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Native Mode Spooler Questions And Answers



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Native Mode Spooler Questions and Answers

Introduction

This Application Note presents some common questions and answers on Native Mode Spooler.

The Native Mode Spooler was introduced on MPE/XL G.40.00 (2.1).

Q. I have notice a problem with the headers of my printers they are still on after a system startup. I have a HEADOFF command in my SYSSTART file for each of my printers.

What is wrong? Why are the headers not being turned off?
How can I get them off?

A. With the Native Mode Spooler, on MPE/XL G.40.00 (2.1) or later, there may be a timing problem between the time the STARTSPOOL takes effect and the time that the HEADOFF is issued. The spooling process must be completely running before a HEADOFF can be successfully issued.

If the HEADOFF is issued before the process is running, it will not take effect. Including the HEADOFF command in the SYSSTART file may issue the command too soon.

It is recommended that the HEADOFF command be placed in a separate job that the SYSSTART file can stream. This should ensure that the spooling processes are completely started before the command is issued.

Q. What is the order that spoolfiles print on the Native Mode Spooler?

A. Refer to the Native Mode Spooler Reference Manual (HP part number 32650-90166) pages 4-39:

A spooled output device processes spoolfiles first in order of priority and then the time the spoolfile entered the READY state.

Q. Prior to MPE XL version A.41.00 (2.2) if I had multiple copies of two

spoolfiles, they would print with interleaving (that is one copy of the first file, one copy of the second file, one copy of the first file, etc.). As of 2.2, the spoolfiles do not interleave and all copies of the first spoolfile are printed prior to printing any of the copies of the second spoolfile. I have two spoolfiles that, together, comprise one report. The interleaving function is necessary in order to alleviate a lot of bursting and sorting of printouts. Is there a workaround that would enable me to accomplish the interleaving function?

- A. In order to accomplish the interleaving effect on version 2.2, you could merge the two spoolfiles into one and then print the one spoolfile multiple times. The following commands illustrate the necessary steps:

```

:BUILD MYFILE;REC=-132,1,F,ASCII;CTL
:FCOPY FROM=Q###.OUT.HPSPOOL;TO=MYFILE;CTL      (first spoolfile)
:FILE MYFILE=MYFILE;ACC=APPEND
:FCOPY FROM=Q###.OUT.HPSPOOL;TO=*MYFILE;CTL      (second spoolfile)
:FILE LP;DEV=LP,1
:FCOPY FROM=MYFILE;TO=*LP;CTL
:LISTSPF
:SPOOLF Q###.OUT.HPSPOOL;COPIES=##              (merged spoolfile)
:SPOOLF Q###.OUT.HPSPOOL;PRINT

```

Q. How do I append a Native Mode spoolfile to an environment file?

- A. To append a Native Mode Spoolfile use the following steps:

1. file x;dev=disc;rec=-132,,f,ascii;disc=nnn;cctl;std
2. fcopy from=onnn.out.hpspool;to=*x;cctl;new
3. editor ---|


```

/ a .1                |
.1 A                 |-----> changes from post to pre spacing
.2 //                |
/ k x,unn            ----

```
4. file y;dev=lp;env=lp2.hpenv.sys (remove ;env if no env desired)
5. fcopy from=x;to=*y;cctl

If you wanted to copy certain line numbers, step 2 would be:

```
fcopy from=onnn.out.hpspool;to=*x;subset=(range);cctl;new
```

Q. How can I append spoolfiles on the Native Mode Spooler?

A. To append spoolfiles with the Native Mode Spooler, use the EDITOR subsystem. Once you are in EDITOR, issue the following commands:

1. /TEXT 01.OUT.HPSPOOL
2. /JOIN 02.OUT.HPSPOOL
3. /KEEP filename
4. /EXIT

The above procedure will create a new disc file. The name of the file will be:

filename.logon group.logon account

To link the new disc file with the spooler, issue the following:

```
:FILE LP;DEV=LP;CTL
:FCOPY FROM=filename.group.account;CTL;TO=*LP;CTL
```

This will create a spoolfile that is a copy of 01.OUT.HPSPOOL with a copy of 02.OUT.HPSPOOL appended to it.

