

ARCHIVE OUTQ TO TAPE OR OPTICAL

SpoolOrganizer provides the following commands to archive spool entries from an outq to external media:

ARCOUTQ	Archive to Tape or ARCFILE member
ARCARCFDTA	Move ARCFILE to Tape
OPTOUTQ	Archive to Optical Disk or ARCFILE member
OPTARCFDTA	Move ARCFILE to Optical Disk

The user must be defined as a SpoolOrganizer Operator or Security Officer to use the archive commands.

An **ARCFILE** is a sequential physical file with record length **4096**. SpoolOrganizer can archive spool entries to an **ARCFILE**, then move the **ARCFILE** member to tape or Optical at a later time. For a description of the **ARCARCFDTA** and **OPTARCFDTA** commands refer to Chapter 17, "Archive Online Database to Tape or Optical".

All commands can optionally write a record of each archived spool entry to the Archive or Optical Catalog. Users can query these catalogs to access the archived spool entries. For more information, refer to Chapter 24, "Search for Spool Entries".

All commands can be placed in a CL program and/or submitted to batch. All commands send an escape message **SPO-1000** if an error is detected. The message can be monitored by a CL program.

Archive Outq to Tape

The **ARCOUTQ** command will place an outq's spool entries onto a Tape. The user can select spool entries to archive based on the spool entries job date. Archived spool entries can be deleted after the archive completes normally. The spool entries (and their data) can be displayed directly from the tape, and reprinted or placed into the Online Database. For more information, refer to Chapter 18, "Display Archived Media Selections".

ARCOUTQ is a stand-alone command, the user does not have to perform any other setup functions (defining monitors, etc.) in preparation to use this command. If executed the following screen will appear:

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```

                                Archive an Outq (ARCOUTQ)
Type choices, press Enter.

Outq to Archive . . . . . _____ Name, *ALL
                                *LIBL      Name, *LIBL
Device . . . . . _____ Name, *ARCFILE
      + for more values
Volume Identifier . . . . . *MOUNTED Character value, *MOUNTED
      + for more values
File label on tape                *GENERATE
Tape sequence number . . . . . *END      Number, *END
End of tape option . . . . . *REWIND *REWIND, *LEAVE, *UNLOAD
Online Database Period . . . . . DT      DT, ND, NM, NY, ME, QE, YE
Online Database Value . . . . . 19900101 Number
Archive Catalog Period . . . . . DT      DT, ND, NM, NY, ME, QE, YE
Archive Catalog Value . . . . . 19900101 Number
ARCFILE name . . . . . *NONE      Name, *NONE
                                *LIBL      Name, *LIBL
ARCFILE file member . . . . . *FILE     Name, *FILE, *FIRST
                                                More...

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

```

```

                                Archive an Outq (ARCOUTQ)
Type choices, press Enter.

Existing mbr opt for ARCFILE . . *ERROR      *REPLACE, *ERROR
File expiration date . . . . . *PERM      Date, *PERM, *NONE
Delete Archived Spool Entries . . *NO      *YES, *NO
Effective Relation . . . . . LT      LT, GT, LE, GE, EQ, NE
Effective Period . . . . . DT      DT, ND, MB, YB
Effective Value . . . . . *ALL      Number, *ALL, *TODAY
User Exit Pgm . . . . . *NONE      Name, *NONE
      Library . . . . . *LIBL      Name, *LIBL
                                                Bottom

