NBSpool

For MPE

Reference Guide

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T A B L E O F C O N T E N T S

NBSpool for MPE Reference Guide

I N T R O D U C T I O N

Welcome to NBSpool

NBSpool streamlines and automates the management of spool files generated by all applications, seamlessly distributing the printing function across networks and printer devices. Originally written to provide a method of moving spool files across a network, NBSpool quickly grew into a powerful, easy-to-use facility for performing a large variety of functions on spool files.

NBSpool matches and surpasses the functionality of the MPE utility **SPOOK** while using concise, simple commands that follow the familiar **SPOOK** syntax. NBSpool makes complex spool management simple and intuitive, allowing end users to easily tap into corporate information resources without steep learning curves.

Note. The maximum number of spool files NBSpool can operate on is **16,380**. This applies to all NBSpool commands with the exception of the **STORE** command.

NBSpool Features

This section provides information on NBSpool features. These features have been designed to allow you to easily and quickly interact with spool files. These features include:

- A flexible method of selecting subsets of spool files to alter, move, store, purge etc. Selections can be made on one or more of the following:

  Spool file DFID or range of DFIDs

  Job/session number or range of job/session numbers

  Output priority or range of output priorities

  Logical device number

  Device class with wild cards

  File names with wild cards

  User names with wild cards

  $STDLISTs (include or exclude them)

  Creation dates or date ranges

  Spool file size

  Spool files that contain a specified string or strings

  Complex selections using **AND**, **OR** and **NOT** operators

- LPR/LPD support which enables you to send and receive print jobs to and from remote hosts, whether they are on HP 9000s, Sun SparcStations or any other UNIX environment.

- **BOOTP** support which can make your HP 3000 the **BOOTP** server for printers that require an IP address before they can be accessed by NBSpool. This eliminates the need for a UNIX system to perform the task.

- A **SHOW** command which displays a selective listing of spool files, including information not found on a **SHOWOUT** listing.

- A **SORT** command which allows sorts by any or all of the following spool file attributes:

  Spool file name

  Device number/class

  User name

  Creation date and time

  Job/session number

  Output priority

  Spool file size

- A **ONCE=Y** subset which instructs NBSpool to **BANNER**, **ARCHIVE** or **VSAVE** a file only once. The **ONCE=Y** subset causes NBSpool to operate on a spool file only once for any particular command.

- JobRescue™ functionality, implemented as follows: A **STRING=filename** subset lets users put error strings in a file. NBSpool can **VSAVE** reports based on certain strings being in a **$STDLIST**, such as abort messages. Also, a **FLAG={OK|WARN|ERROR| FATAL}** parameter was added to **VSAVE** which VISTA Plus picks up and displays in the report selection screen.

- **VIEW** and **BROWSE** commands which provide a quick method to preview and optionally print or purge spool files.

- **ALTER** and **PURGE** commands which have been enhanced to operate on a subset of spool files.

- **TEXT**, **LIST** and **KEEP** commands which provide a comprehensive method for searching, listing and copying spool files to disk. The **TEXT** and **LIST** command can even be performed on opened spool files.

- A very fast duplication function to make exact duplicates of spool files.

- **MOVE** and **COPY** commands to quickly and efficiently move spool files across a network.

- A **TIMEOUT= parameter** for the **MOVE** and **COPY** commands which allows you to override the default time-out values.

- The **SPOOLACKFREQ** JCW available with the **MOVE** and **COPY** commands controls how many blocks of spool file data are sent before waiting for a response from a remote computer. The larger the value, the faster the transfer.

- A **STORE** and **RESTORE** capability for off-line storage. These commands are faster than **SPOOK**, and they use less tape. Also, multiple **STORE**s can be appended to the same tape.
- A tape directory function so you can see what is on a tape, including **SPOOK** tapes.
- An **ARCHIVE** and **UNARCHIVE** command to store and optionally compress a set of spool files to disk. Also, an **ARCDIR** command to see what is in an archived file.
- A **PRINT** command for printing spooled output to a printer slaved to a terminal or PC.
- Full support of job **$STDIN** files, that is, jobs that have been streamed but are not executing, including listing, archiving and restreaming.
- Works on both MPE/V and MPE/XL.
- NBSpool supports the 132-column capability of the newer Hewlett-Packard terminals.
- Non-spooled devices are supported. Users can print to locally attached printers in landscape, compressed portrait, or any desired font. You can easily customize the printer definition for any printer.
- Supports **ASSOCIATE**d devices.
- Can run in the background to perform repetitive tasks, such as archiving or moving spool files.
- Supports command files.
- Adds, changes or deletes environment file data.
- Creates an audit trail of activity.
- Friendly user interface gives users the tools they need to easily view their reports on-line.
- Add on modules for Novell NetWare, IBM hosts and UNIX systems.

About This Reference Guide

Each chapter in this guide is designed to quickly teach you the fundamentals of working with NBSpool. The following is a summary of the chapters in this guide.

Chapter 1 provides instructions for installation, configuration and network printing.

Chapter 2 discusses administrative commands, UDCs, security, subset parameters, variable substitution and command redirection.

Chapter 3 lists all output commands with syntax, parameters and examples.

Chapter 4 lists all input commands with syntax, parameters and examples.

Chapter 5 provides information on background jobs and processing, the **XEQ** command file, background execution, and the commands that are used in background processing.

Chapter 6 offers information on banners, report search logic, distribution lists and the banner maintenance program.

Chapter 7 provides explanations and actions to take for NBSpool error messages.

Addendums

Check your package for addendums. If an addendum is present, it will contain information on new or updated NBSpool features.

CHAPTER 1

Installation and Configuration

This chapter provides information and instructions on installing NBSpool. NBSpool can be installed as a stand alone application or with NetBase. This chapter also provides information on installing and configuring NBSpool for networked printers.

The instructions for installing NBSpool vary depending on whether you are running NBSpool by itself, or if you are running NBSpool with NetBase. If you are using NBSpool with NetBase, turn to the "NBSpool Installation With NetBase" section in this chapter. Use the sections in this chapter that best match your installation needs.

In This Chapter

NBSpool Stand-Alone Installation

This section provides information and instructions on installing NBSpool by itself. Follow the instructions in this section if you are installing or updating NBSpool.

Note. If this is an upgrade, be sure that no one is accessing NBSpool or VISTA Plus before you perform the upgrade. You must also stop all NBSpool background processes before performing the upgrade.

1. Logon as **MANAGER.SYS**.

   ```
   :HELLO MANAGER.SYS
   ```

2. Restore the install job.

   ```
   :RESTORE;NBINSTAL.JOB.@;LOCAL
   ```

3. Add the passwords for **MANAGER.SYS** to the **!JOB** command in the first record of the **NBINSTAL** file.

4. If you are using SECURITY/3000, enter the following command:

   ```
   :NEWACCT NETBASE,MGR;PASS=QUEST
   ```

5. If you are using VESOFT's **STREAMX** utility, do *one* of the following:

   - Disable **STREAMX** and use the MPE **STREAM** command.
   - Modify the installation job and change each **STREAM** command to **STREAMX**.

6. Stream the install job.

Note. If you have a lockword on **QUERY.PUB.SYS**, remove it prior to streaming **NBINSTAL**.

```
:STREAM NBINSTAL
```

7. Put the tape back online and reply to the request when it comes up on the console.

8. Change the passwords on the **NETBASE** account if desired.

9. Installation is complete. You may now use **NBSPOOL.PUB.NETBASE**.

NBSpool Installation With NetBase

This section provides information and instructions on installing or upgrading your copy of NBSpool without upgrading your version of NetBase.

Note. If you are installing on an MPE 5.0 system, skip to **Step 2**.

To install NBSpool with NetBase:

1. Verify that you have a version of NetBase which will allow an update to NBSpool without an update to NetBase:

```
:RUN NBSPOOL.PUB.NETBASE

NetBase Spooling Utility  [x.x]  Update xb  Copyright 1988 QUEST Software

:LISTF QUESTXL.PUB.NETBASE,2
ACCOUNT=  NETBASE     GROUP=  PUB

FILENAME  CODE  ------------LOGICAL RECORD-----------  ----SPACE----
SIZE  TYP        EOF      LIMIT R/B  SECTORS #X MX

QUESTXL * NMXL    128W  FB         551    4096000   1     1024  1  *
```

   If an asterisk does not appear after **QUESTXL** or if this file is not found, you *cannot* update NBSpool without updating NetBase. You will need a NetBase tape (not included in this package) in order to perform the update. Please contact your sales representative to request a NetBase tape. If an asterisk (*****) appears after **QUESTXL**, you may proceed to **Step 2**.

2. Verify that your tape is labeled “NBSpool”. If it is labeled “NetBase”, do not proceed. Contact your sales representative to request a new tape.

3. Stop NetBase’s spooling:

```
:RUN NBCTRL.PUB.NETBASE
*> STOP SPOOLING
```

4. Verify that spooling has stopped:

```
*> STATUS
*> EXIT
```

If spooling is active, issue an **ABORT SPOOLING** command, or wait until spooling stops.

```
:RUN NBCTRL.PUB.NETBASE
*> ABORT SPOOLING
*> EXIT
```

5. Exit all users from NBSpool and VISTA Plus. Once all users are out, stop all NBSpool and VISTA Plus background jobs.

6. Insert the NBSpool tape, restore the install job, and reply to any tape requests.

```
:HELLO MANAGER.SYS
:RESTORE;NBINSTAL.JOB.@;LOCAL
```

7. Add the passwords for **MANAGER.SYS** to the **!JOB** command in the first record of the **NBINSTAL** file.

8. If you are using VESOFT's **STREAMX** utility, do one of the following:

   - Disable **STREAMX** and use the MPE **STREAM** command.
   - Modify the installation job and change each **STREAM** command to **STREAMX**.

9. Stream the install job, type:

Note. If you have a lockword on **QUERY.PUB.SYS**, remove it prior to streaming **NBINSTAL**.

```
:STREAM NBINSTAL
```

10. Put the tape back online, and reply to the request when it comes up on the console.

11. Change the passwords on the **NETBASE** account if desired.

12. You may now resume spooling.

```
:RUN NBCTRL.PUB.NETBASE
*> START SPOOLING
*> EXIT
```

13. Installation is complete. You may now use **NBSPOOL.PUB.NETBASE**.

Network Printing

This section provides information and instructions on configuring HP LAN printers to work with JetDirect cards. The following procedures are covered in this section:

- **Enabling Ethernet**
- **Adding the LAN Printer to the HP 3000**
- **Sending a Test Print Job**

Enabling Ethernet

This section provides instructions on enabling Ethernet. You must enable Ethernet to print to LAN printers..

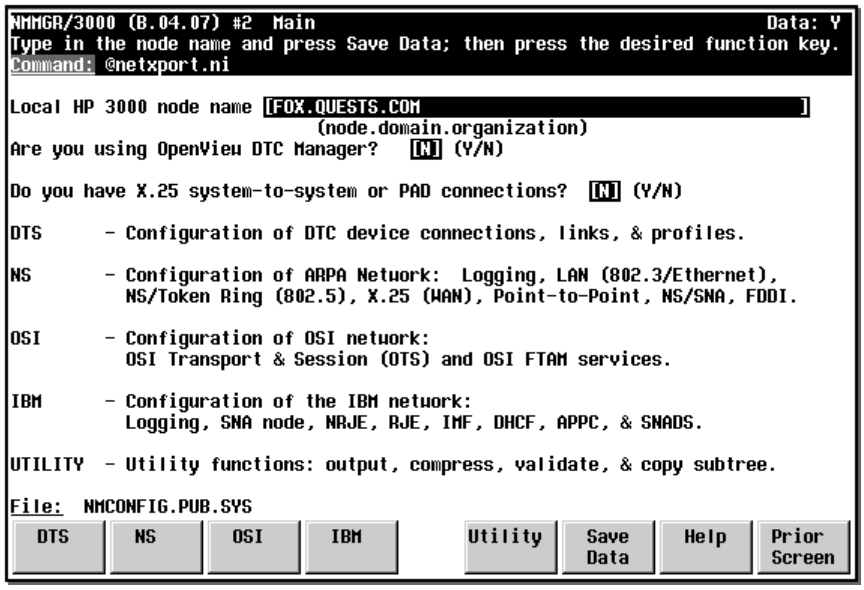
1. Run the **NMMGR** program. The **NMMGR** program screen #1 will be displayed.

   ```
   :NMMGR
   ```

2. Press **F1**, **Open Config**. The screen shown below is displayed.

3. Press the **Shift+Tab** keys to move your cursor to the command line. Type the text shown below and then press **Enter**. The **Return** key does not work.

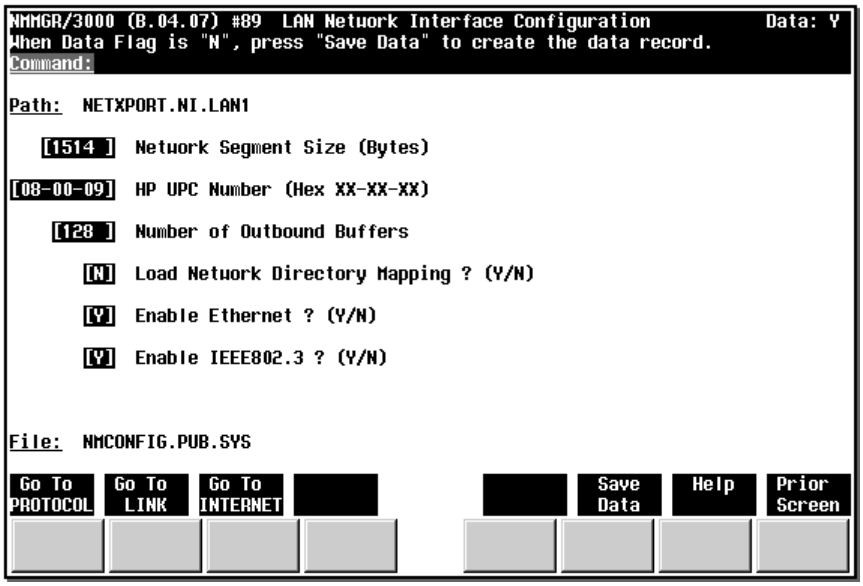
   ```
   @netxport.ni
   ```



4. Press **F6**, **Modify** to pass through the current screen and to the one displayed below:

5. Enable the Ethernet by entering **Y** in the **Enable Ethernet** field. Press **F6**, **Save Data**.

6. Press **Shift+Tab**. Type **EXIT** in uppercase and then **Enter** to exit the program.



Adding the LAN Printer to the HP 3000

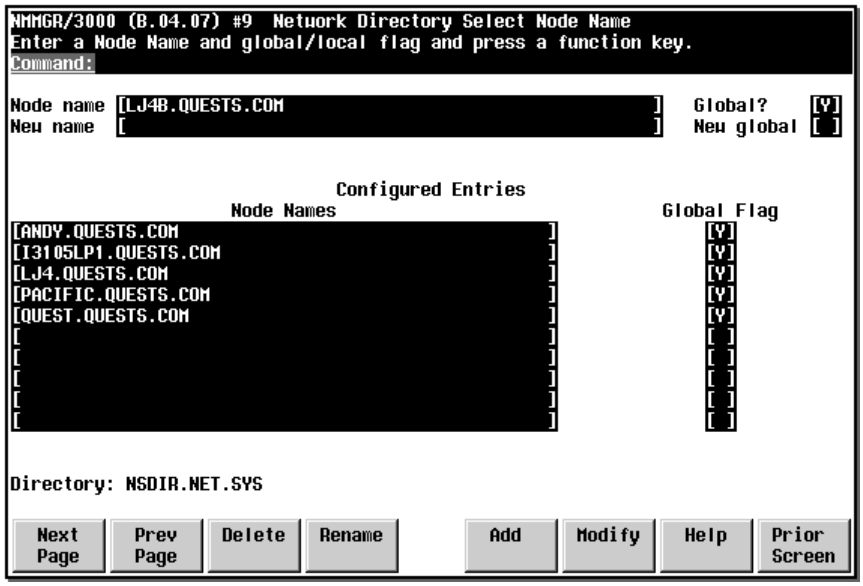
This section provides instructions on adding the LAN Printer to the HP 3000 network directory. You should be logged on as **MANAGER.SYS** before starting this procedure.

