(ROBOTLIB) INLLIBL(QGPL QTEMP) LOG(4 00 *NOLIST) LOGCLPGM(*NO)
INQMSGRPY(*ADD) OUTQ(*DEV) PRTDEV(PRT01) HOLD(*NO) DATE(08/15/00)
SWS(00000000) MSGQ(*NONE) CCSID(37) SRTSEQ(*N/*HEX) LANGID(ENU) CNTRYID(US)
ALWMLTTHD(*NO).
  
```

The message severity. The severity can have one of the following values:

00	Information
10	Warning
20	Error
30	Severe error
40	Abnormal end of program or function
50	Abnormal end of job
60	System status
70	Device integrity
80	System alert
90	System integrity
99	Action

The attributes specified on the SBMJOB command of the submitted job. These can include the following:

JOBPTY	Job priority
OUTPTY	Output priority
PRTTXT	Print text
RTGDTA	Routing data
SYSLIBL	System library list
CURLIB	Current library
INLLIBL	Initial library list
LOG	Message logging
LOGCLPGM	Log CL program commands
INQMSGRPY	Inquiry message reply
OUTQ	Output queue
PRTDEV	Print device
HOLD	Hold on job queue
DATE	Job date
SWS	Switches
MSGQ	Message queue

Reading a Job Log

The job log lists every request, command, and message issued for the job. When determining why a job did not complete successfully, first look at messages of severity 40 or greater.

MSGID	TYPE	SEV	DATE	TIME	FROM PGM	LIBRARY	INST	TO PGM	LIBRARY	INST
5769551	Information	00	10/26/00	11:39:16	QNTPI1PP	QSYS	05E5	*EXT		*N
CPF1124	Information	00	10/26/00	11:39:16	QNTPI1PP	QSYS	05E5	*EXT		*N
CPF2451	Information	40	10/26/00	11:39:18	QNHCHMSQ	QSYS	07C3	*EXT		*N
*NONE	Request	00	10/26/00	11:39:28	QUIMNDRU	QSYS	0260	QUIMNDRU	QSYS	0260
CPF2113	Diagnostic	40	10/26/00	11:43:29	QLICLLIB	QSYS	0360	QUIMNDRU	QSYS	0502
CPC2194	Completion	00	10/26/00	11:45:54	QLICLLIB	QSYS	01F3	QUIMNDRU	QSYS	0502
*NONE	Request	00	10/26/00	11:46:22	QPTCHECK		*N	QUICHD	QSYS	03F2
CPF2105	Escape	40	10/26/00	11:49:25	QLICLOBJ	QSYS	040E	HLP100	RBTCORLIB	002F
CPC9801	Completion	00	10/26/00	11:49:25	QNHQCRTQ	QSYS	00C7	HLP100	RBTCORLIB	0036
CPI2101	Information	00	10/26/00	11:49:26	QLICRDUP	QSYS	054E	HLP100	RBTCORLIB	0048
CPI2101	Information	00	10/26/00	11:49:27	QLICRDUP	QSYS	054E	HLP100	RBTCORLIB	0060

Message identifier.

Message type.

Message severity.

Time the message was issued.

The first diagnostic message gives the cause of the failure: the library could not be allocated.

Read the Recovery text to determine what needs to be done. You may need to look at the preceding messages for the cause.

Sending Us Your Job Log

When you call Help/Systems Technical Support for help with a problem, the Technical Consultant may ask to see the job log for the problem. You can mail or fax us a printed copy of the job log. Or, you can send the job log electronically, directly from your AS/400 to ours, using our Help/NET software.

Using Help/NET, send the spooled file containing the job log. To do this, you need to know the output queue and library name where the spooled file to be sent is located.

Enter the command **HELPNETLIB/HELPNET** to display the Help/NET menu. Then, select **option 5** to send the job log.

```

HLP285                               Help/NET Main Menu                               14:48:28
R0211411008125                       CVBRKING

1. Operations Menu
2. Send a Message to Help/Systems
3. Send for a Product Update
4. Send Object(s) to Help/Systems
5. Send a Spool File to Help/Systems
6. Send for a Special Product Update

Select Option: 5_

F3=Exit

(C) COPYRIGHT HELP/SYSTEMS, INC. 1989
    
```

Enter the name of the output queue and library.

```

Send Spooled File to Help/NET (HLPSENDOUTQ)

Type choices, press Enter.

Output Queue ..... *USRPRF      Character value
Output Queue Library ..... *LIBL      Character value

Bottom
F3=Exit  F4=Prompt  F5=Refresh  F12=Cancel  F13=How to use this display
F24=More keys
    
```

Select the spooled file to be sent (usually QPJOBLOG).

```

HLP388                               Send Spooled File To Help/Net                               14:52:06
Actual Output Queue: WRKJOBLOG      Library: THERESA                       CVBRKING

Type options, press Enter.
1=Send      4=Delete      5=Display

Opt  File      User      User Data      Job Name      Status      Total
 1  QPJOBLOG  THERESA      User Data      QPRTJOB      *READY      Pages
                                     22

Bottom
F3=Exit  F5=Refresh  F17=Top  F18=Bottom  F21=System Command
    
```