# JOBLOG\_COPY\_KEEP Technical Brief

Release 5.1 December 2011

JOBLOG_COPY_KEEP IMPLEMENTATION CHANGES	3
Background	3
New Implementation	3
JOBLOG_COPY_KEEP Configuration Option	4
Removal of USBMJPRTF and UCMSVRPRTF print files.	4
Job Options Affecting Job Log Output	5
Example	6
4.2.0 MVS Manager	6
Joblog for USBMJOB in 4.2.0	6
UCMSINIT joblog: 4.2.0	8
USBMJOB User Output : 4.2.0	10
New Implementation Windows Universal Command Manager	13
Joblog for USBMJOB : New Implementation	13
UCMSINIT job log: New Implementation	17
USBMJOB User Output : New Implementation	19

## **JOBLOG\_COPY\_KEEP Implementation Changes**

With Indesca 5.1 the ability to identify the job log created by the JOBLOG\_COPY\_KEEP option in the output queue on the i5 system has been improved.

#### Background

In prior releases, the job log for the job submitted by the Universal Submit Job command and, optionally, the Server Initiator job log are returned to the manager that initiated the server job. Setting the JOBLOG\_COPY\_KEEP server configuration option to YES results in copies of both of the job logs being sent to the printer files on the system on which the server runs. With JOBLOG\_COPY\_KEEP set to NO, the default setting, no copy of either job log is kept on the system on which the server is running.

#### With JOBLOG\_COPY\_KEEP set to YES,

- Spool files are associated with the user profiles generating the job logs.
   This is normally the user profile that initiated the job, not the user profile to which a job is switched.
- Log Files are stored in a Universal Command printer file associated with the QEZJOBLOG output queue. UCMSINT job logs are sent to UCMSVRPRTF printer file and USBMJOB job logs are set to USBMJPRTF printer file
- The system uses QPRTJOB as the job name, not the name of the job that generated the output.
- The job number associated with the output is the QPRTJOB job. There may be multiple QPRTJOB jobs running simultaneously in the system with different job numbers.

These associations make finding a particular job log very difficult when a large volume of job logs are sent to the job log output queue. This does not fulfill audit requirements for tracking the process execution flow by user id.

#### **New Implementation**

The Job Log Copy Keep option has been modified to allow the system to generate the job log spooled output files for both the UCMSINIT job and the job initiated by USBMJOB, UJOBINIT. The job logs for each of the jobs are captured before job log spool file creation. The Universal Command Server program processes the UCMSINIT job log and the USBMJOB program processes the UJOBINIT job log. The processed job logs are sent to the Universal Command Manager via stderr. The Universal Command Server and USBMJOB, after capturing and processing the job log, allows the UCMSINIT and UJOBINIT programs to generate spooled job log files.

The new implementation results in system generated job logs that are stored in QEZJOBLOG output queue using the QPJOBLOG print file. The system generates the initiator jobs, UCMSINIT and UJOBINIT, second job logs as part of the job's end-of-job processing, thereby preserving the association between the initiator job and its job log. This change makes it easy to locate job logs using standard system tools and commands. It also simplifies automated archiving and restoration of job logs, i.e. spool files, using off-the-shelf products such as BRMS. Generation of these spooled job log files will, in turn, allow

- The WRKOUTQ command to display the job number, user ID and job name of the job for which the log was created.
- The WRKSPLF command to search for the job log based on the original job's information instead of the spooling and QPRTJOB information.
- The job log to be displayed by the WRKJOB command.

There may be additional i5 commands that may be used to display job logs using job\_number, user\_id and job\_name.

#### **JOBLOG COPY KEEP Configuration Option**

The definition of JOBLOG\_COPY\_KEEP has not changed. However, the results of the setting, when JOBLOG\_COPY\_KEEP = YES, will be semantically different. In prior releases, Universal Command spooled a copy of the job log to the QEZJOBLOG output queue. USBMJOB used printer file USBMJPRTF and the Universal Command Server used printer file UCMSVRPRTF. The new implementation results in system generated job logs that are stored in QEZJOBLOG output queue using the QPJOBLOG print file.