1. Run the **NMMGR** program. The **NMMGR** program screen #1 will be displayed.

   ```
   :NMMGR
   ```

2. Press **F2, Open Directory**. A new screen will be displayed.

3. Press **F1**, **Update Directory**. The screen shown below is displayed. In the **Node name** field, enter the new printer's name, including the domain and organization, for example, **LJ4B.QUESTS.COM**.



4. Press **F5, Add**. A screen similar to the one shown below will be displayed. Set the transport services as follows:

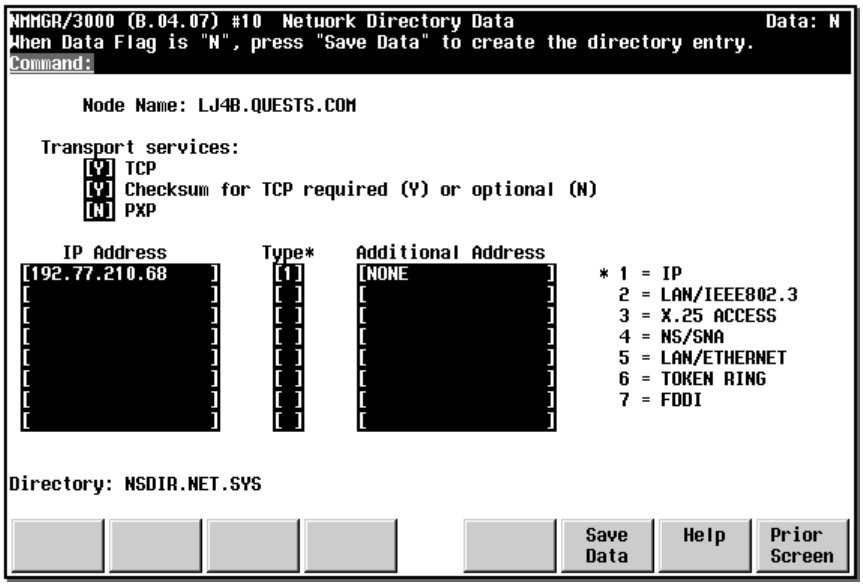
   - TCP should be set to **Y**.
   - Checksum for TCP should be set to **Y**.
   - PXP should be set to **N**.

5. Set the **IP Address** field to the IP address of the printer.

6. Set the **Type** field to **1**. This denotes an IP connection.

7. Set the **Additional Address** field to **None**.

8. To save the information, press **F6**, **Save Data**. Press **Shift+Tab** and type **Exit** in the **Command** field. Press **Enter**.



Sending a Test Print Job

Follow the instructions in this section to send a test print job to the network printer you just configured on the HP 3000.

1. Log on as **MANAGER.SYS**:

```
:HELLO MANAGER.SYS
```

2. Start NBSpool:

```
:run nbspool.pub.netbase
```

3. Copy a spool file to the newly defined printer. In the example shown below, the **TEST** file is being copied to the **LJ4B** printer.

```
COPY TEST TO LJ4B;PTYPE=LJ
Spool File Qualifies


SFID    FILENAME  JOB     USER NAME         SECTORS  STATUS
-----------------------------------------------------------
#O32008 TEST     #S'2113  MGR.NETBASE          16     Sent
```

4. Exit NBSpool.

```
O> E
```

Troubleshooting Network Printing

This section provides steps for troubleshooting network printing. The steps include information on printing to printers that support their own IP address, verifying that a node name is properly resolved to the IP address, and adjusting the **NMMGR** settings for the printer. To check your network printing, take the following steps.

To check network printing:

1. If you are having trouble printing to a printer that supports its own IP address, first verify that the HP3000 can talk to it:

   :PING.NET.SYS *nnn.nnn.nnn.nnn*

2. If ping fails, contact your network administrator or network support person to correct this issue. If the pinging is successful, check to see if you have duplicate IP addresses in your system by turning *off* the printer and repeating the **PING** test.

   Turn off the printer, and then enter:

   :PING.NET.SYS *nnn.nnn.nnn.nnn*

   If ping succeeds while the printer is off, you have a duplicate IP address in your system. Eliminate the duplication, NBSpool should succeed in printing.

3. NBSpool actually uses node names rather than IP addresses. To verify that the node name is properly resolved to the IP address, use **NETTOOL**:

   ```
   :NETTOOL.NET.SYS
   >PING
   >PING node[.domain.org - if different from the HP3000]
   ```

4. If **NETTOOL**'s ping fails, check to see if **NSDIR** is being accessed in the resolution process. To check, run **NMMGR**, and then check in **NETXPORT.GLOBAL** to verify that the **Name Search and Methods Order** includes searching through the **NS** directory.

5. While you are in **NMMGR**, you can verify your entry for the printer. Verify the node name, IP address, **type=1**, and the network flags:

   TCP/IP - **Yes**
   Checksum - **Yes**
   PXP - **No**

6. Some other settings in **NMMGR** may benefit from adjustment. NBSpool customers frequently increase the **Retransmission Lower Bound** to **8**, as well as **Initial Retransmission Interval** and **Max Retransmissions per Packet**.

Note. If you change a configuration setting in **NMMGR**, you may need to stop and restart the network for the change to take effect.

7. If you changed the **NMMGR** entry for the printer, you will need to clear the cache for it so that the new information is accessed. To do so, enter:

```
:NETTOOL.NET.SYS
>NAMEADDR
>CACHE
>DELPATH
>printernode.domain.org
>EXIT
```

8. To validate your changes, first repeat pinging the node by its name via **NETTOOL**. If that succeeds, try sending output to it via NBSpool.

CHAPTER 2

Running NBSpool

This chapter provides information on running NBSpool. NBSpool is a command driven program. When you run NBSpool, it gives you a **O>** prompt and waits for a command from you. Your commands instruct NBSpool to display, modify, and delete spool files. NBSpool enables you to save spool files in an organized manner, to print sections or all of a spool file and to merge spool files.

If NBSpool is run from a job, it behaves somewhat differently. First, no confirming questions are asked. Also, if a command does not execute successfully, NBSpool terminates in an error state. The program also recognizes the **INFO** parameter. If NBSpool is run with an **INFO** string, it executes the command or commands that are passed in the string.

NBSpool operates in one of two modes, input mode and output mode. The mode determines the set of valid commands and the type of spool file on which operations are performed using those commands. The output and input commands are described in chapters 3 and 4.

The command mode can be changed at any time. The command prompt changes to reflect the mode. When NBSpool is in output mode, the prompt is **O>;** in input mode, the prompt is **I>**.

In This Chapter

Administrative Commands

Most NBSpool commands are performed on spool files. However, some NBSpool commands change the mode of operation, provide information, or allow access to MPE commands. These commands are described in this section.

HELP

The **HELP** command displays a list of commands that are valid in the current mode. The syntax of this command is just like MPE's help command. If the **HELP** command is followed by a valid command, NBSpool displays the command syntax and a brief description. More information on a specific command can be obtained by entering **HELP** followed by the name of the command you want help information on. In the example below, **HELP** is used to gain more information on the **ALTER** command. The **ALL** parameter displays a detailed list of help information for the specified command.

```
O> HELP ALTER, all
```

Other help features are provided by the **HELP INFO** command. This command displays the use of the **INFO** parameter when running NBSpool. You can also indicate if you want help information on the input or output command. For example, help information is available for both the input and output **ALTER** commands. In the example below, the **HELP INFO** command is used to gain more information on the input **ALTER** command.

```
O> HELP IALTER, all
```

Any MPE command that is programmatically executable may be issued from NBSpool by prefixing the MPE command with a colon (**:**). If the user enters **O> :SHOWOUT**, NBSpool will perform the MPE **SHOWOUT SP;JOB=@** command.

To prohibit MPE access, you may use the following command:

```
RUN NBSPOOL.PUB.NETBASE,NOCOMMAND
```

LISTREDO and REDO

The **LISTREDO** and **REDO** commands allow you to quickly repeat previously entered commands. The **REDO** command allows the last command entered to be modified and re-executed. To repeat the previously typed command simply type **REDO** at the NBSpool prompt, modify the line using standard **EDITOR** commands, and enter a carriage return to execute the command. The **REDO** command can also be used with the **LISTREDO** command.

The **LISTREDO** command displays a list of previously entered commands. To repeat a command that appears in the list, enter the **REDO** command followed by the number that appeared next to the **LISTREDO** command's display.

START and STOP

The **START** command starts the background execution of various **NBSPOOL** services such as **BOOTP** and **UNIX** receiving. With this command, additional jobs for the running of these services are unnecessary.

Once a background service is started, it remains running until either a **STOP** command is executed, or the **QUIT** command is detected. If **NBSPOOL** is run from a job, it will suspend when the **EXIT** command is executed unless all background services are explicitly stopped.

The **STOP** command stops the specified background services. These services are terminated immediately. For **BOOTP**, this command must be executed from the same NBSpool process that originally started the background **BOOTP** service. Any user with **OP** capability can stop the **RECV** or **LPD** processes.

UDC Commands

To facilitate the creation of user defined commands (UDCs), a list of commands to be executed may be passed to NBSpool via the **;INFO=** parameter of the **:RUN** command. Multiple commands may be separated by backslash (****) characters. After the commands are executed, the user will be left in the program unless the last command is **EXIT** or **QUIT**.

The following is a sample UDC that allows texting of spool files:

```
TS SPOOLID="$"
RUN NBSPOOL.PUB.NETBASE;INFO="T !SPOOLID\L A"
***
```

The UDC shown in the example below will allow the user to text a spool file from MPE by typing:

```
:TS subset
```

The **subset** parameter identifies a spool file or a group of spool files. If more than one spool file qualifies for the subset, NBSpool will display all the matching spool files and prompt the user to choose one. The texted spool file will be listed on the screen.

If a command is prefaced with a hyphen (**-**), all commands in the **INFO** string following the hyphen will not be echoed. Echoing may be re-enabled by prefacing a command with plus sign (**+**). The example shown below will cause the first command to be executed but not displayed. The **SHOW** command will be displayed as normal.

```
RUN NBSPOOL.PUB.NETBASE;INFO="-SORT U,C\+SHOW $"
```

UDC Commands

User security is implemented in a manner similar to **SPOOK**. The user running NBSpool can access spool files based on their capability. The following is a list of who can do what:

Capability	Description
SM	Access to any spool file
OP	Access to any spool file, passwords and lockwords suppressed
AM	Access to spool files created by account users
none	Access to spool files the user created only

You may override this security via the NBSpool **SET** command, giving additional access to spool files to specific users. Turn to Chapter 4 for more information on the **SET** command.

The MPE **ASSOCIATE** command can be used to override this security. This command gives a user temporary control over a device class and all the devices in the class. If a user **ASSOCIATE**s a device, the user will have complete access to output spool files on that device. Logging off or using the **DISASSOCIATE** command will remove the capability.

Note. The list of **ASSOCIATE**d devices is compiled when NBSpool is first entered, or when a programmatic **ASSOCIATE** command is executed from NBSpool's prompt. Also, the **ASSOCIATE** command will not work properly if it is used while in the break mode.

You may secure the **INPUT** mode by using the **SET** command to place a password on the **INPUT** command. As a result, only users with the password may enter **INPUT** mode. Turn to the "SET Command" section in Chapter 4 for more information.

If you want to eliminate the possibility of specific users gaining MPE and UDC access within NBSpool, configure these users to run NBSpool as follows:

```
:RUN NBSPOOL.PUB.NETBASE,NOCOMMAND
```

Subset Parameters

The subset parameter is common to almost all of the NBSpool output commands. It is very flexible and uses a wide range of values to define groups of spool files. Specifying a subset of spool files can be accomplished using a variety of subset designators. Full use of the MPE wild card characters (**?**, **#**, **@**) are allowed. Numeric values may be specified individually or as a range. Ranges are from low to high and are inclusive.

Important! Spool file subsets operate on **READY** spool files unless otherwise specified or as described in individual command descriptions. Spool file states are checked at the beginning of command execution.

More than one subset designator may be specified if separated by commas. If subset designators of different types are specified the spool files must match both or all to be selected. If more than one subset designator of the same kind is specified, such as two file name designators, a match on either of them will be successful.

A match on any of the **NOT** designators will cause a spool file to be eliminated from selection. An exception to this rule is if a **NOT** designator is specified for strings separated by the plus sign (**+**). In this case, if a **NOT** string is found, only that subset designator will be eliminated. All other subset criteria will be used.

If a subset range is optional and omitted, all spool files are used. String searching and forms message searching can be considerably slower than other subsets since the spool files must be searched individually.

Note. An ambiguity may occur when specifying spool file names such as **J123** or **S123**. NBSpool will interpret these to search for matches on job/session number. If a spool file has a name of **J** or **S** followed by all digits, use **FILE=J123** or **FILE=S123** to select it.

The **!PREV** subset designator is useful for passing the subset of one command to the next. Only the spool files successfully altered (or copied, bannerized, etc.) will qualify for the **!PREV** subset. If a command fails catastrophically, the **!PREV** subset will not contain any spool files.

The **!PREV** subset generally contains original spool files, not those which are the product of a command. For example, if a **MOVE** command follows a **DUP** command, the **!PREV** subset will move the original spool files, not the duplicated ones.

Spool file subsets operate on **READY** spool files unless otherwise specified or as defined in the individual command descriptions. Spool file states are checked at the beginning of command execution.

Standard Subset Designators

Subset	Spool File Selection
[#O]nnn[-nnn]	This designator selects by one or a range of spool file **ID** numbers. The **#O** is optional.
*****	This designator selects the currently **TEXT**ed spool file.
#J[']nnn[-nnn]] or J[']nnn[-nnn]	This designator selects by one or a range of job **ID** numbers. Omitted range selects all.
#S[']nnn[-nnn]] or S[']nnn[-nnn]	This designator selects by one or a range of session **ID** numbers. Omitted range selects all.
#*	This designator selects currently logged on job/session.
[jsname.]userset.acctset	This designator selects all files created by a user or users. Wildcard characters are permitted. Job/session names are optional. The separator between the job/session name and the user name is a period, not a comma.
fileset	This designator selects all files having a specific filename. Wild card characters are permitted.
$STDLIST	This designator selects all job standard lists. May be abbreviated to just **$**.
%outpri [-outpri]	This designator selects all files having a specific or range of output priorities.
***ldev/class**	This designator selects all files associated to a particular logical device number or class. Wild card characters are permitted for device class.