Q. I am trying to look at my output file using the new Native Mode (NM) spooler. The instructions in the NM Spooler Reference Manual (HP part number 32650-90166) are:

```
:Run EDITOR
/SET VARIABLE
/t Onn.OUT.HPSPOOL
```

When I do this, only columns 1 to 72 are displayed. How can I see the entire output record?

A. There are two ways to view the entire output record using

EDITOR:

1. Do not issue the SET VARIABLE command and ignore the warning which appears when the file is texted in:

```
***WARNING*** RECORD SIZE TRUNCATED TO 255 BYTES.
```

(You can ignore the warning because spoolfile records

are rarely greater than 255 bytes in length.)

Or:

2. After you SET VARIABLE, issue a SET LENGTH=nn SET RIGHT=nn where nn equals size of your output records.

Both methods will result in the entire output record being displayed with wraparound.

Q. How do I reset the DFID numbers on the Native Mode Spooler?

A. There are two ways to accomplish this:

1. Issue the :SPOOLF @;DELETE command, which will delete all output spoolfiles. Then, simply do a START NORECOVERY.

If you need those spoolfiles, make sure you save them to tape via STORE/RESTORE first so that you can bring them back when the system comes up.

With the introduction of the Native Mode spooler (MPE/XL version 2.1), the maximum possible DFID number on spoolfiles has been increased from 32,767 to 9,999,999. This is due to the DFID field being increased from 16 bits to 32 bits.

2. Install.

Q. When I issue a LISTFTMP @.@.@,2 in a batch job on my MPE XL A.41.00 (2.2) system, I get the following files:

TEMPORARY FILES FOR USER.ACCOUNT,PUB

ACCOUNT= 3000devs GROUP= DEVICES

| FILENAME | CODE | ----- | LOGICAL | RECORD | ----- | SPACE | ----- |
|-----------|------|-------|---------|--------|---------|-------|---------------|
| | | SIZE | TYP | EOF | LIMIT | R/B | SECTORS #I MX |
| 00016384* | 1516 | 1008B | VACS | 0 | 2097151 | 1 | 2048 1 * |
| 00016385* | 1515 | 1008B | VAS | 2 | 1 | 1 | 16 1 * |

What is the purpose of these files?

A. Starting with A.40.00 (2.1), the STDIN is 00016384.DEVICES.3000devs and the STDLIST is 00016385.DEVICES.3000devs. These are virtual device files and they represent a number higher than the highest possible ldev that can be configured on the system. The WHO intrinsic also returns 00016385 as the terminal number.

* * * * *

Q. I am trying to text in a large Native Mode Spoolfile with EDITOR. However, I am having problems if the spoolfile is > 99,999 records. EDITOR should be enhanced to handle spoolfiles larger than 99,999 records.

A. EDITOR is capable of numbering the records from 00000.001 to 99999.999 incrementing each line .001.

The default numbering scheme for EDITOR, however, is to start the line numbering at 1 and increment each line by 1. This allows for only 99,999 records.

To change the defaults, the EDITOR SET command can be used. For example:

```
:EDITOR
/SET DELTA=.001
/SET FROM=.001
/T 0962.OUT.HPSPOOL
```

* * * * *

Q. I have recently run out of permanent disk file space. Now when I stream a job, I receive the following console message:

```
CAN'T FOPEN $STDLIST FOR "user.acct,group", ON LDEV #10. (js 76)
```

and the job goes into the WAIT state. After freeing up some disk space, the jobs are still in the WAIT state. I have attempted to do an :OPENQ ldev command on each printer device, but I receive the following error message:

```
SPOOLING QUEUE OPENED FOR DEVICE 00000006, BUT NOT IN EFFECT SINCE
SPOOLING QUEUES ARE GLOBALLY DISABLED. (CIWARN 4625)
```

How can I get my jobs to log on?

- A. When the **NM SPOOLER** cannot **FOPEN \$STDLIST** for whatever reason, in this case because of lack of disk space, it globally shuts the spooling queues down, similar to a **:SHUTQ @** command.