Regardless of the JOBLOG\_COPY\_KEEP setting, USBMJOB and the Universal Command Server will generate 80 characters wide, formatted output job logs. This is the job log sent back to the Universal Command Manager via stderr. USBMJOB always returns a job log and Universal Command Server returns a job log if the JOB\_LOG Universal Command Server configuration value is set to ALWAYS or ERROR. See the JOB\_LOG configuration option in the Universal Command Reference Guide for details. The behavior described in this paragraph is consistent with the prior releases.

#### Removal of USBMJPRTF and UCMSVRPRTF print files.

Universal Command no longer requires Stonebranch specific print files. These print files will be deleted as a result of removal of the release that required the print files. Removing the print files will not result in the job log deletion as job logs will be spooled and associated with the QEZJOBLOG output queue. If any of these job logs need printing at a future date, the CHGSPLFA command provides the ability to associate the job logs with a different printer file.

# Job Options Affecting Job Log Output JOBMSGQFL set to \*PRTWRAP

The JOBMSGQFL option can affect when output is spooled to the job log spool file. When JOBMSGQFL is set to \*PRTWRAP, job log messages in the job log message queue are written to the job log spool file before being overwritten in the queue. These messages, once written to the spool file, cannot be read. Therefore, with JOBLOG\_COPY\_KEEP = YES, the job log sent via stderr with JOBMSGQFL set to \*PRTWRAP will be the same as when JOBMSGQFL is set to \*WRAP. Stated differently, for job logs returned via stderr with JOBLOG\_COPY\_KEEP = YES, JOBMSGQFL set to \*PRTWRAP is equivalent to JOBMSGQFL set to \*WRAP.

The JOBMSGQFL setting does not affect messages written to the job log spool file with JOBLOG\_COPY\_KEEP set to YES. All job log message are written to the job log spool file just as if Universal Command were not part of the process.

The JOBMSGQFL default setting is \*NOWRAP. When set to \*NOWRAP, the operating system ends the job when the job log message queue is full.

#### **USBMJOB**

The SBMJOB Encapsulated Configuration Options now include the LOGOUTPUT parameter. The default is the SBMJOB default of \*JOBD.

This solution does not force a job log to the job log output queue if LOGOUTPUT is set to \*PND either prior to invocation of Stonebranch processes or via the USBMJOB, LOGOUTPUT parameter. Having LOGOUTPUT set to \*PND prior to invocation of Stonebranch processes or via the USBMJOB, LOGOUTPUT parameter does not affect job logs returned to the Universal Command Manager.

#### **Example**

The following example is taken from the Stonebranch QA environment and describes the current behavior for release 4.3 and below and the new behavior with the implementation of the enhancement request.

Current behavior when using USBMJOB and JOBLOG\_COPY\_KEEP is set to yes in the ucms conf file on the i5 server.

#### 4.2.0 MVS Manager

```
//SCRIPT DD *

USBMJOB CMD(dsplib qatest) JOB(DRO1AJOB) USER(QATEST)

//SYSIN DD *

-HOST QA-AS400V5

-port 4420

-USERID DRO1A

-pwd xxxxx

-SCRIPT SCRIPT
```

#### Joblog for USBMJOB in 4.2.0

USBMJOB joblog can be found by displaying spool files for user DRO1A. See below-user of DRO1A, File name of USBMJBRTF in Queue QEZJOBLOG and job name of QPRTJOB. It is found under user DRO1A because this is the user specified for the ucmd server. Other ways to show this are WRKOUTQ OUTQ(QEZJOBLOG) which shows file USBMJPRTF and user DRO1A. The challenge is that this represents the output for job 234892/QATEST/DRO1AJOB with no easy way to identify this from looking at the list of spool files especially when there are 1+ jobs to look at. You must open every file.