Continued

Subset	Spool File Selection
[mm/dd/yy][-[mm/dd/yy]]	This designator selects all files created during the specified date range.
[date time][-[date time]]	This designator selects all files created during the specified date and time range. Format for **date time** is **mm/dd/yy hh:mm**.
=TODAY[-days]	This designator selects files created on the specified date. If **-days** is omitted, the date is today's date. If **-days** is specified, where **days** is an integer from **0** to **364**, that number of days will be subtracted from today's date. For example, **TODAY-5** means five days ago.
<TODAY[-days]	This designator selects files created before the date specified by **TODAY[-days]**.
<=TODAY[-days]	This designator selects files created on or before the date specified by **TODAY[-days]**.
>TODAY-days	This designator selects files created after the date specified by **TODAY-days**.
>=TODAY-days	This designator selects files created on or after the date specified by **TODAY-days**.
>size	This designator selects files larger than size (in sectors).
=size	This designator selects files equal to size.
<size	This designator selects files smaller than size.
>=size	This designator selects files at least as large as size.
<=size	This designator selects files no larger than size.
<>size	This designator selects files not equal to size.
"string" or 'string'	This designator selects files containing the specified string.
|string|	This designator is the same as the **string** designator, except the case of alpha characters is ignored.
"string"+"string"[+. . .]	This designator selects files containing *all* specified strings.

Textual Subset Designators

These subset designators mostly duplicate the designators listed in the previous section. These designators are provided just in case you do not understand the designators listed in the previous section. Some of the subsets must be specified using the designators listed below.

Subset	Spool File Selection
ABORTED={TRUE|FALSE}	This designator selects (or not) **$STDLIST**s of aborted jobs.
COPIES=copies[-copies]	This designator selects files with the number of copies specified (or a range of copies). Copies must be from **1** to **127** (or **65535** for **NMS**).
DATE=daterange	See the date designator in the previous section.
DEVICE=devspec	See the device designator in the previous section.
ENV={TRUE|FALSE}	This designator selects files with or without environment file information.
FILEDES=name	See the spool file name designator in the previous section.
FORMID=formspec	This designator selects by native mode spooler, **FORMID**. Wild card characters are valid.
FORMS=["pattern"]	This designator selects by forms message. The **?**, **#**, and @ characters are treated as wild card characters, unlike string subsets. If the pattern is omitted, any spool file with a forms message will be selected.
JOBNUM=jobspec	See the job designator in the previous section.

Continued

Subset	Spool File Selection
ONCE=Y	This designator specifies that each qualifying spool file will only be selected once for this command. Upon successful completion of a command, the spool file will not qualify again if **ONCE=Y** is subsequently specified. The following commands can use this subset: **ALTER ARCHIVE BANNER COPY** **DUP MERGE PRINT STORE** **SUBMIT VSAVE** Although the syntax **ONCE=N** is valid, it will be ignored if it is specified. **WARNING!** You must change **SYSSTART.PUB.SYS** to use this feature. The following line must be added to the **COOLSTART** section: **STREAM NBSPONCE.JOB.NETBASE** Streaming **NBSPONCE** tells NBSpool that you have reset the spool file ID numbers. Since NBSpool keeps track of which spool files it has altered (or duped, etc.) by spool ID number, NBSpool needs to know when those numbers are re-used.
OWNER=userspec	See the user (creator) designator in the previous section.
PRIORITY=prispec	See the output priority designator in the previous section.
RECS=low[-high]	This designator selects spool files by the number of records. Open spool files are considered to have **0** records.
SPOOLID=dfidspec	See the spool file ID designator in the previous section.

Continued

Subset	Spool File Selection
STATE=state	Selects spool files by state. Some of the states apply only to the native mode spooler. The valid states are shown below. The upper-case characters shown below are the minimum necessary to designate a particular state. **Active Create DEFer DELpnd** **Locked Opened Print PROblem** **Ready SPSave TRansfer** **RDefer RNondefer** The **RDEFER** and **RNONDEFER** states mean **READY** state, deferred (or not) because a spool file is below or above the **OUTFENCE**. Device outfences are used if they exist.
STRINGS=filename	Reads a set of string subsets from a file. Each string must be in a separate record. To specify **AND** strings, follow the string with a plus (**+**) character. For example, to specify the subset **"HELLO"+"THERE"**, the file would look like this: **"HELLO"+** **"THERE"** **Note**: The quotation marks are required.
USER=userspec	See the **OWNER** designator in the previous section.

These selection criteria can be abbreviated as shown below. The upper-case characters shown below are the minimum necessary.

Copies	**DAte** **Node OWNer** **User**	**Device** **Priority**	**Filedes** **RECs**	**FOrms** **SPOOLID**	**Jobnum** **State STRings**

Special Subset Designators

Subset	Spool File Selection
~designator	This designator specifies that if a spool file matches the criteria specified by ***designator***, it will *not* be selected. ***Designator*** is any of the above selection parameters specified in the previous sections.
!	This designator uses the subset specified in the last **SHOW** command. Each **SHOW** command saves the subset for later use in other commands. May *not* be used with the tilde (**~**) or any other designator.
!PREV	This designator selects spool files successfully processed by the previous command. This subset can be shortened to **!P** if desired. This subset designator can only be used by itself.

Examples of Using Subset Designators

Subset Value	Spool Files Selected
1024	This selects spool file #**O1024**.
1-10,20-30	This selects spool files **1** through **10**, and **20** through **30**.
AP@	This selects spool files with a name starting with **AP**.
AP@,~APY@,~APZ@	This selects spool files starting with **AP**, but not **APY** or **APZ**. For example, **APREPORT** would qualify, but not **APZONE**.
#*,QUADLIST	This selects spool files named **QUADLIST** created by the current job/session.
#J1-999	This selects spool files created by jobs #**J1** through #**J999**.
%1	This selects spool files with an **outpri** of **1**.
%1-8,~%5	This value selects spool files with an **outpri** between **1** and **8**, but not **outpri 5**.
***40**	This selects spool files for logical device **40**.
***REMOTELP**	This selects spool files for device class **REMOTELP**.
$STDLIST,*LP#	

Continued

Subset Value	Spool Files Selected
?@	This selects all spool files except **$STDLIST**s.
@.DEV	This selects spool files created by any user in the **DEV** account.
BOB.OPERATOR.SYS	This selects all spool files created by the user who logged on as **BOB,OPERATOR.SYS**.
INV@,MGR.@	This selects any file with a name starting with **INV** that was created by **MGR** users in any account.
%8-13,7/4/88,@.SYS	This selects pool files created on specified date with an **outpri** of **8** to **13** created by users in the **SYS** account.
#S',-8/1/88	This selects all **#S'** files created on or before **8/1/88**.
=TODAY	This selects all spool files created today.
<TODAY	This selects all spool files created before today.
<=TODAY-5	This selects all spool files five days old or older.
>TODAY-2	This selects all spool files created today or yesterday. This is the same as **>=TODAY-1**.
"hello"	This selects all spool files with the string **hello** in them. Upper/lower case is significant.
"hello","there"	This selects all spool files containing the string **hello** or **there**.
"hello"+"there"	This selects all spool files containing the string **hello** and **there**.
"hello"+~"there"	This selects all spool files containing the string **hello** but not containing the string **there**.
FORMS="PRINT ME"	This selects all spool files with the forms message **PRINT ME** specified.
P=3,C=2-4	This selects all spool files with a priority of **3** and copies between **2** and **4**, inclusive.
!	Use the same subset specified in the last **SHOW** command.

Variable Substitution

NBSpool will substitute JCWs and MPE/iX variables into a command string. To insert a value of a variable into a command, preface the JCW or variable name with an exclamation point. For example, to insert the value or variable of the JCW **PRI** into an **ALTER** command, enter:

```
O> ALTER $,MGR.SPOOL;P=!PRI
```

If a variable name is specified but not found, no substitution will be made. Furthermore, using two exclamation points will prevent the insertion of a value. In the example shown below, the **ALTER** command will search for the string **!TEST**. Each pair of exclamation points will be converted to **1**, but only if the character following the last **!** is an alphabetic character. Otherwise, all of the exclamation points will be left in the command string.

```
O> ALTER $,"!!TEST"
```

For MPE/iX users, a general discussion on the use of variable substitution can be found by entering **HELP ECHO,EXAMPLE.**

Notes on Using Variables

- If a session has a variable called **PREV**, using the **!PREV** subset will fail, as the value of the variable **PREV** will be inserted in the command. To avoid this problem, modify the command line to use a subset of **!PREV**. This will ensure the use of the **!PREV** subset in all cases.
- When entering **XEQ** commands, make sure all variables are defined and valid before entering the **XEQ** command list. The **XEQ** command parses each command as it is entered, so an error will occur if a variable isn't found.
- Each time a command is executed, the value of all variables will be looked up. This allows an **XEQ** command to change the value of a variable and have it take effect on all subsequent commands.
- Variables are *not* substituted in MPE commands.

Variables Set by NBSpool

The following variables, which are actually JCW's, are set by NBSpool during normal operation.

Variable	Description
NBQUALIFIED	Count of spool files that qualified on the last command. This is not a count of spool files that were successfully processed.
NBSTRINGFOUND	If a **LIST** command with a string is executed, this JCW is created. It is set to **1** if the string was found, otherwise it is set to **0**.
NBFIRSTLINE	Set by the **LIST** command if the **VARS** parameter is used. Equals the line number of the first line listed.
NBLASTLINE	Similar to **NBFIRSTLINE**, except that it is set to the line number of the last line listed.

Note. NBSpool uses the **LPP** JCW to override the default **LPP** value of **60** for all commands that use "lines per page." This value is only read when NBSpool is started.

Predefined Variables

NBSpool creates "virtual" variables that do not really exist, but can be used by NBSpool commands. In order to use these variables in child processes or after leaving NBSpool, you must issue a **SETVAR** or **SETJCW** command explicitly.

Note. The scope of these variables is limited, so they may not exist at all times. Variables beginning with **CURR** only exist during the execution of a **WHILE** loop.

The following variables are predefined.

Variable	Description
CURRENT	This variable is used to pass the current spool file ID to each command in **WHILE** loops.

Continued

Variable	Description
CURRDEV	This variable is used to specify the device **class/ldev** of current spool file.
CURRENV	This variable is used to specify the environment file name of current spool file.
CURRJNUM	This variable is used to specify the **job/session** number of the current spool file's creator (without a leading **#** character).
CURRJOB	This variable is used to specify the **job/session** name of the current spool file's creator. This variable does not exist if a **job/session** name does not exist for the current spool file.
CURRNAME	In **WHILE** loops, this variable has the name of the current spool file.
CURRPRI	This variable is used to specify the **outpri** of current spool file.
CURRCOPY	This variable is used to specify the number of copies for current spool file.
CURRFORM	This variable is used to specify the forms message in the current spool file. This variable does not exist if the spool file has no forms message.
CURRFORMID	This variable is used to specify the forms ID for the current spool file. It does not exist if the spool file has no **FORMSID**.
CURRSTREAMER	This variable is used to specify the user who streamed the job. This only applies if the current spool file is a **$STDLIST**.
CURRUSER	This variable is used to specify the user name (**user.acct**) of the current spool file's creator.
NEW	When a command creates a new spool file, this variable becomes available. It retains the same value until another "spool file creating" command is executed. The following commands qualify as "spool file creating" commands: **ALTER* BANNER DUP KEEP*** **LIST* MERGE* UNARCH** **Note:** The commands listed above with an asterisk (*****) do not always create a new spool file. Other commands can create multiple spool files. When that happens, the last spool file created will be the **!NEW** value.
YYMMDD	This variable returns the current date in the **YYMMDD** format.

LOOKUP Variables

NBSpool also has a class of variables that are created by the **SET** command and are available for use in **WHILE** commands. A limited set of these variables is also available for use outside **WHILE** commands. **LOOKUP** variables are used to predefine a set of values based on spool file and user attributes for use in NBSpool and MPE commands. The general form of **LOOKUP** variables are:

Variable	Description
CURR_key_name	Looks up values based on the current spool file.
LOOKUP_key_name	Looks up values based on the current user running NBSpool.

The following keys are available:

Key	Description
DEVICE	Uses spool file's device **class/number** as key.
JOBNAME	Uses spool file's or user's **job/session** name as key.
NAME	Uses spool file's **name** as key.
USER	Uses spool file's or user's **account** as key.

The **name** portion of the variable can be any string from **1** to **8** alphanumeric characters. The first character must be alphabetic. For example:

```
0> SET VAR=QUEUE;USER=MGR.NETBASE;VALUE='DEVSERV/HPLJQ'
0> SET VAR=QUEUE;USER=OPER.GL;VALUE='ACCTSERV/LJ4'
```

In the previous example, two NBSpool variables have been created: **CURR_USER_QUEUE** and **LOOKUP_USER_QUEUE**. The **CURR_USER_QUEUE** variable has one of three possible values for each iteration of a **WHILE** loop:

- **DEVSERV/HPLJQ** if the current spool file was created by the user **MGR.NETBASE**.
- **ACCTSERV/LJ4** if the current spool file was created by the user **OPER.GL**.
- No value for spool files created by all other users. In this case, the current command will be ignored (if in a **WHILE** loop).

The **LOOKUP_USER_QUEUE** variable will also only be defined if it was previously created with a **SET** command. The **LOOKUP** variables use the logon user's information as opposed to a spool file's user information. In the following example, any **$STDLIST**s created by one of the three specified users will be archived to the corresponding files. Spool files created by other users will be ignored.

```
0> SET VAR=ARCHIVE;USER=MGR.NETBASE;VALUE='STUFF.ARC'
0> SET VAR=ARCHIVE;USER=MANAGER.SYS;VALUE='SMSTUFF.DATA'
0> SET VAR=ARCHIVE;USER=OPERATOR.SYS;VALUE='OPSTUFF.DATA'

0> WHILE $

W> ARC !CURRENT;FILE=!CURR_USER_ARCHIVE
W> END
```

Command Redirection

Redirection allows the output of certain commands to be sent to an output file other than **$STDLIST**. The syntax for redirection is:

```
O> command >[filespec]
```

The **filespec** entry is a file name or back-referenced file equation.

- If no **filespec** is specified, the output will go to **NBOUTPUT**, which by default is directed to the device class **LP**. If no file exists, one will be built as a temporary, variable ASCII file with **CCTL** enabled. Use a file equation to alter these default characteristics.

- If the **filespec** entry is invalid in any way, it will be assumed that it is part of the command string. Also, it will be completely ignored if it is specified on a command that does not support redirection.

If an error occurs when opening the redirection file, the command will not be executed. If an error occurs while writing to the file, the command will continue processing, but the output will be thrown away and a message will be printed when the command is finished.

Commands that Support Redirection

All output from the commands shown below will be sent to the redirection file with the exception of the **Scanning** and **n files qualified** messages.

ALTER	**ARCDIR**	**ARCHIVE**	**BANNER**	**COPY**	**DUP**
LIST	**MERGE**	**MOVE**	**PURGE**	**RESTORE**	**SHOW**
STORE	**TAPEDIR**	**UNARCHIVE**	**VDIR**	**VFILE**	**VSAVE**

Examples of Command Redirection

To create a fixed ASCII disk file in the permanent domain, issue the following commands:

```
O> :FILE SAVEOUT;REC=-80,16,F;NOCCTL;SAVE
O> S $STDLIST > *SAVEOUT
```

To redirect the output to the device class **LASER**, do one of the following:

```
O> :FILE LISTING;DEV=LASER
O> ARC @;FILE=BIGARC > *LISTING
```

or

```
O> :FILE NBOUTPUT=WHATEVER;DEV=LASER
O> P @.SYS >
```

In this last example, the file name is missing, so the default was taken. The file equation specifies a new device and a new name.