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

```

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The **ARCOUQ** command has the following parameters:

Outq to Archive (OUTQ) Parameter

Specifies the outq to archive to tape. The spool entries in the outq will be archived to tape.

***ALL:** Specifies that all outqs on the system will be archived.

Device (DEV) Parameter

Specifies the tape device to use. Specify up to four devices.

***ARCFIL:** The spool entries will be archived to a special disk file. The file must be a physical sequential file with record length of **4096**. Multiple members can exist. The file must exist.

Volume Identifier (VOL) Parameter

Specifies the tape volume **ID**. Specify up to five volume **ID**'s.

***MOUNTED:** The mounted volume will be used.

File Label on Tape (FILELABEL) Parameter

Specifies the file name assigned to the spool entries when placed on tape. Specify up to 17 characters.

***GENERATE:** SpoolOrganizer will assign a unique file name. The name will have the format "**BSO**" followed by a 5-digit number (i.e. **BSO00001**).

Tape Sequence Number (SEQNBR) Parameter

Specifies the tape sequence number to place the file.

***END:** The spool entries are placed at the end of the tape.

End of Tape Option (ENDOPT) Parameter

Specifies the tape option after the archive completes.

***REWIND:** The tape rewinds and stays in a ready status.

***LEAVE:** The tape remains positioned at the end.

***UNLOAD:** The tape unloads.

Online Database Period (OLDPRD) and Online Database Value (OLVAL) Parameters

Used for compatibility with the Online Database. If at a later date a user displays the archived spool entries using a **DSPARCE** command, then moves a displayed spool entry to the Online Database, these values will be used. For more information concerning the Online Database, refer to Chapter 5, "Define

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Monitors".

Archive Catalog Period (ARCPRD) and Archive Catalog Value (ARCVAL) Parameters

Specifies if a record of each archived spool entry will be placed into the Archive Catalog and if so, the amount of time the record will remain in the Archive Catalog. SpoolOrganizer will calculate a date using the specified parameters and compare it to the current date. If the calculated date is greater than the current date then each archived spool entry will be placed into the Archive Catalog. For more information concerning the amount of time an entry will remain in the Archive Catalog, refer to Chapter 5, "Define Monitors".

DT 19900101: The spool entry will not be placed into the Optical Catalog.

ARCFILE Name (ARCFILE) Parameter

Specifies the name of the **ARCFILE** to place the archived spool entries into. The **ARCFILE** must exist. Specify a name and a library.

ARCFILE File Member (ARCMBR) Parameter

Specifies the member within the **ARCFILE** to place the archived spool entries. If the member does not exist it will be created.

***FILE:** The member name will be the same as the file name.

***FIRST:** The first member defined will be used.

Existing mbr opt for ARCFILE (MBROPT) Parameter

Specifies the action SpoolOrganizer will take if the **ARCFILE** member already exists.

***ERROR:** An error message is placed into the joblog and an escape message sent to the calling program. In normal situations you should specify **MBROPT(*ERROR)** on the **ARCOUTQ** command and specify **MBROPT(*REMOVE)** on the **ARCARCFDTA** command. This will insure that entries written to the **ARCFILE** are not lost.

***REPLACE:** The existing entries in the member will be replaced with the new entries.

File Expiration Date (EXPDATE) Parameter

Specifies, for tape devices, the file expiration date placed on the tape dataset. This value will be checked by **OS/400** on future write operations to the tape. If a write operation is specified (**SAVLIB** command, etc.) which would overwrite a file which is not expired, **OS/400** will send a warning message to the **QSYSOPR** msgq. Enter a date or specify one of the following:

***PERM:** The file is permanent. A future operation that writes over this label will receive a warning.

***NONE:** The file can be overwritten after it is closed.

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Delete Archived Spool Entries (DLTSPLE) Parameter

Specifies that archived spool entries are to be deleted from the outq after the archive completes normally.

***NO:** The archived spool entries will not be deleted.

***YES:** The archived spool entries will be deleted from the outq after the archive completes normally.

Effective Relation (EFREL) Parameter

Specifies if a spool entry is to be selected for archive based on its Job Date. Only spool entries with a Job Date which passes the calculated Effective Date test will be archived. SpoolOrganizer/400 will perform an Effective Date test using the **EFREL**, **EFPRD** and **EFVAL** parameters. It will first calculate an Effective Date using the **EFPRD** and **EFVAL** parameters. Then it will compare the calculated Effective Date to the spool entry's Job Date attribute using the specified Effective Relation. Spool Entries which pass the comparison will be archived. For example if **LT** (Less than), **ND** (num days) and **1** are specified, spool entries created before yesterday will be archived.

This parameter is ignored if **EFVAL(*ALL)** is specified.

Enter one of the following:

LT: Spool entries with Job Start dates older than the calculated Effective Date will be archived.

GT: Spool entries with Job Start dates newer than the calculated Effective Date will be archived.

LE: Spool entries with Job Start dates older than or equal to the calculated Effective Date will be archived.

GE: Spool entries with Job Start dates newer than or equal to the calculated Effective Date will be archived.

EQ: Spool entries with Job Start dates equal to the calculated Effective Date will be archived.

NE: Spool entries with Job Start dates not equal to the calculated Effective Date will be archived.

Effective Period (EFPRD) Parameter

Specifies if spool entries are to be selected for archive based on their Job Date. SpoolOrganizer will use the **EFPRD** and **EFVAL** parameters to calculate the Effective Date. Enter one of the following:

DT: The **EFVAL** parameter will contain a date, which will be used as the Effective Date. The **EFVAL** parameter may also contain one of the following values:

***ALL:** All spool entries will be selected for archive.

***TODAY:** The current day is the Effective Date.

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ND: The **EFVAL** parameter will contain the number of days from the current date to use as the Effective Date. For example a value of 1 represents yesterday.

MB: The first day of the current month is the Effective Date.

YB: The first day of the current year is the Effective Date.

Effective Value (EFVAL) Parameter

Specifies the value required by the **EFPRD** parameter defined above.

Exit Program (EXITPGM) Parameter

Specifies the name of the user-written exit program to call. This program is called prior to processing each spool entry in the specified outq(s). The exit program will pass back a return code that instructs spool organizer to process or skip the spool entry. Thus the processing spool entries can be controlled by user-written programs. For more information see the section "User Exit Program" below. Specify one of the following:

***NONE:** No exit program is called:

pgm-name, lib: Specify the name and library of the exit program. The program must exist.

Example: The following command saves the outq **JOBLOGS** to tape and deletes the archived spool entries:

```
ARCOUTQ OUTQ(JOBLOGS) DEV(QTAPE1) VOL(ARCLOG) ENDOPT(*UNLOAD)
DLTSPLE(*YES)
```

Archive Outq to Optical Disk

The **OPTOUTQ** command will place an outq's spool entries into a directory on one or more Optical Disks, or into an **ARCFILE**. The user can select spool entries to archive based on the spool entries job date. Archived spool entries can be deleted after the archive completes normally. The contents of an **ARCFILE** can be written to Optical using the **OPTARCFDTA** command. The spool entries (and their data) can be displayed directly from Optical Disk or **ARCFILE**, and reprinted or placed into the Online Database. For more information, refer to Chapter 18, "Display Archived Media Selections".

The **OPTOUTQ** command writes spool entries and an index into the specified Target Directory on the Optical disk. The Target Directory can be a subdirectory, within a tree structure. Multiple Target directories can reside on a volume. The Target Directory can only contain one SpoolOrganizer (**OPTOUTQ**, **OPTOLE**, etc.) operation.

An **OPTOUTQ** operation can span multiple Optical volumes. SpoolOrganizer will fill up the first volume and write an index of this volume's spool entries. It will create the specified path and Target

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Directory on the next volume, then continue writing the rest of the entries and another index on the next volume. Each index contains only the spool entries on that volume. Mount messages and End-of Volume-List messages will be issued if needed.

OPTOUTQ can optionally place a record of each archived spool entry into the Optical Catalog. Once in the Optical Catalog the spool entry can be searched, displayed, and printed similar to spool entries in the Online Database.

OPTOUTQ is a stand-alone command; the user does not have to perform any of the setup functions (defining monitors, etc.) in preparation to use this command. If executed the following screen will appear: (**Note:** This screen shows parameters when using volume ID's).

```

Archive an Outq to Optical (OPTOUTQ)

Type choices, press Enter.

Outq to Archive . . . . . > _____ Name
                                     > *LIBL      Name, *LIBL
Volume Identifier . . . . . > *ARCFILE _____
                               + for more values _____
DirPath Name . . . . . > *ROOT _____
_____
                               + for more values _____
_____
DirPath Not Found Option . . . . *ERROR      *CREATE, *ERROR
Target Directory Name. . . . . *GENERATE _____
_____
Target Directory Exists Option    *ERROR      *REPLACE, *ERROR
Online Database Period . . . . . DT          DT, ND, NM, NY, ME, QE, YE
Online Database Value . . . . . 19900101    Number
Archive Catalog Period . . . . . DT          DT, ND, NM, NY, ME, QE, YE
Archive Catalog Value . . . . . 19900101    Number
Delete Archived Spool Entries . . *NO          *YES, *NO
Delete Archived Spool Entries . . *NO          *YES, *NO
Effective Relation . . . . . LT          LT, GT, LE, GE, EQ, NE
Effective Period . . . . . DT          DT, ND, MB, YB
Effective Value . . . . . *ALL _____ Number, *ALL, *TODAY
User Exit Pgm . . . . . *NONE _____ Name, *NONE
    Library . . . . . *LIBL _____ Name, *LIBL

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

Outq to Archive (OUTQ) Parameter

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Specifies the outq to archive. The spool entries in the outq will be archived to Optical Disk.