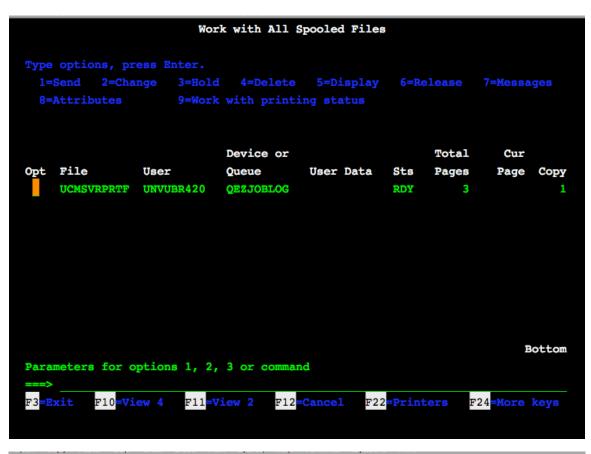
		ange 3=Hol 9=Wor	d 4=Delete k with printi	5=Display ing status	6=Re	elease	7=Messages
			Device or			Total	Cur
Opt	File	User	Queue	User Data	Sts	Pages	Page Cop
	QSYSPRT	DRO1A	PRT01		RDY	1	
	QSYSPRT	DRO1A	PRT01		RDY	1	
_	QPJOBLOG	DRO1A	QEZJOBLOG	QPADEV0001	RDY	2	
	QPJOBLOG	DRO1A	QEZJOBLOG	QPADEV0001	RDY	2	
_	QPJOBLOG	DRO1A	QEZJOBLOG	QPADEV0001	RDY	4	
	QPRTSPLF	DRO1A	PRT01		RDY	1	
	QPRTSPLQ	DRO1A	PRT01		RDY	3	
	QPRTSPLQ	DRO1A	PRT01		RDY	3	
	USBMJPRTF	DRO1A	QEZJOBLOG		RDY	3	
							Botto

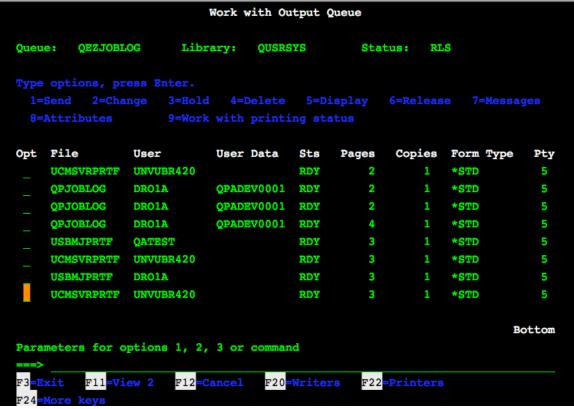
Display Spooled File		
File : USBMJPRTF	Page/Line	1/7
Control	Columns	1 - 78
Find		
*+1+2+3+4+5	+6	+7+
Job : DRO1AJOB User : QATEST	Number	: 234901
Message ID : CPF1124 Severity .		: 00
Message type : *INFO		
Date sent : 2010-10-06 Time sent		: 10.08.21
Message : Job 234901/QATEST/DR01AJOB star	ted on 10/06	/10 at 10:08:2
in subsystem QBASE in QSYS. Job entered system on	10/06/10 at	10:08:21.
Message ID Erase all input 125 Severity .		: 00
Message type : *INFO		
Date sent : 2010-10-06 Time sent		: 10.08.21
Message : Job 234901/QATEST/DR01AJOB subm	itted.	
Cause : Job 234901/QATEST/DR01AJOB subm	itted to job	queue QBATCH
in QGPL from job 234892/QUSER/UCMSINIT. Job 23490	1/QATEST/DRO	1AJOB was
started using the Submit Job (SBMJOB) command wit	h the follow	ing job
attributes: JOBPTY(5) OUTPTY(5) PRTTXT() RTGDTA(C	CMDB) SYSLIB	L(UNVPRD420
QSYS QSYS2 QHLPSYS QUSRSYS) CURLIB(	DRO1A) INLLI	BL(QGPL
QTEMP QGY) INLASPGRP(*NONE) LOG(4 00 *SECLVI	) LOGCLPGM(*	NO)
		More
F3=Exit F12=Cancel F19=Left F20=Right F24=Mo	re keys	