CHAPTER 3

NBSpool Output Commands

The NBSpool output mode determines the set of valid NBSpool output commands that can be used on output spool files. This chapter describes each output command, with information on the operation, syntax and parameters for each command. Examples are also provided. Review the "Command Summary" section for a brief overview of the output commands. The NBSpool output commands appear in alphabetical order in this chapter.

The majority of the commands discussed in this chapter can be performed on subsets of spool files. Subsets allow you to quickly perform a command on multiple spool files that share a common attribute. Turn to Chapter 2 for more information on working with subsets of spool files.

Note. The prompt for NBSpool output commands is **O>**.

In This Chapter

Command Summary

This section summarizes the available NBSpool output commands. The output commands are listed in alphabetical order.

Command	Function
O>ALTER	This command changes device, outpri, creator and other attributes of a spool file.
O> ARCDIR	This command displays the directory of files in an archive file.
O>ARCHIVE	This command stores and optionally compresses a subset of spool files to a disk file. Spool files may be restored with the **UNARCHIVE** command.
O>ARCPURGE	This command removes selected spool files from previously created archive files.
O>BANNER	This command appends a header and optional trailer banner to a subset of spool files.
O>BROWSE	This command invokes the VISTA Plus online report viewer for a subset of spool files.
O>COPY	This command copies spool files from one computer to another.
O> COPYF	This command copies a disk file to a NetWare file server.
O>DUP	This command duplicates and optionally modifies existing spool files.
O>EXIT	This command exits NBSpool. This command suspends NBSpool if it is running as a son process from another program.
O>HELP	This command provides online help on NBSpool commands for the current mode. Turn to the “Administrative Commands” section in Chapter 2 for more information.
O>INDICATE	This command inserts a line of text to indicate where the strings used in a subset were found in qualified spool files.
O>INPUT	This command changes the operating mode of NBSpool from output to input.
O>KEEP	This command copies the currently texted spool file to a disk file.

Continued

Command	Function
O>LIST	This command lists a range of lines of the currently texted spool file.
O>LISTREDO	This command displays a list of previously entered commands.
O>MAIL	This command converts spool file data to text format and sends it via HPDesk to a specified user.
O>MERGE	This command copies a subset of spool files into one disk or spool file.
O>MOVE	This command moves spool files from one computer to another.
O>PRINT	This command prints a spool file to a locally connected printer.
O>PURGE	This command purges all qualified spool files.
O>QUIT	This command exits NBSpool. This command terminates NBSpool if it is running as a son process from another program.
O>REDO	This command repeats the last entered command for editing and executing.
O>RESTORE	This command restores spool files from tape.
O>SET	This command alters NBSpool run-time behavior.
O>SHOW	This command displays a sorted list of spool files.
O>SORT	This command specifies sort criteria to be used whenever a subset of spool files is used.
O>SPOOLER	This command controls the execution of background **NBSPOOL** spooler processes. Turn to the "Background Execution" section in Chapter 5 for more information.
O>START	This command starts the background execution of various NBSpool services.
O> STOP	This command stops the specified background services.
O>STORE	This command stores spool files to tape.
O>SUBMIT	This command submits spool files to **SNA NRJE**.
O>TAPEDIR	This command displays a directory of spool files on tape.

Continued

Command	Function
O>TEXT	This command opens a spool file for listing with the **LIST** and **KEEP** command.
O>UNARCHIVE	This command extracts and rebuilds spool files from a previously created archive file.
O>VDIR	This command displays a directory of a VISTA Plus folder file.
O>VERIFY	This command displays the current value of NBSpool configuration options.
O>VFILE	This command stores a subset of disk files into a VISTA Plus folder file for later access by the VISTA Plus online report viewer.
O>VIEW	This command displays one or more spool files on the terminal. Each file may be altered, purged, or relisted after displaying.
O>VSAVE	This command stores a subset of spool files into a VISTA Plus folder file for later access by the VISTA Plus online report viewer.
O>WHILE	This command executes a series of commands for each spool file in a subset. Turn to the "Background Execution" section in Chapter 5 for more information.
O>WIDTH	This command changes the display on certain Hewlett-Packard terminals to **132** columns and back to **80** columns.
O>XEQ	This command executes a sequence of NBSpool commands as a background job. Turn to Chapter 5 for more information.
O>XEQSTOP	This command stops an executing NBSpool background process. Turn to Chapter 5 for more information.

Output Commands

The following sections describe the NBSpool output commands in detail. For each command, you will find information on the operation, syntax and parameters. Examples are also provided. The NBSpool output commands appear in alphabetical order.

ALTER

The **ALTER** command changes local spool file characteristics such as **OUTPRI, DEVICE** or **COPIES**. The **ALTER** command allows mass changes to a subset of spool files. Each qualifying spool file will be displayed as it is altered. This command works exactly like the MPE **ALTSPOOLFILE** command. The command can be stopped at any time by pressing **Ctrl+y**.

The **NOFORMS** parameter removes any forms messages from the subset of spool files. The **NOPAGE** parameter will remove form feeds from a spool file. This is most useful for processing **$STDLIST** files which can contain many useless form feeds. These parameters require the spool file to be in the **READY** state.

Using the **FORMS=** parameter can add, change, or delete a forms message. If a blank or null forms message is specified, it will be treated as though the **NOFORMS** parameter was specified. Any other string will either add a forms message or replace an existing forms message.

Changing the creator of a spool file can have an unexpected side effect. The spool file may not be accessible if the creator is changed to a different account, since NBSpool security prevents users with **AM** (or less) capability from viewing other user's spool files.

The **ALTER** command will work on spool files in any state if only the number of copies, outpri, device or state is changed. Other changes only operate on **READY** spool files.

User Tip. This command may be abbreviated to **A**.

ALTER Syntax

```
O> ALTER subset [;PRI   =outpri   ]
                [;COPIES=copies   ]
                [;DEV   ={class}  ]
                [        {ldev }  ]
                [;CREATOR=user    ]
                [;ENV=envfile     ]
                [;FORMID=[formid] ]
                [;FORMS="formmsg" ]
                [;JOBNAME=jobname ]
                [;NAME=name       ]
                [;PRINTER=printdef]
                [;SPSAVE={Y | N}  ]
                [;STATE=state     ]
                [;ASK             ]
                [;NOENV           ]
                [;NOFORMS         ]
                [;NOPAGE          ]
                [;NEWTIME         ]
                [;NOQUOTE         ]
```

ALTER Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to be altered. Turn to Chapter 2 for more information on using subsets.
outpri	This parameter specifies the new output priority that will be assigned to all spool files qualified by the 'subset' parameter. Must be an integer from 0 to 14.
copies	This parameter specifies the new number of copies that will be assigned to all qualified spool files. This parameter must be an integer from **1** to **127**.
class	This parameter specifies the new device class assigned to all qualified spool files. This parameter must be a valid spooled device class.
ldev	This parameter specifies the new logical device number assigned to all qualified spool files. This parameter must be a valid spooled output device.
user	This parameter specifies the new creator for the spool file. The format for this parameter is **user.account**.
name	This parameter specifies the new name of the spool file.
formid	This parameter specifies a **1** to **8** character name specifying the new **FORMID** value for the spool file. If it is omitted, the **FORMID** is removed.

Continued

Parameter	Description
formmsg	This parameter specifies the new forms message to be used by this spool file. Trailing periods are ignored.
jobname	This parameter specifies the new job name for the spool file. This name can be omitted.
envfile	This parameter specifies the name of an environment file to be added to the spool file. If an environment already exists in the spool file, it will be changed to the new environment.
printdef	This parameter specifies the name of a configured printer definition. Printer definitions are maintained via **PRINTDEF**. Specifying this parameter causes the lead-in string for the printdef to be added to the spool file.
SPSAVE	This parameter enables or disables the **SPSAVE** flag. This does not change the state of the spool file.
state	This parameter specifies the state to be assigned to the subset. (For **NMS** only) Valid states are: **DEFER DELPND PROBLEM READY SPSAVE TRANSFER**
ASK	This parameter prompts at each file to include for processing.
NOENV	This parameter removes all **FDEVICECONTROL** records from the spool file.
NOFORMS	This parameter disables forms messages for the spool files.
NOPAGE	This parameter removes all form feeds from the spool files.
NEWTIME	This parameter changes the creation date and time to current time. This parameter is only allowed for **NM** spooler.
NOQUOTE	This parameter prevents the single quote from being added to job/session numbers when changing the environment for a spool file.

ALTER Examples

In the following example, all **$STDLIST** spool files output priorities are changed to **1**.

```
O> ALTER $;PRI=1
3 Spool files Qualify

DFID    FILENAME  JOB     USER NAME         SECTORS  STATUS
-------------------------------------------------------------
#O3399  $STDLIST #J1049   MGR.NETBASE            36  Altered
#O3404  $STDLIST #J1052   MGR.NETBASE            40  Altered
#O3415  $STDLIST #J1058   MGR.NETBASE            36  Altered

Altered 3 spool files successfully
```

ARCDIR

The **ARCDIR** command displays a formatted listing of the spool files stored in an archive file. The format of the display is the same as the **SHOW** command.

Information about the size of the archive and its directory is displayed before the listing of spool files. The available space in an archive is also displayed. If an archive has its security released, the word ***RELEASED*** will be displayed in the archive directory header.

ARCDIR Syntax

```
O> ARCDIR fileset

O> ARCDIR subset;FILE=fileset
```

User Tip. This command may be abbreviated to **ARCD**.

ARCDIR Parameters

Parameter	Description
fileset	This parameter specifies the name of the archive file(s). The files must be a valid NBSpool archive files.
subset	This parameters specifies the subset of spool files to be displayed from the archive file. Turn to Chapter 2 for more information on using subsets.

ARCDIR Examples

In the following example, the spool files in the **A111188** archive file are displayed.

```
O> ARCDIR A111188.ARCSPOOL
Archive Directory for file created on 11/11/88 16:30:54

Archive Directory Limit      = 26        Archive Limit in Sectors   = 4000
Directory Entries Available  = 15        Archive Sectors Available  = 2880

DFID    FILENAME  JOB     USER NAME      SECTORS  DEVICE  PRI  WHEN CREATED
-------------------------------------------------------------------------
#O6     LIST      #S463   MGR.NETBASE         44  LP        8 10/10/88 13:10
#O7     BIGLIST   #S497   MGR.NETBASE       1960  LP        2 10/19/88 10:43
#O8     PRINTER   #S415   MGR.NETBASE         36  LP        3 09/20/88 17:25
#O9     PORT      #S222   MGR.NETBASE         40  LP        2 08/26/88 15:04
#O284   OFFLINE   #S35    MGR.NETBASE         32  LP        8 11/10/88 16:33
#O287   OFFLINE   #S35    MGR.NETBASE         32  LP        8 11/10/88 17:00
#O290   OFFLINE   #S35    MGR.NETBASE         32  LP        8 11/10/88 17:05
#O295   $STDLIST #J132   MGR.NETBASE         36  LP        1 11/10/88 17:42
#O296   OFFLINE   #S35    MGR.NETBASE         32  LP        8 11/10/88 17:44
#O299   OFFLINE   #S35    MGR.NETBASE         32  LP        8 11/10/88 17:57
#O303   $STDLIST #J136   MGR.NETBASE         40  LP        1 11/11/88 14:29

Total of 2880 sectors in 11 spool files
```

ARCHIVE

The **ARCHIVE** command stores and compresses spool files to disk for later *unarchiving*. This provides a disk-based alternative to the **STORE** and **RESTORE** to tape feature. Press **Ctrl+y** to terminate the command. If the **PURGE** option was specified, none of the archived spool files will be purged.

The archive file is created by this command, so if a file with the same name already exists, it will be purged after confirmation from the user. Archive files are created with a file code of **888** to identify them from other files. Files may be extracted from the archive using the **UNARCHIVE** command.

If the **LIMIT** parameter is specified, the archive file will be built with enough directory space to contain the requested number of files. If the limit is specified, the size of the archive (in sectors) must also be specified. If this parameter is omitted, the archive will only be built large enough to hold the current spool file subset. This parameter is ignored if the archive already exists.

Note. An archive cannot contain more than **32,767** files.

The **APPEND** parameter will append the current spool file subset to an existing archive file. If the archive does not exist, this parameter is ignored. A **LIMIT** must be specified when the archive is created for an **APPEND** to be used later on that archive. If an archive is too small to hold new spool files, it may be expanded by copying it to a larger file with the same file code and record size. However, the size of the directory is fixed and cannot be changed.

The **NOCOMP** parameter disables the normally enabled compression algorithm. This can considerably speed up the archival of large spool files, but more disk space will be consumed.

By default, normal NBSpool security provisions will prevent users from unarchiving spool files from an archive file unless they would normally have access to the spool files. The **RELEASE** parameter will allow any user to unarchive any spool file in the archive, assuming the user has read access to the archive file. This parameter is ignored if appending to an existing archive file.

The **NEWPRI** and **PURGE** parameters affect the condition of the spool files. If **NEWPRI** parameter is used, each spool file will have its outpri changed to the specified value as each file is successfully archived. The **PURGE** parameter causes the archived spool files to be purged after all files are archived.

ARCHIVE Syntax

```
0> ARCHIVE [subset]  ;FILE=[filename]
                    [;LIMIT=files,sectors]
                    [;NEWPRI=outpri      ]
                    [;PURGE              ]
                    [;ASK                ]
                    [;NOCOMP             ]
                    [;APPEND             ]
                    [;RELEASE            ]
```

User Tip. This command may be abbreviated to **ARC**.

ARCHIVE Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to be archived. Turn to Chapter 2 for information on using subsets.
filename	This parameter specifies the formal file designator of the new archive file. This file cannot exist prior to the execution of the command unless **APPEND** is also specified. If the file name is omitted, the file name used will be the current date.
files	This parameter specifies the maximum number of spool files that may be put into the archive. An archive cannot contain more than **32,767** files.
sectors	This parameter specifies the size in sectors of the archive file.
outpri	This parameter specifies the output priority that all successfully archived spool files will have after being archived.
PURGE	This parameter purges all spool files that have been archived once the archive file is successfully created and closed.
ASK	This parameter prompts at each spool file to include for processing.
NOCOMP	This parameter specifies that compression will be disabled in the current archive file. This will improve performance at the price of consuming more disk space.
APPEND	This parameter appends the spool files to an existing archive file.
RELEASE	This parameter allows any user to unarchive spool files from an archive file.