To globally enable the spooling queues, issue the following command:

```
:OPENQ @
```

- Q. I have just updated my **MPE XL** system to **A.40.00 (2.1)** which includes the native mode spooler.

I often have to realign special forms or suspend a print job to allow an urgent spoolfile to print. What is the procedure to suspend the spooler and later resume at the beginning of my spoolfile?

- A. Issue the following command to suspend the spooler and set the offset to the beginning of the spoolfile:

```
:SPOOLER LP;SUSPEND;OFFSET=1
```

Using the **'OFFSET=1'** at the time you suspend the spooler will assure that the offset is set to the beginning of the spoolfile, The default is to set the offset according to the last completed page of output. If you suspend the spooler and take the default of **KEEP** the **'OFFSET=1'** can be specified when the spooler is resumed.

```
:SPOOLER LP;RESUME;OFFSET=1
```

If you take the default of **KEEP** and do not specify **'OFFSET=1'** when you suspend the spooler and you decide to print a higher priority spoolfile you can use **'OFFSET=1'** when you **RELEASE** the spoolfile.

```
:SPOOLER LP;RELEASE;OFFSET=1
```

If you specify the **NOKEEP** option when you suspend the spooler, always specify **'OFFSET=1'** if you want the spoolfile to print at the beginning.

If you want to confirm if the spooler was suspended with a **KEEP** or **NOKEEP** option, issue a **SHOW** on the spooler.

```
:SPOOLER LP;SHOW
```

```
LDEV  DEV      SPSTATE  QSTATE  OWNERSHIP  SPOOLID
```

```
6  00000006  SUSPEND  OPENED  OUT SPOOLER  #0321
```

If a **SPOOLID** exists then the **KEEP** option was used and the spooler will activate that spoolfile when a **RESUME** is issued, unless the spoolfile is

released or deleted.

For further information, please use the Online Help Facility

:HELP SPOOLER ALL

or review chapter 3 in the NATIVE MODE SPOOLER REFERENCE MANUAL,
(HP part number 32650-90166).

* * * * *

Q. How can I change the content of a spoolfile on A.40.00 (2.1) MPE XL

A. In order to change the content of a spoolfile on 2.1 MPE XL, do the following:

1) Copy the spoolfile from OUT.HPSPOOL (group.account) to a flat file.

(Let us assume that the spoolfile is 010.OUT.HPSPOOL)

:COPY 010.OUT.HPSPOOL,newfile

(where newfile is a filename of your choice)

2) Using EDITOR, make the necessary changes to the newfile.

:EDITOR

/T newfile

(Make the changes)

/KEEP;EXIT

*** WARNING *** NEW SERIAL FILE WILL REPLACE OLD SPOOL FILE.

newfile ALREADY EXISTS - RESPOND YES TO PURGE OLD AND KEEP NEW
PURGE OLD?Y

3) Create another new file, which will be used as the new spoolfile.

(The SPOOL parameter is used to assign spoolfile attributes
to the new file)

:BUILD newspool;DISC=#records;SPOOL

4) FCOPY the edited newfile to the newspool file.

:FCOPY FROM=newfile;TO=newspool

HP32212A.03.30 FILE COPIER (C) HEWLETT-PACKARD CD. 1990

*200*WARNING: FROM FILE RECSIZE IS 1276 BYTES,

TOFILE RECSIZE IS 1008 BYTES.

CONTINUE OPERATION (Y OR N) ?Y

(use FCOPY as opposed to COPY so that the newspool will keep it is spoolfile attributes)

- 5) Use the SPOOLF command to send the spoolfile to the printer.
:SPOOLF newspool;PRINT;DEV=LP

Q. How is the parameter SELEQ= for the LISTSPF command used?

A. In order to use the SELEQ= for the LISTSPF command, do the following:

```
:LISTSPF spoolid;SELEQ= ~indirect_file
                        [select_eq]
                        _      _
                        !      !
                        !      !
```

You must include the brackets

Examples:

- 1) List all spoolfiles that have been sent to class LP for all users

```
:LISTSPF 00;SELEQ=[DEV=LP AND OWNER=C.C]
```