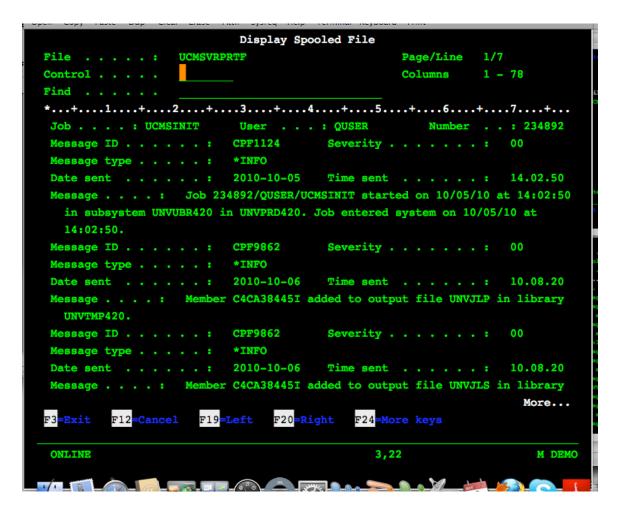
1=Send	d 2=Chan	ess Enter. age 3=Hold	ary: QUSRS 4=Delete			tus: RLS	3	
1=Send	d 2=Chan	ige 3=Hold	4=Delete	5=D:				
8=Attr	ributes	0-Work			гвртау	6=Release	7=Mess	ages
		9-WOLK	with printi	ng sta	atus			
Opt Fil	le	User	User Data	Sts	Pages	Copies	Form Type	Pt
QPJ	TOBLOG	DRO1A	QPADEV0001	RDY	2	1	*STD	5
QPJ	TOBLOG	DRO1A	QPADEV0001	RDY	4	1	*STD	5
USE	BMJPRTF	QATEST		RDY	3	1	*STD	5
UCM	<b>ASVRPRTF</b>	UNVUBR420		RDY	3	1	*STD	5
USE	BMJPRTF	DRO1A		RDY	3	1	*STD	5
UCM	<b>ASVRPRTF</b>	UNVUBR420		RDY	3	1	*STD	5

### **UCMSINIT** joblog: 4.2.0

The job log for UCMSINIT is not easily found. In this example it would be Job 234892/QUSER/UCMSINIT ended on 10/06/10 at 10:08:21. JOBLOG\_keep is set to always in the ucmds configuration file. The job log is found under user UNVUBR420 work with spool files and file UCMSVRPRTF in queue QEZJOBLOG. You can also find it with WRKOUTQ OUTQ(QEZJOBLOG) file UCMSVRPRTF user UNVUBR420. There is no way to relate this entry to job 234892/QUSER/UCMSINIT. You must open every entry.







#### **USBMJOB User Output: 4.2.0**

The output generated from the USBMJOB can be found by working with jobs for user QATEST. This user is specified as an option for the USBMJOB command. This is typical and acceptable. The file is QPDSPLIB with print queue of PRT01.