ARCHIVE Examples

In the following example, every spool file is archived and then purged.

```
O> ARCHIVE @;FILE=A111188.SPOOLARC;PURGE
10 Spool files Qualify

DFID    FILENAME  JOB     USER NAME         SECTORS  STATUS
-------------------------------------------------------------
#O6     LIST     #S463    MGR.NETBASE            44  Archived
#O7     BIGLIST  #S497    MGR.NETBASE          1960  Archived
#O8     PRINTER  #S415    MGR.NETBASE            36  Archived
#O9     PORT     #S222    MGR.NETBASE            40  Archived
#O275   OFFLINE  #S35     MGR.NETBASE            76  Archived
#O278   OFFLINE  #S35     MGR.NETBASE            32  Archived
#O287   OFFLINE  #S35     MGR.NETBASE            32  Archived
#O290   OFFLINE  #S35     MGR.NETBASE            32  Archived
#O293   OFFLINE  #S35     MGR.NETBASE            32  Archived
#O295   $STDLIST #J132    MGR.NETBASE            36  Archived

Purging...
Archived 10 spool files for 2400 sectors
```

In the following example, all **$STDLIST**s are archived to the file **STDLST.SPOOLARC**.

```
O> ARCHIVE $;FILE=STDLST.SPOOLARC
```

In the following example, all spool files created by jobs except the **$STDLIST**s are archived, and then the **OUTPRI**s are changed to **13**.

```
O> ARCHIVE #J,~$;FILE=ARCEM;NEWPRI=13
```

In the following example, an archive with room for **400** spool files and a total size of **10000** sectors is created, and all **$STDLIST**s are placed in the new archive.

```
O> ARC $;FILE=STORE;LIMIT=400,10000
```

In the following example, all spool files with an outpri of 1 are appended to the archive **SQUISH**, and then their **OUTPRI**s are changed to **2**.

```
O> ARC %1;FILE=SQUISH;APPEND;NEWPRI=2
```

ARCPURGE

The **ARCPURGE** command purges selected spool files that were archived with the **ARCHIVE** command. Any subset of spool files in the archive may be purged. Only the archive's creator may use the **ARCPURGE** command.

Pressing **Ctrl+y** will terminate the archive purging process. If a fileset was specified, any fully processed archive files will be left in their newly cleaned state. Any archive files that have yet to be fully processed will be left intact, without any spool files being purged.

ARCPURGE Command Syntax

```
O> ARCPURGE [subset]  ;FILE=fileset
                     [;ASK          ]
```

User Tip. This command may be abbreviated to **ARCP**.

ARCPURGE Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to be unarchived. Turn to Chapter 2 for more information on using subsets. The forms message selection is not supported.
Fileset	This parameter specifies a file name or file set (like **:LISTF**) which specifies the file(s) which will have selected entries removed.
ASK	If this parameter is specified, then the list of files which qualified for **PURGING** will be presented.

ARCPURGE Examples

In the following example, all spool files from the **STUFF** archive are purged of **outpri 7**.

```
O> ARCP %7;FILE=STUFF
```

In the following example, all spool files for device class **LPSLOW** are purged.

```
O> ARCPURGE *LPSLOW;FILE=ARCFILE
```

In the following example, all spool files more than 10 days old are purged.

```
O> ARCPURGE >TODAY-10;FILE=ARCFILE
```

BANNER

The **BANNER** command takes spool files and attaches header and trailer banners to them. The information displayed on the banner as well as the format of the banners is predefined in the **BANNER** database. In addition, the distribution lists for a particular spool file come from the **BANNER** database.

If a distribution list exists for a spool file, the **BANNER** command will create one spool file for each user on the distribution list. This can be overridden with the **SINGLE** parameter. When **SINGLE** is specified, the banner will contain the complete distribution list for the spool file. In addition, the number of copies will be set to the total of the distribution.

If a spool file is not defined in the **BANNER** database, the **SINGLE** parameter will not process the spool file unless the **ALTER** parameter is specified. This causes all spool files matching the subset to be altered. The **NOTRAIL** parameter will suppress trailer banners if they have been requested in the database.

This command requires that a database reside in **BANNER.DATA.NETBASE**. If the database does not exist here, a file equation may be used to redefine it.

BANNER Syntax

```
O> BANNER subset [;PRI   =outpri ]
                 [;COPIES=copies ]
                 [;DEV   ={class}]
                 [        {ldev }]
                 [;ALTER         ]
                 [;ASK           ]
                 [;SAVE          ]
                 [;SINGLE        ]
                 [;NOFORMS       ]
                 [;NOTRAIL       ]
```

User Tip. This command may be abbreviated to **B**.

BANNER Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to be processed. Turn to Chapter 2 for information on using the subset parameter.
outpri	This parameter specifies the output priority of the new spool files. This parameter must be an integer from **1** to **14**.
copies	This parameter specifies the number of copies for the new spool files. This parameter must be an integer from **1** to **127**.
class	This parameter specifies the device class assigned to the new spool files. This parameter must be a valid spooled output device class.
ldev	This parameter specifies the logical device number of the new spool files. This parameter must be a valid spooled output device.
ALTER	This parameter alters all spool files to the specified values, even if the spool file is not defined in the **BANNER** database.
ASK	This parameter prompts at each file to include for processing.
SAVE	This parameter retains the original copy of the spool file. By default, the original copy is not retained in its original “no banner” form.
SINGLE	This parameter prevents multiple copies of the spool file from being generated if a distribution list exists for the spool file. All lines of the distribution will appear in the banner.
NOFORMS	This parameter eliminates forms messages from the spool file.
NOTRAIL	This parameter suppresses a trailer banner.

BANNER Examples

In the following example, a banner is added to all **$STDLIST**s with an output priority of **6**.

```
O> B $,%6
```

In the following example, a banner is added to spool file #**O102**, leaving the original alone and suppressing a trailer.

```
O> BANNER 102;SAVE;NOTRAIL
```

In the following example, a banner is added to **GLREPORT** and prevents the creation of multiple spool files for everyone on the distribution list.

```
O> B GLREPORT;SINGLE
```

BROWSE

The **BROWSE** command executes in two stages. The first stage processes the subset of spool files for viewing. The second stage invokes the VISTA Plus online viewer. The user is then able to use VISTA Plus to view any report specified in the subset. The **BROWSE** command operates only on spool files in the **READY** state.

By default, the **BROWSE** command simply displays a **Processing Files...** message while it preprocesses the spool files. If any error occurs during processing, the command will terminate. The **SHOW** parameter will override this behavior. In addition, the **SHOW** parameter displays each spool file name as it is processed.

The **BROWSE** command creates a temporary VISTA Plus folder named **VISTATMP**, which may be reexamined by entering **BROWSE** with no parameters. This will reinvoke VISTA Plus without recreating the folder file.

The **VISTATMP** folder can be saved permanently. For example, to save the temporary folder under the name **STDLISTS**, type:

```
O> :RENAME VISTATMP,STDLISTS,TEMP
O> :SAVE STDLISTS
```

The **COMP** parameter is of no use unless the **VISTATMP** file will be saved for later use. Therefore, use of **COMP** is not recommended unless necessary.

BROWSE Syntax

```
O> BROWSE

O> BROWSE subset [;ASK                ]
                 [;COMP               ]
                 [;FFSCAN[="ffdelim"] ]
                 [;SHOW               ]
                 [;LPP=lines          ]
                 [;PRINTER=printername]
                 [;START=firstrec     ]
```

User Tip. This command may be abbreviated to **BR**.

BROWSE Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to be viewed. Turn to Chapter 2 for more information on using subsets.
ASK	This parameter prompts at each file to include for processing.
COMP	This parameter specifies that compression should be used when processing the spool files.
FFSCAN	This parameter scans the contents of each report for form feed characters to determine page breaks.
ffdelim	This parameter overrides the default page break character from a formfeed to the specified string.
SHOW	This parameter displays the name of each spool file as it is processed.
lines	This parameter specifies the number of lines per page that will be assumed for each spool file. This parameter must be a value between **4** and **88**. The default is **60** lines.
printername	This parameter specifies a **1** to **8** character name of a printer definition defined by the **PRINTDEF** program. This parameter allows certain default information to be overridden such as lines per page, perforation control, etc.
firstrec	This parameter specifies the first record of the spool file that will be viewed. All previous records are ignored.

BROWSE Examples

In the following example, all **$STDLIST**s created today with the word **ABORT** in them are viewed.

```
O> BROWSE $,'ABORT',=today
```

In the following example, all files named **AGING** which are normally printed at 80 lines per page are viewed.

```
O> BR AGING;LPP=80
```

Turn to the "VSAVE" section in this chapter for more information on creating VISTA Plus folders.

COPY

The **COPY** command copies one or more spool files to a remote node. When the command is first executed, NBSpool will contact the remote computer and establish a connection. Any subsequent access to that node will not require an additional connection. This command may be stopped at any time by pressing **Ctrl+y**. If a copy is in process, the unfinished remote copy will be purged.

Note. Unlike the **MOVE** command, the **COPY** command does not purge the original spool file. The **COPY** command only operates on spool files in the **READY** state.

If NBSpool is running in a NetBase environment, a remote session to the node receiving the spool file is not required since NetBase will automatically handle the transfer. The node name or node number used in the command should be consistent with the node names or numbers used in the NetBase configuration.

If NetBase is not installed, the RPM service of **NS** will be used to create the process **NBSPOOLT** on the remote computer. A **DSLINE** command is required to specify the destination node. Programmatic logons are supported if the **LOGON=** parameter is specified in the **DSLINE** command, and a remote session does not exist in the environment.

Spool files will be left unchanged unless the **NEWPRI** parameter is specified, which causes successfully copied spool files to be altered in priority. New spool files will have the job/session number changed to include an apostrophe, for example **#S'10**.

If the **NEWTIME** parameter is specified, the remote spool files will have a creation date/time of the current time. This allows the user to order the spool files for printing on systems with the native mode spooler, since the **NMS** prints in creation sequence within a priority.

If a spool file is to be transferred to an HP-UX computer, either the **DEST** or **HPUX** parameter must be specified. The **OUTPRI** and **COPIES** parameters are translated to the UNIX equivalents. Other parameters affecting the destination spool file are not applicable. This feature requires the HP-UX option to be purchased.

Forms handling on NetWare are controlled by the **FORM NUMBER**. The **FORM** parameter allows either the form name or number to be specified for a subset of spool files. If a form name is specified, NBSpool will look for a **CI** variable or JCW with the same name as the form name. If it exists, the value will be used as the form number.

If NBSpool encounters a Workstation Configurator TermType file, it will open the termtype file, look for a TVFC file associated with the file, open the VFC file, and extract the initialization string. If any of these steps fail, an error will occur and the command will continue to execute. The **NOENV** keyword disables this feature.

If you are sending copies via LPR/LPD, the destination can be followed by an option string that will be sent to the remote system. The option string must be in the following format:

```
"dest -option1 [ -option2[...]]"
```

For example:

```
lj -olandscape -tHello.
```

To alter the printing characteristics of a spool file destined for a NetWare printer, the **PRINTER** parameter can be used. As with the **PRINT** command, various control strings can be specified, as well as paging control. Turn to the "Running PRINTDEF" section in this chapter for more information.

On some slow network links, it is possible that a **COPY** command will continually encounter errors. These errors can be reduced by adjusting the size of the spool file transfer packets. By setting the JCW **SPOOLPACKET** to **1024** or any multiple of **1024** up to **8192**, these errors can be eliminated. Set this JCW before entering NBSpool.

COPY Syntax

Turn to the "MOVE" section in this chapter for the syntax of this command. The **MOVE** and **COPY** commands have the same syntax with one exception: the **COPY** command has an additional **NEWPRI** parameter valid for all types of **COPY** operations.

```
O> COPY [subset] TO destination [;NEWPRI=newpri]
                                [;...          ]
                                [;RETRY              ]
                                [;RETRYDELAY=seconds  ]
```

User Tip. This command may be abbreviated to **CO**.

COPY Parameters (for all destinations)

Turn to the "MOVE Parameters" section in this chapter for information on the available **COPY** command parameters. All parameters are the same, with one exception for the **COPY** command. The parameter is defined as follows:

Parameter	Description
newpri	This parameter specifies the output priority that will be assigned to the original spool file after successful completion of a copy. Must be between **0** and **14**.
RETRY	Specifies that during a **COPY**, if the destination node is unavailable, a delay of five seconds should be followed by an attempt to reconnect.
RETRYDELAY	Specifies **RETRY**, as above, with a delay in seconds as specified, instead of the default time of five seconds.

COPY Examples

In the following example, all spool files named **CATLIST** are duplicated onto node **MASTER**. Note that this command will leave the original copy on the local computer.

```
:DSLINE MASTER;LOGON=NBSPOOL,OPERATOR.SYS
ENVIRONMENT 1: MASTER.QUEST.SOFTWARE
:RUN NBSPOOL.PUB.NETBASE
NetBase Spooling Utility [0.9.1]  Update 7  Copyright 1988 QUEST Software

QUEST Software, Inc.

O> COPY CATLIST TO *MASTER
1 Spool file Qualifies

Connecting with MASTER...

DFID    FILENAME  JOB     USER NAME         SECTORS  STATUS
-------------------------------------------------------------
#O580   CATLIST  #S62     MGR.NETBASE            84  Copied as #O54
```

The **COPY** command is often used in background jobs to continually copy spool files from one computer to another. In the following example, all spool files with a priority of **8** to **14** are copied to the remote computer, **ENGINE**, every **60** seconds.

```
!JOB COPYJOB,OPERATOR.SYS
!
!DSLINE ENGINE;LOGON=SPXFER,OPERATOR/SECRET.SYS
!
!RUN NBSPOOL.PUB.NETBASE
XEQ;WAIT=60
COPY %8-14 TO *ENGINE;NEWPRI=7
END
EXIT
!EOJ
```

Note. The **NEWPRI=** parameter prevents the same spool files from being copied every time the command executes, since the copied spool files will be reduced below the subset selection criteria.

The **DSLINE** command with the **LOGON=** parameter will cause NBSpool to automatically log on to the remote machine with a "programmatic" logon. If the remote computer **ENGINE** goes down, NBSpool will log on again without any operator intervention.

In the following example, all spool files for device class **NOVELL** are copied to Novell Server **MYSERVER**, Printer Queue HPLJQ, and the report is printed with 132 column portrait.

```
O> COPY DEV=NOVELL TO MYSERVER;LPR;DEST="HPLJQ":PRINTER=LP132

1 Spool files Qualify

DFID    FILENAME  JOB     USER NAME         SECTORS  STATUS
-----------------------------------------------------------------
#O3234  GLREPORT #J969    OPERATOR.SYS          236  Sent
```

In the following example, the Quest Novell PC Gateway Product is used to copy all spool files for device class **RLASER** to Novell Server **MYSERVER**, Printer Queue HPLJQ.

```
O> COPY DEV=RLASER TO GATEWAY;QUEUE=MYSERVER/HPLJQ

1 Spool files Qualify

DFID    FILENAME  JOB     USER NAME         SECTORS  STATUS
-----------------------------------------------------------------
#O3434  APREPORT #J972    OPERATOR.SYS          272  Sent
```

COPYF

The **COPYF** command performs a file transfer operation between the HP 3000 and a Novell NetWare server. This command operates only on disk files. Binary disk files are transferred without any data translation. ASCII files are converted to DOS format (trailing spaces truncated, CR/LF appended to the end of each line).

A transfer will not be made if the destination file exists unless the **REP** parameter is specified. Note that the NetWare user **NBSPOOL** must have the appropriate rights to the destination directory. Either forward slashes (*/*) or backward slashes (****) may be used. This command may also be terminated at any time by pressing **Ctrl+y**.

COPYF Syntax

```
O> COPYF [filename] TO gateway;QUEUE=server/volume:path
                                      [;APPEND]
                                      [;PURGE]
                                      [;REP   ]
```

Note. This command requires a Quest Software Unidirectional Gateway.

COPYF Parameters

Parameter	Description
filename	This parameter specifies the name of an MPE file to be moved to the NetWare server. The file must be a flat disk file, either ASCII or BINARY.
gateway	This parameter specifies node name of the gateway computer.
server	This parameter specifies file server name for the destination file.
volume	This parameter specifies file server volume name for the file.
path	This parameter specifies full DOS path and file name for the file.
APPEND	This parameter appends the source file to the destination file.
PURGE	This parameter purges the source file after a successful transfer.
REP	This parameter deletes the destination file if it exists before executing the transfer.