- 2) List all spoolfiles that are in the PRINT state

```
:LISTSPF 00;SELEQ=[STATE=PRINT]
```

- 3) List all spoolfiles selected on \$stdlist

```
:LISTSPF 00;SELEQ=[FILEDES=$STDLIST]
```

- 4) List all spoolfiles with priority of 8

```
:LISTSPF 00;SELEQ=[PRI=8]
```

- 5) List all spoolfiles in the SPSAVE state that were created on 11/20

```
:LISTSPF 00;SELEQ=[(STATE=SPSAVE AND DATE=11/20/90)]
```

The complete syntax for the LISTSPF command is shown below:

```
LISTSPF [[IDNAME=] { spoolid          }]
          {(spoolid [,spoolid ]...)}
          [[;SELEQ=] {[select_eq]    }]
          {~indirect_file }
```

[{:DETAIL}]
{:STATUS}

* * * * *

Q. How can I redirect the output of a command, such as LISTSPF, to a file?

A. Issue the following command:

:LISTSPF(or other command) >filename

This will create a temporary file. You can see the file by issuing:

:LISTFTEMP filename

You can save this as a permanent file by issuing:

:SAVE filename

* * * * *

Q. How can I print a file that has entered the SPSAVE state?

A. In order to print a file in the SPSAVE state you need to issue the following command:

:SPOOLF filename.OUT.HPSPOOL;PRINT

Note The file name must be fully qualified.

* * * * *

Q. What is the 3000DEVS account?

A. The 3000DEVS account is used to store configuration information for the Native Mode Spooler. This account will only exist on versions of MPE/XL 2.1 or later.

This account is used by the Native Mode Spooler and is not accessible by other users.

This file is not stored on the SLT or the STORE tape, it is created

everytime the system is bootup.

Q. In SYSGEN under MISC there is a new command IO. What is this and what happened to the SPOOL command?

A. The MISC SPOOL command was obsoleted when the Native Mode Spooler was introduced with MPE/XL version 2.1 (A.40.00). The IO command is listed as replacing the SPOOL command. There are three parameters to the IO command as listed below:

```
io (io)  [maxdyninput = dynamic input devs]
          [maxdynoutput = dynamic output devs]
          [maxdynio    = dynamic I/O devs]
```

The Communicator for 2.2 INCORRECTLY states that these are the same as the IDD, ODD, XDD respectfully.

The maxdyninput and maxdynoutput are NOT used by MPE XL. The maxdynio is the maximum number of possible virtual terminal sessions. This is not to be changed unless HP tells you to change it!

So, in fact the IO command is nothing like the SPOOL command !!

The SHOW command will list the settings. The value under CURRENT is the currently configured amount.

```
misc> show io
```

| IO command | parameter | MAX | MIN | CURRENT |
|---------------------|--------------|-----|-----|---------|
| DYNAMIC INPUT DEVS | maxdyninput | 999 | 0 | 2 |
| DYNAMIC OUTPUT DEVS | maxdynoutput | 999 | 0 | 4 |
| DYNAMIC IO DEVS | maxdynio | 999 | 0 | 332 |

Q. How can I print part of a spool file using the native mode spooler?

A. There is a utility called PRINTSPF.PUB.SYS which will print a spool file to \$STDLIST. Below is how to send the output from this utility to a printer:

```
:FILE LP;DEV=LP (Use which ever printer you desire)
:RUN PRINTSPF.PUB.SYS;INFO="FILE=0###.OUT.HPSPOOL;START=###;#
END=###";STDLIST=*LP
```

The O### is the spool file name. The ### after START is the number of the first record to be displayed. The ### after END is the number of the last record to be displayed.

* * * * *

Q. I have an HP 3000 960 that is on MPE/XL 2.1. I have a user on the system who has the following capabilities: AM, AL, GL, ND, SF, BA, IA, OP. This user is presently able to read Native Mode Spooler spoolfiles that were created in other accounts. I thought that users with AM, Account Manager, capability would only be able to read spoolfiles created by users in their own accounts. Why is this user able to access spoolfiles beyond her own account?