Туре	options, p	ress Enter.	Work wi	th User Jobs	10/06/10	\$10CEE0
		Hold 4=End pooled files			7=Display mes	sage
Opt	Job	User	Туре	Status	Function	
	DRO1AJOB	QATEST	BATCH	OUTQ		
	DRO1AJOB	QATEST	BATCH	OUTQ		
	QDFTJOBD	QATEST	BATCH	OUTQ		
	QDFTJOBD	QATEST	BATCH	OUTQ		
	QDFTJOBD	QATEST	BATCH	OUTQ		
	QDFTJOBD	QATEST	BATCH	OUTQ		
	QDFTJOBD	QATEST	BATCH	OUTQ		
	QDFTJOBD	QATEST	BATCH	OUTQ		
	QDFTJOBD	QATEST	BATCH	OUTQ		
	QDFTJOBD	QATEST	BATCH	OUTQ		
						More.
Para	meters or c	ommand				

			Work wit	h Job		
					System:	S10CEE0B
Job:	DR01AJOB	User:	QATEST	Number:	234891	
Selec	t one of the f	following:				
	1. Display job	status at	tributes			
	2. Display job	definition	n attribute	s		
	3. Display job	run attril	butes, if a	ctive		
	4. Work with a	spooled file	es			
1	0. Display job	log, if a	ctive, on j	ob queue, or p	pending	
1	1. Display cal	ll stack, i	f active			
1	2. Work with	locks, if a	ctive			
1	3. Display lib	orary list,	if active			
1	4. Display ope	en files, i	f active			
1	5. Display fil	le override	s, if activ	e		
1	6. Display con	mmitment co	ntrol statu	s, if active		
						More
Selec	tion or comman	nd				
===>	4					
E 3	it E4=Prompt	E9-Retr	F12	Cancel		

```
Work with Job Spooled Files
Job:
       DRO1AJOB
                              QATEST
                                             Number:
                      User:
                                                        234891
                 Device or
                                                  Total
                                                          Current
Opt File
                 Queue
                             User Data
                                          Status Pages
                                                            Page
                                                                   Copies
     QPDSPLIB
                 PRT01
                                           RDY
                                                                        1
                                                                          Bottom
Parameters for options 1, 2, 3 or command
F3=Exit
          F10=View 3
                       F11=View 2
                                     F12=Cancel
                                                  F22<mark>=Printers</mark>
                                                                  F24=More keys
```

	Display Spooled File	
File : QPD	SPLIB	Page/Line 1/1
Control		Columns 1 - 78
Find		
*+1+2	.+3+4+5.	+6+7+
5722SS1 V5R4M0 060210	Display I	ibrary
Library	: QATEST	
Type	: TEST	
Number of objects		89
Library ASP number .	1	
Library ASP device .	: *SYSBA	s
Library ASP group .	*SYSBA	s
Create authority	*CHANG	B
Text description	: QA TES	T library
Object Type	Attribute Size	Description
DATE400 *PGM	CLE 53248	
JOBMEMINFO *PGM	CLE 65536	
RSTUDM *PGM	CLLE 86016	
RUNLOOP *PGM	CLLE 69632	
RUNLOOP2 *PGM	CLLE 69632	
RUNLOOP3 *PGM	CLLE 69632	
		More
F3=Exit F12=Cancel	F19=Left F20=Right F24=M	ore keys

#### **New Implementation Windows Universal Command Manager**

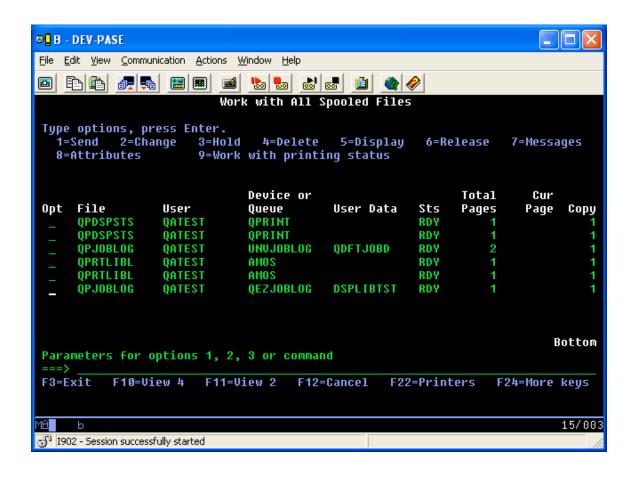
ucmd -c "unvprd499/usbmjob cmd(dsplibl) job(dsplibtst) user(qatest)" -u amos -w xxxx -i dev-as400v5 -p 4990