COPYF Example

In the following example, the file **BIGREPT.DATA** is copied to the directory **\HOME\JANE** on the **SYS** volume of the file server **ACCTNG**.

```
O> COPYF BIGREPT.DATA TO GATE;Q=ACCTNG/SYS:HOME/JANE/BIGREPT.DATA
```

DUP

The **DUP** command duplicates existing spool files. The new spool files may have their outpri, copies and device specifications changed, but will otherwise be exact copies of the originals. This command may be interrupted at any time by pressing **Ctrl+y**. If a spool file is being copied, the new incomplete copy will be purged.

Note. The **DUP** command operates only on spool files in the **READY** state.

To denote the copies, the job/session number will be changed to include an apostrophe, as in **#S'1**. The exception to this rule is when both the **NOPAGE** and **PURGE** parameters are specified, resulting in a new spool file with the same characteristics as the original excepts all form feeds have been removed.

If the **NEWTIME** parameter is specified, the duplicate spool files will have a creation date/time of the current time. This allows you to order the spool files for printing on systems with the native mode spooler, since the **NMS** prints in creation sequence within a priority.

The **INTERLEAVE** parameter allows you to print multiple copies of reports in whatever order you desire. It takes the number of copies for the first spool file in the subset (or the value specified in **COPIES=**) and generates that many copies of each spool file in the subset. Each copy is timestamped to cause them to print in the sequence specified by the **SORT** command.

For example, to print three copies of the **A**, **B** and **C** spool files one can use the **NM** spooler, which will print them in the sequence shown below.

```
A A A B B B C C C
```

The **INTERLEAVE** parameter can be used to override this. To print the spool files in the **A B C A B C A B C** order, type:

```
0> DUP A,B,C;INTERLEAVE;COPIES=3
```

If the **COPIES=** parameter is not specified, the first spool file in the subset determines the number of copies to print. The number of copies set on all other spool files in the subset will be ignored.

DUP Syntax

```
O> DUP subset [;PRI   =outpri  ]
              [;COPIES=copies  ]
              [;DEV   ={class} ]
              [        {ldev } ]
              [;NEWPRI=newpri  ]
              [;CREATOR=user   ]
              [;ENV=envfile    ]
              [;FORMS="formmsg"]
              [;NAME=name      ]
              [;ASK            ]
              [;NOENV          ]
              [;INTERLEAVE     ]
              [;NEWTIME        ]
              [;NOPAGE         ]
              [;NOQUOTE        ]
              [;PURGE          ]
```

DUP Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to be duplicated. Turn to Chapter 2 for information on using subsets.
pri	This parameter specifies the output priority of the new spool files. This must be an integer from **1** to **14**.
copies	This parameter specifies the number of copies for the new spool files. This must be an integer from **1** to **127**.
class	This parameter specifies the device class assigned to the new spool files. This must be a valid spooled output device class.
ldev	This parameter specifies the logical device number of the new spool files. This must be a valid spooled output device.
newpri	This parameter specifies the output priority of the original spool file after a successful execution of this command. This must be an integer from **0** to **14**.
user	This parameter specifies the new creator of the spool file. The format is **user.account**.
envfile	This parameter specifies the name of an environment file to be added to the spool file. If an environment already exists in the spool file, it will be changed to the new environment.

Continued

Parameter	Description
formmsg	This parameter specifies the new forms message to be used by this spool file. A trailing period will be ignored if specified.
name	This parameter specifies the name of the new spool file. Can be any valid spool file name except **$STDLIST**.
ASK	This parameter prompts at each file to include for processing.
NEWTIME	This parameter changes the creation date and time to be the current time when creating the duplicate spool file. This is most useful when creating native mode spool files to make the print order be the same as the move order.
NOENV	This parameter removes all **FDEVICECONTROL** records from the spool file.
NOPAGE	This parameter removes all page ejects from the spool file. This is useful to eliminate invalid page ejects in **$STDLIST** files.
NOQUOTE	This parameter prevents the single quote from being added to the job/session number. Requires **OP** capability.
INTERLEAVE	This parameter takes a subset of two or more spool files and generates multiple copies that will print in a specified sequence. This parameter is only available for **NM** spoolers.
PURGE	This parameter purges the original spool file. Used in conjunction with **NOPAGE** to convert a spool file to one without page ejects.

DUP Examples

In the following example, the spool file **FORMLIST** is duplicated and the new copy is immediately printed on logical device **22** with a priority of **14**.

```
O> DUP FORMLIST;DEV=22;PRI=14
1 Spool file Qualifies

DFID    FILENAME  JOB     USER NAME    SECTORS  STATUS
-----------------------------------------------------------------
#O3436  FORMLIST #S457    MGR.NETBASE       48  Duplicated as #O3445

To get rid of all page ejects from all $STDLISTs, enter:

O> DUP $;NOPAGE;PURGE
```

INDICATE

This command inserts a line of text to indicate where the strings used in a subset were found in qualified spool files. The **WITH** parameter allows the default text ******* to be overridden. **INDICATE** operates only on spool files in the **READY** state.

INDICATE Syntax

```
O> INDICATE subset [;WITH   ="string" ]
                   [;SHOW             ]
```

User Tip. This command may be abbreviated to **INDI**.

INDICATE Parameters

Parameter	Description
subset	Specifies the subset of spool files to be processed. The format of this parameter must include strings, either individually or with the **STRINGS** specification. Turn to Chapter 2 for information on using subsets.
WITH="string"	Replaces the default text, which is three asterisks (*******), with the value enclosed in quotes. The length of **"string"** cannot exceed **255** characters.
SHOW	Displays to **$STDLIST**, the spool file and the text lines which are being inserted.

INDICATE Example

To add indications to **$STDLIST**'s where selected text was found:

```
O> INDICATE $,"WARNING";WITH="*** WARNING *** WARNING ***"
O> INDICATE $,"ERROR";WITH="*** ERROR *** ERROR ***"
```

To add indications to **MYJOB** in front of each ***** EXPRESSION** line,
and display the results to the screen:

```
O> INDICATE MYJOB,"*** EXPRESSION";WITH="!!!!";SHOW
```

INPUT

The **INPUT** command switches the mode of NBSpool to look at job **$STDIN** files. A new set of commands will appear, and the operation of other commands may change. If a file is texted when switching modes, it will be closed. In addition, the sorting order will be reset when switching modes. Finally, the prompt will change to show the new mode.

To secure the **INPUT** mode, you may use the **SET** command to specify a password required with the **INPUT** command. Turn to the "SET" section in this chapter for more information.

INPUT Syntax

```
O> INPUT
```

INPUT Parameters

No parameters exist for the **INPUT** command.

KEEP

The **KEEP** command copies some or all of the currently texted spool file into a permanent disk file. By default, the new file will contain all of the carriage control (**CCTL**) information from the spool file. It can then be edited and **FCOPY**ed back into a spool file without losing formatting information.

Important! Laser printer environment information is not written to the keep file and will be lost.

By specifying the **EXPAND** parameter, a simple flat file without **CCTL** will be created. Line spacing carriage control directives will be translated to an appropriate number of blank lines. If a large number of blank lines are inserted, the default size of the disk file may not be large enough. You must use a file equation to increase the file size before issuing the **KEEP** command. By specifying the **NOCCTL** parameter, a simple flat file without **CCTL** will be created.

The **;REC=AUTO** parameter allows you to request that the keep file be built with the smallest record size which can hold the spool file.

KEEP Syntax

```
O> KEEP filename [;REC=[AUTO|recsize]
                       [,[blkfact]
                       [,[F|V]
                       [,[ASCII|BINARY]]]]]
                  [;EXPAND]
                  [;NOCCTL]
                  [;RANGE=first[/last]]
                  [;SAVECCTL]
```

User Tip. This command may be abbreviated to **K**.

KEEP Parameters

Parameter	Description
filename	This parameter specifies the name of the file to create. If the file already exists, you will be asked for permission to overwrite it.
AUTO	This parameter specifies that the record length for the keep file should be determined automatically. The size will be that of the longest record in the spool file.
recsize	This parameter specifies the record size for the keep file. Type a negative for bytes. The default is 132 byte records.
blkfact	This parameter specifies the blocking factor for the new file. If omitted, the optimum blocking factor will be determined.
F	This parameter indicates that the keep file should have fixed length records. This is the default.
V	This parameter indicates that the keep file should have variable length records.
ASCII	This parameter indicates that the keep file should be ASCII. This is the default.
BINARY	This parameter indicates that the keep file should be BINARY.
EXPAND	This parameter expands line skipping carriage control to blank lines.
NOCCTL	The keep file will be built without **CCTL**, and no carriage control information will be written to it. By default, the file will contain the carriage control information from the spool file.
RANGE	This parameter specifies the range of lines to be retained. If this parameter is not specified, all lines will be retained. Range is expressed in the following manner: **first** The first line in the spool file. **/last** The last line in the spool file.
SAVECCTL	This parameter keeps the carriage control in the first byte of each record for non-**CCTL** files. Must be used to save carriage control to labeled tapes.

KEEP Example

In the following example, the spool file **OFFLINE** is saved as **TEMPLIST**, stripping out the printer carriage control information. The **LISTF** command shows the default parameters NBSpool uses to build the disk file if the **REC=** parameter is omitted.

```
O> TEXT OFFLINE
Opened spool file #O3419 (OFFLINE), last line is 84.
O> KEEP TEMPLIST;NOCCTL
O> :LISTF TEMPLIST,2
ACCOUNT=  NETBASE     GROUP=  PUB

FILENAME  CODE  ------------LOGICAL RECORD-----------  ----SPACE----
                  SIZE  TYP        EOF      LIMIT R/B  SECTORS #X MX

TEMPLIST          132B  FA          83         83  31       64  1  1
```

In the following example, the currently texted spool file is kept as a flat ASCII file with the minimum record length and no carriage control information.

```
O> KEEP MYFILE;REC=AUTO;NOCCTL
```

In the following example, the default size of the output file may not be large enough when using the **EXPAND** parameter. A file equation to make it larger.

```
O> :FILE MYFILE;DISC=5000
O> KEEP *MYFILE;REC=AUTO;EXPAND
```

LIST

The **LIST** command displays some or all of the spool file opened by a prior **TEXT** command. The format of the command closely approximates that of the contributed library program **QUAD**.

To copy a subset of a spool file to another spool file, use the **UNN** and **OFFLINE** parameters. This will copy the selected range of lines to a new spool file named **NBSPLIST**. All carriage control will be retained in the new file. All **FDEVICECONTROL** records will be stripped.

The **WAIT** parameter is used to continually monitor the progress of **OPEN** spool files. The command will display to the end of the spool file and then pause for a specified time. After the pause, any new lines that have been written to the spool file will be displayed. The command will terminate if the spool file is closed or if you press **Ctrl+Y**.

Note. Timing considerations can cause the listing of the last block of an **OPEN** spool file to be unsuccessful. If any error should appear, simply redo the command.

If the **CCTL** parameter is used, carriage controls and space modes are displayed within the file. This parameter offers information similar to that displayed by the MPE **PRINTSPF** command. Any of the **LIST** command's parameters may be shortened to as little as one character. For example, **FIRST** may be abbreviated to **F**. Each subcommand must be separated by a space.

LIST Syntax

```
O> LIST [range] [CCTL           ]
                [OFFLINE        ]
                [PAUSE          ]
                [REMOVE         ]
                [TRUNCATE       ]
                [UNN            ]
                [VARS           ]
                [WAIT [=seconds]]
                [string         ]

Where:

range = {ALL          }
        {@            }
        {[line][/line]}
```

User Tip. This command may be abbreviated to **L**. Also, the parameter in uppercase can be abbreviated to one character.

LIST Parameters

Parameter	Description
range	This parameter specifies the range of lines to be displayed. If this parameter is not specified, only the current line will be listed. Range is expressed as one of the following: **ALL** Selects all lines in the spool file. **@** Selects all lines in the spool file. **line** Line designator. A line is one of the following: **line#** A positive integer specifying a particular line in the file. The first line in a spool file is line 0. **FIRST** The first line in the spool file. **LAST** The last line in the spool file. ***** The current line of the spool file. Any of these can be followed by a positive or negative number to indicate a displacement from the specified line. **/line** Causes a range of lines to be listed. Must be equal to or greater than the first specified line.
CCTL	This parameter displays carriage control information when each line is displayed. In addition, **Open**, **Close** and **Device** control records will be displayed.
OFFLINE	This parameter causes all output to be directed to the new **NBSPLIST** file, which by default is directed to device class **LP**. File equations may redirect this file.
PAUSE	This parameter causes the terminal to wait for input after a full screen of data is displayed (24 lines). If the **UNN** or **OFFLINE** parameter is specified, this option is ignored.
REMOVE	This parameter removes all nonprintable characters from the listing. Each occurrence of a nonprintable character is replaced with a period.
TRUNCATE	This parameter prevents terminal wrap around by truncating all output to **79** or **131** characters, depending on screen width.

Continued

Parameter	Description
UNN	This parameter suppresses line numbers in the listing, and causes all carriage control directives to be executed.
VARS	When selected, two **CI** variables (or JCWs on MPE/V) are created: **NBFIRSTLINE** and **NBLASTLINE** which contain the line numbers of the first and last line listed. If nothing is listed, the values will be **-1** (or **65535** on MPE/V).
WAIT	This parameter causes the command to pause at the end of an open spool file and continue to display new lines as they are added to the open spool file. A default pause of **3** seconds between updates is used to prevent overutilization of the CPU.
seconds	This parameter overrides the default waiting time of **3** seconds. Must be between **1** and **600** seconds.
string	This parameter causes only those lines containing the specified string to be listed. Strings may be delimited by single (‘) or double quotes (“). If no line range is specified, all lines in the file will be searched for the string.

Note. All uppercase parameters described above can be abbreviated to one character. For example, **U** and **UNN** are equivalent.