Volume Identifier (VOL) Parameter

Specifies the Volume ID of the Optical Disk that will receive the spool entries. The volumes must be defined in the Optical Library Dataserver and must be formatted. Specify up to five volumes, or *ARCFILE.

***ARCFILE:** The spool entries will be archived to a special disk file. The file must be a physical sequential file with record length of 4096. Multiple members can exist in an ARCFILE. The file must exist.

DirPath Name(s) (DIRPATH) Parameter

Specifies the directories that make up the path that the Target Directory will be placed into. Specify up to 30 directories, or *ROOT. Example: to place the Target Directory into path /A/B/C, specify DIRPATH(A B C).

***ROOT:** The Target Directory will be placed into the root directory.

Note: The length of the path generated (including the Target Directory and slashes generated by SpoolOrganizer) cannot be greater than 63.

DirPath Not Found Option (DIROPT) Parameter

Specifies the action to take if the path specified in the DIRPATH parameter does not exist on the first volume. **Please note** that SpoolOrganizer will always create the directories in the second thru n volumes if they do not exist.

***ERROR:** The OPTOUTQ command will end in error. An error message is placed into the joblog and escape message SPO-1000 is sent to the calling program.

***CREATE:** All directories not found in the specified path will be created.

Target Directory Name (TRGTDIR) Parameter

Specifies the name of the Target Directory to contain the archived spool entries. SpoolOrganizer places multiple files into the specified Target Directory. The Target Directory is a sub directory of the path specified in the DIRPATH parameter. For example if the DIRPATH parameter defines path /A/B/C, Target Directory TGT1 will appear as /A/B/C/TGT1. If the Target Directory does not exist it will be created.

***CREATE:** SpoolOrganizer will create a unique name. The generated name will be "BSO" followed by a five-digit number (e.g. BSO00001).

Target Directory Exists Option (TDIROPT) Parameter

Specifies the action to take if the specified Target Directory already exists in the specified path on any volume.

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***ERROR:** The **OPTOUTQ** command will end in error. An error message is placed into the joblog and escape message SPO-1000 is sent to the calling program.

***REPLACE:** The **OPTOUTQ** command will proceed. SpoolOrganizer/400 will place the spool entries into the specified Target Directory. A new index file will be written to the Target Directory, thus making any previously written spool entries irrecoverable.

Online Database Period (OLDPRD) and Online Database Value (OLDVAL) Parameters

Used for compatibility with the Online Database. If at a later date a user displays the archived spool entries using a **DSPOPTTE** command, then moves a displayed spool entry to the Online Database, these values will be used. For more information concerning the Online Database, refer to Chapter 5, "Define Monitors".

Archive Catalog Period (ARCPRD) and Archive Catalog Value (ARCVAL) Parameters

Specifies if a record of each archived spool entry will be placed into the Optical Catalog and if so, the amount of time the record will remain in the Optical Catalog. SpoolOrganizer will calculate a date using the specified parameters and compare it to the current date. If the calculated date is greater than the current date then each archived spool entry will be placed into the Optical Catalog. For more information concerning the amount of time an entry will remain in the Optical Catalog, refer to Chapter 5, "Define Monitors".

T 19900101: The spool entry will not be placed into the Optical Catalog.

ARCFILE Name (ARCFILE) Parameter

Specifies the name of the **ARCFILE** to place the archived spool entries into. The **ARCFILE** must exist. Specify a name and a library.

ARCFILE File member (ARCMBR) Parameter

Specifies the member within the **ARCFILE** to place the archived spool entries. If the member does not exist it will be created.

***FILE:** The member name will be the same as the file name.

***FIRST:** The first member defined will be used.

ARCFILE Member Exists Option (MBROPT) Parameter

Specifies the option SpoolOrganizer will take if the **ARCFILE** member already exists.