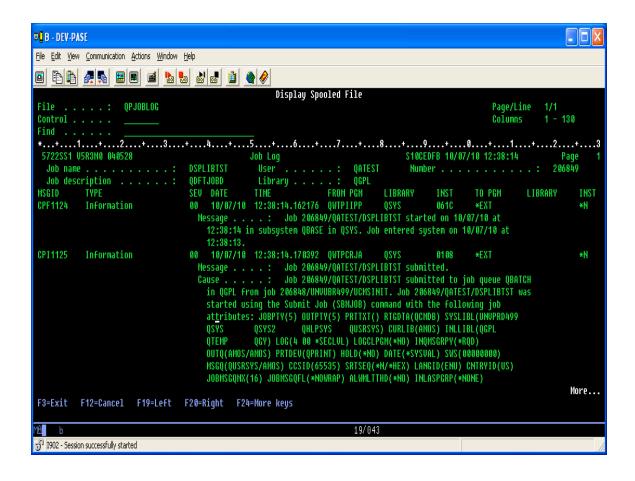
#### Joblog for USBMJOB: New Implementation

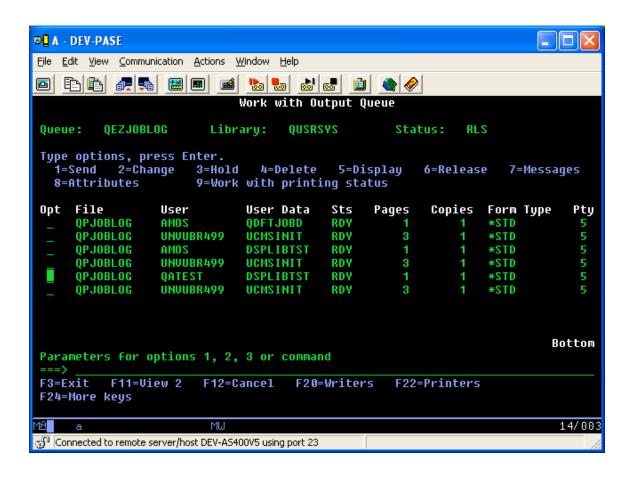
USBMJOB joblog can be found by displaying spool files for user QATEST. See below-user of QATEST, File name of QPJOBLOG in Queue QEZJOBLOG. It is found under user QATEST because this is the user specified for the USBMJOB USER option. Other ways to show this are WRKOUTQ OUTQ(QEZJOBLOG) which shows file QPJOBLOG and user QATEST. Changing the view for either the Spooled Files screen or the Output Queue screen now displays the job number for the executed job.

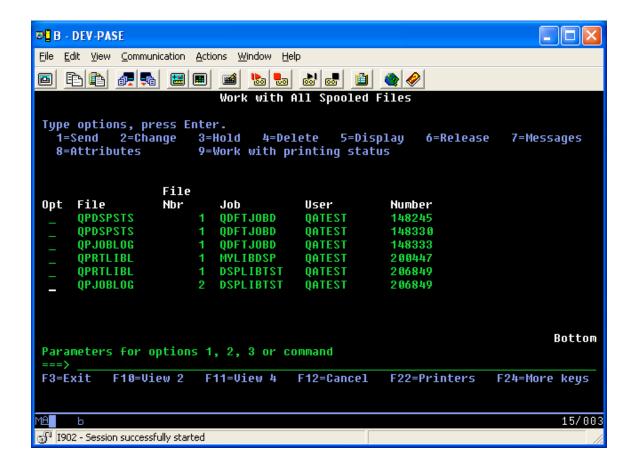
#### Changes to existing behavior:

- File name changes from USBMJPRTF to QPJOBLOG.
- User changes from the user specified for the UCMD server to the user associated with the USBMJOB command. In this example qatest is used instead of amos.
- The output queue remains the default system job log output queue, in this case QEZJOBLOG.
- The job number changes from the job number of the QPRTJOB to the job number of the UJOBINIT job. UJOBINIT is the job submitted by USBMJOB.
- The jobname changes from QPRTJOB to the jobname of the UJOBINIT job, in this case DSPLIBTST.
- The User Data changes from blanks to that supplied by the system.
- Job log time and date changes from the time when the spool file was generated by the USBMJOB program to the time and date stamp applied by the system job log generation process.









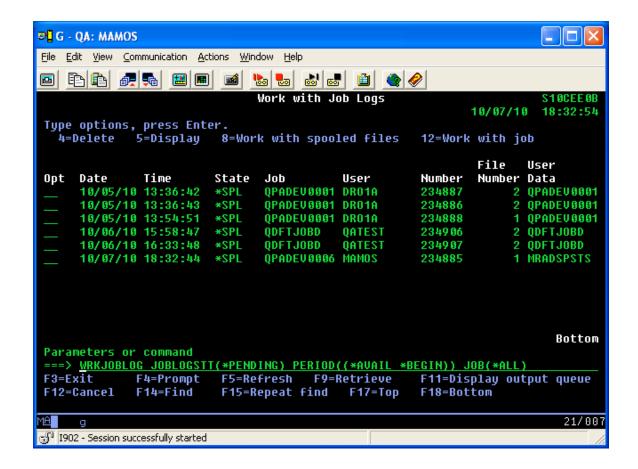
#### **UCMSINIT** job log: New Implementation

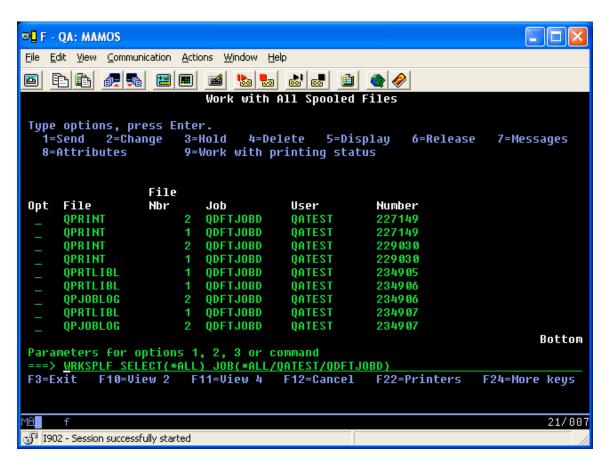
The first screen shot shows using the Work with Job Logs command to locate a job log. The second example shows use of the WRKSPLF command to identify a job log. If a specific job number had been specified instead of \*ALL, the correct job displays because the output now has the UCMSINIT job number associated with it instead of the job number for the job spooling the output.

Changes to existing behavior:

- File name changes from UCMSVRPRTF to QPJOBLOG.
- The user will remain to be the user associated with the UNVSRV job, in this case UNVUBR420. UCMSINIT inherits the UNVSRV job's user.
- The output queue remains the default system job log output queue, in this case QEZJOBLOG.
- The job number changes from the job number of the QPJOBLOG to the job number of the UCMSINIT job.

- The jobname changes from QPRTJOB to UCMSINIT.
- The User Data changes from blanks to that supplied by the system.
- Job log time and date changes from the time when the spool file was generated by the UCMSRV program to the time and date stamp applied by the system job log generation process.





#### **USBMJOB User Output: New Implementation**

There are no changes to the handling of the USBMJOB User output in the new implementation.