A. A user that has OP, System Supervisor, capability will be able to access Native Mode Spooler spoolfiles that were created by users in other accounts. Do not give users OP capability if you wish to restrict their ability to access spoolfiles in other accounts. For more information on the Native Mode Spooler, refer to the Communicator 3000/XL for XL Release 2.1, part number 5957-7024.

* * * * *

Q. I just updated to MPEXL 2.2 with the Native Mode Spooler. Now I notice that all Spool Files I create always go to LDEV 1. I looked at my class configuration in SYSGEN, and all of my disc drives have device class SPOOL on them, yet all spool files still go only to ldev 1. What might be causing this and how can I get spool files to go to my other disc drives?

A. The problem in this case is most likely due to the way Volume Class SPOOL is defined in Volutil.

The problem is if volume class 'SPOOL' exists anywhere, spool files will only go to devices in this volume class. However, if SPOOL is not set up as a volume class, spool files will get spread to all DISC devices.

In other words, volume class SPOOL should either include ALL discs that are to be used for spooling, or NONE of the discs.

The VOLUME CLASS defined in VOLUTIL is different than the DEVICE CLASS defined in SYSGEN, and that is where most of the confusion arises.

Whether or not this is the problem can easily be verified with Volutil and the following commands:

```

mpexl: VOLUTIL
Mirvutil A.00.01, (C) Hewlett-Packard Co. 1989. All Rights Reserved.
volutil: SHOWCLASS SPOOL;INFO=VOLUMES

```

```

Volume name:      Index:
-----

```

```

MEMBER1          1

```

As in the above example, if only ldev 1 has volume class 'spool' on it, all spool files will be created only on ldev 1.

This situation can be corrected by expanding volume class 'spool' to include all disc drives that you wish to have spool files on.

For example, to add MEMBER2 to Volume Class Spool, enter the following:

```

volutil: EXPANDCLASS MPEXL_SYSTEM_VOLUME_SET:SPOOL (MEMBER2)

```

It should also be noted that even though MPEXL uses the Volume Class to determine where to place files, the Device Class 'spool' must also exist in SYSGEN on at least one device (it does not matter which one). This is due to the fact the MPE XL checks to make sure that 'SPOOL' is a valid Device Class before checking for which devices are in the Volume Class.

Q. What are the P1 and P2 values that are displayed by the PRINTSPF command?

A. These parameters are holdovers from MPE/V spooling and were originally used for the ATTACHIO calls. P1 is for carriage control and has the following meaning:

| Value contained in P1 | Meaning |
|--------------------------|------------------------------------------------------------------|
| ----- | ----- |
| Equal to 1 | The first byte of the output record is the carriage control byte |
| Not equal to 1 | P1 itself contains the carriage control byte. |

P2 is used for printer control. It has the following meanings:

| P2 Value | Meaning |
|------------|------------------------------------------------|
| ----- | ----- |
| If ODD | Data record is to be printed in prespace mode |
| If EVEN | Data record is to be printed in postspace mode |
| Bit 14 on | No perforation skip |
| Bit 14 off | Skip over perforation area if necessary. |

For more information, please refer to the Native Mode Spooler Reference Manual, (HP part number 32650-90166).

- Q. I just updated my HP3000 900 series system to MPE XL A.40.00 (2.1). I also have an MPE V/E system and I need to transfer spoolfiles from one system to another. I used to use SPOOK to OUTPUT the spoolfiles to tape. How do I do this with the NATIVE MODE SPOOLER?
- A. Since the SPOOK utility is no longer available on 2.1, there is a new utility called SPXIFER that provides compatibility with the MPE V/E spooler. There are four commands in SPXIFER. They are HELP and EXIT, which are self explanatory, and INPUT and OUTPUT. The INPUT and OUTPUT commands follow the same syntax as in the SPOOK utility.



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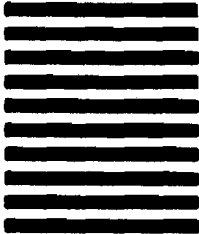
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