LIST Examples

In the following example, texting in a **$STDLIST** and using the **LIST** command to display the contents are illustrated.

```
O> T $STDLIST
4 Spool files Qualify

DFID    FILENAME  JOB     USER NAME      SECTORS  DEVICE  PRI  WHEN CREATED
------------------------------------------------------------------------------
#O3434  $STDLIST #J1065   MGR.NETBASE        384  LP        1  OPENED
#O3404  $STDLIST #J1052   MGR.NETBASE         40  LP        1 10/03/88 14:51
#O3415  $STDLIST #J1058   MGR.NETBASE         36  LP        1 10/05/88 10:51
#O3399  $STDLIST #J1049   MGR.NETBASE         36  LP        1 10/03/88 14:34
```

Since the filename **$STDLIST** was not unique, NBSpool displayed all qualifying spool files and requests that you resolve the ambiguity by entering the **DFID** of the desired file.

```
Enter DFID number of desired file: 3434

Opened spool file #O3434 ($STDLIST), last line is 40.
NOTE: SPOOL FILE IS OPEN
```

The **LIST** command is now used to display the spool file in the familiar **SPOOK** format. Notice that the spool file chosen is actually an open spool file.

```
O> L ALL
 1
 2 :JOB NETBASE,MGR.NETBASE,PUB
 3 PRIORITY = DS; HIPRI; TIME = UNLIMITED SECONDS
 4 JOB NUMBER = #J1065
 5 THU, OCT  6, 1988,  4:47 PM
 6 HP 3000 / MPE V  G.B3.02 (BASE G.B3.02).
 7 :
 8 :CONTINUE
 9 :COMMENT REMOVED 'PURGE NBLOGBK.DATA' TO KEEP MPEXL ACCOUNTING OK
10 :CONTINUE
11 :RUN COPYN.PUB.NETBASE;INFO="FROM=NBLOG.DATA.NETBASE;TO=NBLOGBK.DATA"
12
13 FastCopy  [2.9.2]  (C) QUEST Software 1985
14 WALL TIME   =   8.130       CPU TIME   =   5.113
15 INPUT RECS  =     257       OUTPUT RECS=     257
16
17 END OF PROGRAM
18 :
19 :CONTINUE
20 :RUN NBCOP.PUB.NETBASE
21
22 NetBase Control Program  [0.8.2]  (C) QUEST Software 1987
23 16:47:36 NBN/NetBase Control Process  [0.8.2]
```

If you are only interested in the **RUN** commands, the following command can be used:

```
O> L “RUN”
11 :RUN COPYN.PUB.NETBASE;INFO=”FROM=NBLOG.DATA.NETBASE;TO=NBLOGBK.DATA”
20 :RUN NBCOP.PUB.NETBASE
```

In the following example, the last **100** lines of the current spool are copied to a new spool file.

```
O> LIST LAST-99/LAST OFFLINE UNN
```

or

```
O> L L-99/L O U
```

In the following example, the progress of a job is monitored as it executes, listing the job’s spool file without line numbers and truncated so it all fits on the screen.

```
O> L W=1 U T
```

LISTREDO

The **LISTREDO** and **REDO** commands allow you to quickly repeat previously entered commands. The **LISTREDO** command displays a list of previously entered commands. To repeat a command that appears in the list, enter the **REDO** command followed by the number that appeared next to the **LISTREDO** command's display.

LISTREDO Syntax

```
0> LISTREDO
```

LISTREDO Parameters

No parameters exist for the **LISTREDO** command.

MAIL

The **MAIL** command converts spool file data to text format and sends it via HPDesk to a specified user. This command requires that HPDesk be installed and enabled on the system. A user must be specified in order to send any messages. The **CI** variable **DESKUSER** must first be defined before the **MAIL** command can be used. The format of the variable is as follows:

```
username[;[password][;node/sublocation]]
```

An example **DESKUSER** can be defined as follows:

```
:SETVAR DESKUSER "JOHN DOE;SECRET;QUEST/02"
```

When the first **MAIL** command is issued, NBSpool will attempt to log on as this user. Assuming it is successful, the message will be sent according to the specified parameters. NBSpool will remain logged on until it is terminated.

Mail Syntax

```
O> MAIL [subset];TO="username[;mailnode]"
              [;NEWPRI=pri]
              [;PURGE]
              [;SUBJECT="subject"]
```

Mail Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to be mailed. Turn to Chapter 2 for information on using subsets.
Username	This parameter specifies the name of the destination user as defined in the HPDesk directory.
mailnode	This parameter specifies the node name of the destination user. This field is of the form **nodename/sublocation**. This is necessary if the **username** exists on more than one mail node.
Pri	This parameter specifies that each spool file will be set to this priority after the mail message is successfully sent.
PURGE	This parameter purges the spool file when successfully sent.
Subject	A **1** to **60** character string which contains the subject of the message.

Mail Examples

In the following example, the **DESKUSER** variable must be set first before executing the **MAIL** command:

```
:SETVAR DESKUSER "JANE DOE;MYPASS;DEMO/00"
:RUN NBSPOOL.PUB.NETBASE
```

In the following example, the spool files named **GLREPORT** are sent to a HPDesk user:

```
O> MAIL GLREPORT;TO="BOB SMITH;ACCT/03";SUBJECT="General Ledger"
```

MERGE

The **MERGE** command merges a subset of spool files together to form one new file. The order in which the files will be merged is determined by the **SORT** command. If a range is specified, only those lines within the range from each spool file will be merged. If the output file is a disk file, it will be created if it does not exist. If it does exist, it will be purged unless a file equation has been issued with the **ACC=APPEND** parameter.

The **MERGE** command will only retain data records in the output file. Therefore, environment information, device control records, and forms messages will be stripped upon output. The **NOCCTL** parameter will strip all carriage control from the output file. If a file equation explicitly specifies **CCTL** and this keyword is specified, all carriage control will be converted to spaces. By default, a form feed will be inserted between each spool file in the output. This may be suppressed by the **NOPAGE** parameter.

A delimiter string may also be inserted between spool files. The string will be inserted as a new record between each spool file pair. If the **REPEAT** parameter is specified, the specified string will be duplicated as many times as necessary in order to fill a record.

 **Note.** Only ready spool files will be merged.

MERGE Syntax

```
O> MERGE [subset]  ;FILE=filename
                  [;REC=[recsize]
                        [,[blkfact]
                        [,[F|V]
                        [,[ASCII|BINARY]]]]]
                  [;DELIM={[%]numeric} [,REPEAT]]
                          {string    }
                  [;NEWPRI=outpri]
                  [;RANGE=range]
                  [;ASK]
                  [;EXPAND]
                  [;NOCCTL]
                  [;NOPAGE]
                  [;PURGE]
                  [;SAVECCTL]
```

MERGE Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to be merged. Turn to Chapter 2 for information on working with subsets.
filename	This parameter specifies the name of the file to create. If the disk file exists, the user will be asked to purge it.
recsize	This parameter specifies the record size for the output file. Negative for bytes. The default is 132 byte records.
blkfact	This parameter specifies the blocking factor for the new file. If omitted, the optimum blocking factor will be determined.
F	This parameter indicates that the keep file should have fixed length records. This is the default.
V	This parameter indicates that the keep file should have variable length records.
ASCII	This parameter indicates that the keep file should be ASCII. This is the default.
BINARY	This parameter indicates that the keep file should be BINARY.
NOCCTL	If this parameter is specified, the keep file will be built without **CCTL**, and no carriage control information will be written to it. By default, the file will contain the carriage control information from the spool file.
ASK	This parameter prompts at each file to include for processing.
EXPAND	This parameter expands line skipping carriage control to blank lines.
SAVECCTL	This parameter keeps the carriage control in the first byte of each record for non-cctl files. This parameter must be used to save carriage control to labeled tapes.
NOPAGE	This parameter suppresses form feeds between each spool file in the merged output. This parameter is ignored if the output file does not use carriage control.
DELIM	This parameter specifies a delimiter string will be inserted between each spool file. The delimiter string will not appear before the first or after the last spool files.
numeric	A value between 0 and 255 which corresponds to an ASCII character value. The **%** is used to denote octal values.
string	A character string to be inserted. The string should be enclosed in quotes.

Continued

Parameter	Description
REPEAT	This parameter causes the string to be repeated across the full width of the spool file.
range	This parameter specifies the range of lines to be merged. If this parameter is not specified, all lines will be merged. Range is expressed as one of the following: **ALL** Selects all lines in the spool file. @ Selects all lines in the spool file. **line** Line designator. A line is one of the following: **line#** A positive integer specifying a particular line in the file. The first line in a spool file is line **0**. **FIRST** The first line in the spool file. **LAST** The last line in the spool file. **/line** Causes a range of lines to be listed. Must be equal to or greater than the first specified line.
outpri	This parameter specifies the new priority of all successfully merged spool files. Spool files not merged will not be changed.
PURGE	This parameter purges all successfully merged spool files.

MERGE Examples

In the following example, all files named **OFFLINE** are merged into a disk file.

```
O> MERGE OFFLINE;FILE=BIGFILE
```

In the following example, all **$STDLIST**s are merged together into a new spool file, suppressing the form feed between each file.

```
O> :FILE ALLLISTS;DEV=LP
O> MERGE $;FILE=*ALLLISTS;NOPAGE
```

In the following example, all files created by **JOE,MGR.MVS** are merged and delimited with the string **"Howdy"**.

```
O> MERGE JOB.MGR.MVS;FILE=LPFILE;DELIM="Howdy"
```

In the following example, a set of **$STDLIST**s are appended to the file **HOLDSTDL.DATA**, and the file is created if it does not exist.

```
O> :FILE HOLDSTDL.DATA;ACC=APPEND;DISC=10000
O> MER $STDLIST;FILE=*HOLDSTDL.DATA
```

Note. If the **HOLDSTDL.DATA** file existed, the records would have been appended to the end. If the file did not exist, it would have been built with the example size of **10,000** records.

MOVE

The **MOVE** command moves one or more spool files to a remote node. When the command is first executed, NBSpool will contact the remote computer and establish a connection. Any subsequent access to that node will not require an additional connection. This command may be stopped at any time by pressing **Ctrl+y**. If a move is in process, the unfinished remote copy will be purged.

The **MOVE** command looks at the **SPSAVE** flag and places spool files into the **SPSAVE** state after moving them if you have enabled the following **SET** option:

```
0>  SET  SPSAVE=T
```

Note. This flag is not a global flag. It must be set at the beginning of each NBSpool session.

If NBSpool is running in a NetBase environment, a remote session to the node receiving the spool file is not required since NetBase will automatically handle the transfer. The node name or node number used in the command should be consistent with the node names or numbers used in the NetBase configuration.

If NetBase is not installed, the RPM service of **NS** will be used to create the **NBSPOOLT** process on the remote computer. A **DSLINE** command is required to specify the destination node. Programmatic logons are supported if the **LOGON=** parameter is specified in the **DSLINE** command and a remote session does not exist in the environment.

The **MOVE** command differs from the **COPY** command in that the original spool file will be purged upon successful completion of the copy. The new spool files will have their job/session numbers changed to include an apostrophe, for example **#J'101**.

If the **NEWTIME** parameter is specified, the remote spool files will have a creation date/time of the current time. This allows the user to order the spool files for printing on systems with the native mode spooler, since the **NMS** prints in creation sequence within a priority.

If a spool file is to be transferred to an HP-UX computer, the **DEST** or **HPUX** parameter must be specified. Note that the **OUTPRI** and **COPIES** parameters are translated to the UNIX equivalents. Other parameters affecting the destination spool file are not applicable. This feature requires the HP-UX option to be purchased.

If you are moving spool files via LPR/LPD, the destination can be followed by an option string that will be sent to the remote system. The option string must be in the following format:

```
"dest -option1 [ -option2[...]]"
```

For example:

```
lj -olandscape -tHello.
```

To alter the printing characteristics of a spool file destined for a NetWare printer, the **PRINTER** parameter can be used. As with the **PRINT** command, various control strings can be specified, as well as paging control. Turn to the "Running PRINTDEF" section in this chapter for more information.

On some slow network links, it is possible that a **MOVE** command will continually encounter errors. These errors can be reduced by adjusting the size of the spool file transfer packets. By setting the JCW **SPOOLPACKET** to **1024** or any multiple of **1024** up to **8192**, these errors can be eliminated. Set this JCW before entering NBSpool.

Destinations for the MOVE Command

The following sections provide information on the **MOVE** command's syntax and parameters for the several different destination types. These destinations include HP 3000, UNIX, NetWare/iX, NFS/iX, Gateway, LAN-connected printer and LPR/LPD. The parameters are defined after each syntax destination type. Moving spool files to some of the destinations listed in this section may require additional utilities. Contact your Quest Software sales representative for more information.

MOVE Syntax for HP 3000 Destinations

```
O> MOVE [subset] TO {nodename} [;PRI   =outpri       ]
                    {nodenum } [;COPIES=copies       ]
                    {*envname} [;DEV   ={class}      ]
                               [        {ldev }      ]
                               [;DUP                 ]
                               [;NEWTIME             ]
                               [;NOENV               ]
                               [;REMOTEUSER          ]
                               [;TIMEOUT=seconds     ]
                               [;RETRY               ]
                               [;RETRYDELAY=seconds  ]
```

MOVE Parameters for HP 3000 Destinations

Parameter	Description
subset	This parameter specifies the subset of spool files to be copied. Turn to Chapter 2 for information on using subsets.
nodename	This parameter specifies the name of the destination node. This is the name defined in the NetBase configuration, not the network transport node name. If NetBase is not installed, the node name is the **DSLINE** environment id.
nodenum	This parameter specifies the number of the destination node. This is the node number defined in the NetBase configuration.
***envname**	This parameter specifies that the node name is an environment created with a **DSLINE** command. Used to access nodes not defined in the NetBase configuration. If NetBase is not installed, this parameter is the same as **nodename** above.

Continued

Parameter	Description
outpri	This parameter specifies the output priority used when creating the spool file on the remote computer. This must be between **1** and **13**.
copies	This parameter specifies the number of copies used when creating the spool file on the remote computer. This must be between **1** and **127**.
class	This parameter specifies the device class used when creating the spool file on the remote computer. This must be a valid spooled device class.
ldev	This parameter specifies the logical device number used when creating the spool file on the remote computer. This must be a valid spooled output device.
DUP	This parameter causes a spool file to be sent multiple times to the destination if the number of copies is greater than one. Useful if the destination does not support multiple copy printing.
NEWTIME	This parameter changes the creation date and time to be the current time when creating the spool file on the remote computer. This is most useful when creating native mode spool files to make the print order be the same as the move order.
NOENV	This parameter prevents inserting Term Type file initialization strings from being added to the output data. By default, these strings will be inserted in the output data.
REMOTEUSER	This parameter causes the creator of the spool file to be changed to the remote session's name.
seconds	The number of seconds to wait for a response from the remote system before aborting a transfer. This should only be used if errors or hanging occurs during moves. A value of **0** disables the timeout entirely.
RETRY	Specifies that during a **MOVE**, if the destination node is unavailable, a delay of five seconds should be followed by an attempt to reconnect.
RETRYDELAY	Specifies **RETRY**, as above, with a delay in seconds as specified, instead of the default time of five seconds.

MOVE Syntax for UNIX Destinations

```
O> MOVE [subset] TO nodename  ;HPUX="options"
                                [;COPIES=copies       ]
                                [;DEST="destination"  ]
                                [;DUP                 ]
                                [;PRINTER=printername ]
                                [;START=record        ]
                                [;TIMEOUT=seconds     ]
                                [;RETRY               ]
                                [;RETRYDELAY=seconds  ]
```

MOVE Parameters for UNIX Destinations

Parameter	Description
subset	This parameter specifies the subset of spool files to be copied. Turn to Chapter 2 in this guide for information on using subsets.
nodename	This parameter specifies the name of the HP-UX system as defined in the network directory in **NMMGR** utility.
options	A string passed to the remote HP-UX computer. This string is passed verbatim to the **lp** command when the spool file is submitted for printing. The quotes are mandatory.
copies	This parameter specifies the number of copies used when creating the spool file on the remote computer. Must be between **1** and **127**.
destination	This parameter specifies the destination printer on the remote HP-UX computer. Same as specifying the **-d** option on an **lp** command. This requires the **HPUX** option.
DUP	This parameter causes a spool file to be sent multiple times to the destination if the number of copies is greater than one. Useful if the destination does not support multiple copy printing.
HPUX	This parameter specifies that the target computer is an HP-UX computer. The options string is optional.
printername	This parameter specifies the name of a configured printer definition. Printer definitions are maintained by the **PRINTDEF** program.
line	This parameter specifies the number of the line or record at which you want NBSpool to begin moving the file.