***ERROR:** An error message is placed into the joblog and an escape message sent to the calling program. In normal situations you should specify **MBROPT(*ERROR)** on the **OPTOUTQ** command and specify **MBROPT(*REMOVE)** on the **OPTARCFDTA** command. This will insure that entries written to an **ARCFILE** are not lost.

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***REPLACE:** The existing entries in the member will be replaced with the new entries.

Delete Archived Spool Entries (DLTSPLE) Parameter

Specifies that archived spool entries are to be deleted from the outq after the archive completes normally.

***NO:** The archived spool entries will not be deleted.

***YES:** The archived spool entries will be deleted from the outq after the archive completes normally.

Effective Relation (EFREL) Parameter

Specifies if a spool entry is to be selected for archive based on its Job Date. Only spool entries with a Job Date which passes the calculated Effective Date test will be archived. SpoolOrganizer/400 will perform an Effective Date test using the **EFREL**, **EFPRD** and **EFVAL** parameters. It will first calculate an Effective Date using the **EFPRD** and **EFVAL** parameters. Then it will compare the calculated Effective Date to the spool entry's Job Date attribute using the specified Effective Relation. Spool Entries which pass the comparison will be archived. For example if **LT** (Less than), **ND** (num days) and **1** are specified, spool entries created before yesterday will be archived.

This parameter is ignored if **EFVAL(*ALL)** is specified.

Enter one of the following:

LT: Spool entries with Job Start dates older than the calculated Effective Date will be archived.

GT: Spool entries with Job Start dates newer than the calculated Effective Date will be archived.

LE: Spool entries with Job Start dates older than or equal to the calculated Effective Date will be archived.

GE: Spool entries with Job Start dates newer than or equal to the calculated Effective Date will be archived.

EQ: Spool entries with Job Start dates equal to the calculated Effective Date will be archived.

NE: Spool entries with Job Start dates not equal to the calculated Effective Date will be archived.

Effective Period (EFPRD) Parameter

Specifies if spool entries are to be selected for archive based on their Job Date. SpoolOrganizer will use the **EFPRD** and **EFVAL** parameters to calculate the Effective Date. Enter one of the following:

DT: The **EFVAL** parameter will contain a date, which will be used as the Effective Date. The **EFVAL** parameter may also contain one of the following values:

***ALL:** All spool entries will be selected for archive.

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***TODAY:** The current day is the Effective Date.

ND: The **EFVAL** parameter will contain the number of days from the current date to use as the Effective Date. For example a value of 1 represents yesterday.

MB: The first day of the current month is the Effective Date.

YB: The first day of the current year is the Effective Date.

Effective Value (EFVAL) Parameter

Specifies the value required by the **EFPRD** parameter defined above.

Exit Program (EXITPGM) Parameter

Specifies the name of the user-written exit program to call. This program is called prior to processing each spool entry in the specified outq(s). The exit program will pass back a return code that instructs spool organizer to process or skip the spool entry. Thus the processing spool entries can be controlled by user-written programs. For more information see the section “User Exit Program” below. Specify one of the following:

***NONE:** No exit program is called:

pgm-name, lib: Specify the name and library of the exit program. The program must exist.

Example: The following example places the spool entries in outq **QEZJOBLOG** onto the optical disk with volume **SAVSPLE**. The path will be **JOBLOGS** and the Target directory will be **JULY95**:

```
OPTOUTQ OUTQ(QEZJOBLOG) VOL(SAVSPLE) DIRPATH(JOBLOGS)
TGTDIR(JULY95) DLTSPL(*YES)
```

User Exit Program

The **ARCOUTQ** and **OPTOUTQ** commands can optionally call a user-written program prior to processing each spool entry it selected for processing. The commands will pass to the user exit program the current spool entry’s attributes. The user exit program will signal to the command via a return code to process the spool entry or to skip it. Thus the user can tailor the spool entry selection process to meet their needs.

An example of an exit program is contained on file **BRODERICK/BSOSRC**, member **BSOAX2**. Additional usage information is specified in the member. The developers should copy this module into their own source file. The example is a CL program, but other languages such as RPG or COBOL can be used. Rename and modify your copy as desired and compile the program into your library. Specify your library/program in the **EXITPGM** parameter.