Continued

Parameter	Description
seconds	This parameter specifies the number of seconds to wait for a response from the remote system before aborting a transfer. This should only be used if errors or hanging occurs during moves. A value of **0** disables the timeout entirely.
RETRY	Specifies that during a **MOVE**, if the destination node is unavailable, a delay of five seconds should be followed by an attempt to reconnect.
RETRYDELAY	Specifies **RETRY**, as above, with a delay in seconds as specified, instead of the default time of five seconds.

MOVE Syntax for NetWare/iX Destinations

```
O> MOVE [subset] TO server/queue [;COPIES=copies       ]
                                 [;DUP                 ]
                                 [;NOENV               ]
                                 [;FORM={formname}     ]
                                 [      {*       }     ]
                                 [;PRINTER=printername ]
                                 [;RETRY               ]
                                 [;RETRYDELAY=seconds  ]
```

MOVE Parameters for NetWare/iX Destinations

Parameter	Description
subset	This parameter specifies the subset of spool files to be copied. Turn to Chapter 2 for information on using subsets.
server	This parameter specifies the name of a Novell NetWare server. This parameter requires NetWare/iX product from HP and the NBSpool NetWare module to be installed.
queue	This parameter specifies the name of the queue where the spool file will be sent. The slash (*/*) is required to separate the server and queue name
copies	This parameter specifies the number of copies used when creating the spool file on the remote computer. Must be between **1** and **127**.
DUP	This parameter causes a spool file to be sent multiple times to the destination if the number of copies is greater than one. Useful if the destination does not support multiple copy printing.
NOENV	This parameter prevents inserting Term Type file initialization strings from being added to the output data. By default, these strings will be inserted in the output data.
formname	This parameter specifies the form name used when the destination is a NetWare print queue. Must be a valid name between **1** and **12** characters long. A form number may also be specified. Form numbers are integers between **0** and **255**. The form number is generally more useful than a form name since the number prevents a form from printing if it is not mounted.
*****	This parameter specifies the spool file's **FORMID** should be used as the NetWare form name.

Continued

Parameter	Description
printername	The name of a configured printer definition. Printer definitions are maintained by the **PRINTDEF** program.
RETRY	Specifies that during a **MOVE**, if the destination node is unavailable, a delay of five seconds should be followed by an attempt to reconnect.
RETRYDELAY	Specifies **RETRY**, as above, with a delay in seconds as specified, instead of the default time of five seconds.

MOVE Syntax for Quest Gateway Destinations

```
O> MOVE [subset] TO gateway ;QUEUE={server/queue}
                                   {path        }[;COPIES=copies       ]
                                                 [;NOENV               ]
                                                 [;DUP                 ]
                                                 [;PRINTER=printername ]
                                                [;START=record        ]
                                                [;TIMEOUT=seconds     ]
                                                [;RETRY               ]
                                                [;RETRYDELAY=seconds  ]
```

MOVE Parameters for Quest Gateway Destinations

Parameter	Description
subset	This parameter specifies the subset of spool files to be copied. Turn to Chapter 2 for information on subsets.
gateway	This parameter specifies the node name of a Quest NetWare Printer gateway system. This is a standalone PC used to convert TCP/IP to IPX for connecting to NetWare servers.
QUEUE	If this parameter is specified, the destination is assumed to be a Quest gateway. This parameter specifies the destination server and queue for the spool file.
server	This parameter specifies the name of a Novell NetWare server.
queue	This parameter specifies the name of the queue where the spool file will be sent. The slash (*/*) is required to separate the server and queue name.
path	This parameter specifies the fully qualified NetWare server path specifying the location to which the spool file is being downloaded.
copies	This parameter specifies the number of copies used when creating the spool file on the remote computer. This must be between **1** and **127**.
NOENV	This parameter prevents inserting Term Type file initialization strings from being added to the output data. By default, these strings will be inserted in the output data.
DUP	This parameter causes a spool file to be sent multiple times to the destination if the number of copies is greater than one. Useful if the destination does not support multiple copy printing.

Continued

Parameter	Description
printername	This parameter specifies the name of a configured printer definition. Printer definitions are maintained by the **PRINTDEF** program.
record	This parameter specifies the first record in the spool file that will be sent to the remote system or printer. The **LIST** command can be used to determine this number.
seconds	This parameter specifies the number of seconds to wait for a response from the remote system before aborting a transfer. This should only be used if errors or hanging occurs during moves. A value of **0** disables the timeout entirely.
RETRY	Specifies that during a **MOVE**, if the destination node is unavailable, a delay of five seconds should be followed by an attempt to reconnect.
RETRYDELAY	Specifies **RETRY**, as above, with a delay in seconds as specified, instead of the default time of five seconds.

MOVE Syntax for LAN-connected Printer Destinations

```
O> MOVE [subset] TO nodename ;PTYPE=printertype
                                        [;COPIES=copies       ]
                                        [;NOENV               ]
                                        [;DUP                 ]
                                        [;PRINTER=printername ]
                                        [;START=line          ]
                                        [;TIMEOUT=seconds     ]
                                        [;RETRY               ]
                                        [;RETRYDELAY=seconds  ]
```

MOVE Parameters for LAN-connected Printer Destinations

Parameter	Description
subset	This parameter specifies the subset of spool files to be copied. Turn to Chapter 2 for information on using subsets.
nodename	This parameter specifies the name of the printer as defined in the network directory entry in the **NMMGR** utility.
printertype	This parameter specifies the type of LAN connected printer. If specified, the destination node is a printer directly attached to the LAN. Below is a list of ports to which NBSpool sends successfully: **Print Server/Manufacturer** — **Ptype** — **Port** Digital Netprint — 10001 or 10003 — N/A Emulex, Netjet — 2501 — N/A Emulex, NetQ — 2501 — Parallel Emulex, NetQ — 2502 — Serial Hewlett Packard — LJ — N/A JetXPrint 104 — 10001 — N/A Kentek — KENTEK — N/A LanPress — 1230 — Parallel LanPress — 1231 — Serial Lantronix EPS4 — 3001 — N/A Milan Fast Port — 2000 thru 2002 — N/A Netport — 3001 — Parallel 1 Netport — 3002 — Parallel 2 Netport — 2501 — Serial 1 QMS — QMS — N/A Xyplex — XYPLEX or 2100 — N/A
copies	This parameter specifies the number of copies used when creating the spool file on the remote computer. Must be between **1** and **127**.

Continued

Parameter	Description
NOENV	This parameter prevents inserting Term Type file initialization strings from being added to the output data. By default, these strings will be inserted in the output data.
DUP	This parameter causes a spool file to be sent multiple times to the destination if the number of copies is greater than one. Useful if the destination does not support multiple copy printing.
printername	This parameter specifies the name of a configured printer definition. Printer definitions are maintained by the **PRINTDEF** program.
PTYPE	This parameter instructs NBSpool that this is a LAN-connected printer
record	This parameter specifies the first record in the spool file that will be sent to the remote system or printer. The **LIST** command can be used to determine this number.
seconds	This parameter specifies the number of seconds to wait for a response from the remote system before aborting a transfer. This should only be used if errors or hanging occurs during moves. A value of **-1** disables the timeout entirely.
RETRY	Specifies that during a **MOVE**, if the destination node is unavailable, a delay of five seconds should be followed by an attempt to reconnect.
RETRYDELAY	Specifies **RETRY**, as above, with a delay in seconds as specified, instead of the default time of five seconds.

MOVE Syntax for NFS/iX Routed Destinations

```
O> MOVE [subset] TO nodename    ;NFS
                                ;DEST="device[ user]"
                               [;COPIES=copies       ]
                               [;NOENV               ]
                               [;PRINTER=printername ]
                               [;START=record        ]
                               [;RETRY               ]
                               [;RETRYDELAY=seconds  ]
```

MOVE Parameters for NFS/iX Destinations

Parameter	Description
subset	This parameter specifies the subset of spool files to be copied. Turn to Chapter 2 for information on using subsets.
nodename	This parameter specifies the name of the UNIX system as defined in the network directory field in the **NMMGR** utility.
NFS	This parameter enables the routing of a spool file to an NFS server supporting the PCNFS daemon. As a result of this parameter, NBSpool converts the MPE spool file (carriage control data), and then calls **PCNFS3K.NFSPUB.NETBASE** which connects with the NFS server PCNFS daemon.
device	This parameter specifies the printer name or device where the spool file is being routed. The printer name must exist on the NFS service where the report will print.
user	This parameter specifies the user name assigned to the spool file where it is created on the NFS server. This must be a valid user name on the server system.
copies	This parameter specifies the number of copies used when creating the spool file on the remote computer. This must be between **1** and **127**.
NOENV	This parameter prevents inserting Term Type file initialization strings from being added to the output data. By default, these strings will be inserted in the output data.
printername	This parameter specifies the name of a configured printer definition. Printer definitions are maintained by the **PRINTDEF** program.

Continued

Parameter	Description
record	This parameter specifies the first record in the spool file that will be sent to the remote system or printer. The **LIST** command can be used to determine this number.
RETRY	Specifies that during a **MOVE**, if the destination node is unavailable, a delay of five seconds should be followed by an attempt to reconnect.
RETRYDELAY	Specifies **RETRY**, as above, with a delay in seconds as specified, instead of the default time of five seconds.

MOVE Syntax for LPR/LPD Routed Destinations

```
O> MOVE [subset] TO nodename    ;LPR
                               ;DEST="device[ options]"
                               [;COPIES=copies       ]
                               [;NOBANNER            ]
                               [;NOENV               ]
                               [;PRINTER=printername ]
                               [;START=record        ]
                               [;TIMEOUT=seconds     ]
                               [;RETRY               ]
                               [;RETRYDELAY=seconds  ]
```

MOVE Parameters for LPR/LPD Routed Destinations

Parameter	Description
subset	This parameter specifies the subset of spool files to be moved. Turn to Chapter 2 for information on using subsets.
nodename	This parameter specifies the node name defined in the network directory field in the **NMMGR** utility.
copies	This parameter specifies the number of copies used when creating the spool file on the remote computer. This must be between **1** and **127**.
NOBANNER	This parameter prevents a banner page from being emitted when sending to the NetWare PLPD process.
NOENV	This parameter prevents Term Type file initialization strings from being added to the output data. By default, these strings will be inserted in the output data.
options	This parameter specifies a string passed to the remote UNIX computer. This string is passed verbatim to the **lp** command when the spool file is submitted for printing. The quotes are mandatory.
printername	This parameter specifies the name of a configured printer definition. Printer definitions are maintained by the **PRINTDEF** program.
record	This parameter specifies the first record in the spool file that will be sent to the remote system or printer. The **LIST** command can be used to determine this number.

Continued

Parameter	Description
seconds	This parameter specifies the number of seconds to wait for a response from the remote system before aborting a transfer. This should only be used if errors or hanging occurs during moves. A value of **-1** disables the timeout entirely.
device	This parameter specifies the destination device name. Case is significant.
ASK	This parameter prompts at each file to include for processing.
FORMS=true/false	For LPR and LPD routes only, will generate a mount forms message on the console if one is needed.
RETRY	Specifies that during a MOVE, if the destination node is unavailable, a delay of five seconds should be followed by an attempt to reconnect.
RETRYDELAY	Specifies RETRY, as above, with a delay in seconds as specified, instead of the default time of five seconds.

MOVE Examples

In the following example, all spool files named **ETERROR** are moved to node **MASTER**. This command differs from the copy command in that once a spool file has been successfully transferred, it is automatically purged from the local computer.

```
:DSLINE MASTER;LOGON=NBSPOOL,OPERATOR.SYS
ENVIRONMENT 1: MASTER.QUEST.SOFTWARE
:RUN NBSPOOL.PUB.NETBASE
NetBase Spooling Utility [0.9.1]  Update 7  Copyright 1988 QUEST Software

QUEST Software, Inc.

O> MOVE ETERROR TO *MASTER
2 Spool files Qualify

DFID    FILENAME  JOB     USER NAME         SECTORS  STATUS
-------------------------------------------------------------------
#O3234  ETERROR  #J969    OPERATOR.SYS          236  Moved as #O55
#O3237  ETERROR  #S408    MANAGER.SYS           236  Moved as #O56
```

The **MOVE** command is often used in background jobs to continually move spool files from one computer to another. If a line or computer goes down, it is often preferable to have NBSpool keep trying to connect until the remote computer comes back up. The **DSLINE** command with the **LOGON=** will cause NBSpool to automatically log on to the remote machine with a “programmatic”

logon. If the remote computer **ENGINE** goes down, NBSpool will logon again without any operator intervention.
In the following example, some sample JCL do this.

```
!JOB MOVEJOB,OPERATOR.SYS
!
!DSLINE ENGINE;LOGON=SPXFER,OPERATOR/SECRET.SYS
!
!RUN NBSPOOL.PUB.NETBASE
XEQ;WAIT=60
ERROR IGNORE
MOVE %8-14 TO *ENGINE
END
EXIT
!EOJ
```

In the following example, the Quest Novell PC Gateway Product moves all spool files for device class **RLASER** to Novell Server **MYSERVER**, Printer Queue HPLJQ.

```
O> MOVE DEV=RLASER TO GATEWAY;QUEUE=MYSERVER/HPLJQ

1 Spool files Qualify

DFID    FILENAME  JOB     USER NAME         SECTORS  STATUS
-----------------------------------------------------------------
#O3434  APREPORT #J972    OPERATOR.SYS          272  Sent
```

In the following example, all spool files for device class **LASER** are moved to a LAN-connected printer with a nodename of **LJPRINT**, such as a LaserJet.

```
O>  MOVE DEV=LASER TO LJPRINT;PTYPE=LJ
```

In the following example, all spool files for device class **RPRINT** are moved to a Novell File Server called **NOVELL**, with a print queue called **LASER**.

```
O> MOVE DEV=RPRINT TO NOVELL;LPR;DEST="LASER"
```

PRINT

The **PRINT** command allows a user to print a spool file on a printer attached to a local terminal or PC. Every attempt has been made to reproduce the output of normal line printers on local printers. Most carriage control directives are translated to the appropriate line and form feed commands. In normal operation, the **PRINT** command will purge a spool file once a copy has been successfully sent to a printer. The **SAVE** or **NEWPRI** parameters will override this default. Also, the **COPIES** parameter will cause multiple copies to be printed. As a spool file is printed, the percentage completed will be updated after every 8 KB. Spool files smaller than this will always show **0%** complete.

PRINT Set Up and Control

The **PRINT** command uses the built in functionality of HP terminals and PC-based terminal emulators to send a spool file to a printer attached to the terminal or PC. Before this command can be used, the terminal must be configured as follows:

- The **to devices** must be set properly under the **device control** menu. See the terminal or emulator software manual for more details.
- The printer must be properly configured.
- The printer must be turned on. If it is not turned on, the terminal may not be able to determine if it is online or not.
- The user must be logged on with **TERM=10** or **TERM=24**.
- To print graphics, disable **ENQ/ACK**.
- To stop printing in progress, you must press **Return** during the print operation. This will cause some data to echo to the terminal.

Printer Definitions allow more control over the specific features of a printer. For example, HP LaserJet printers can print in compressed or landscape mode by sending the proper PCL sequences. The **PRINTDEF** program will allow new printer definitions to be added. Currently the following definitions are supplied:

Printer Definitions	Description
LJ	Print **80** column portrait
LJ132	Print **132** column portrait
LJ8LPI	Print **132** column portrait, **80** lines per page
LJLAND	Print **132** column landscape, **45** lines per page
RAW	Passes spool files with HP 3000 escape sequences, does not do PCL conversion

By default, the **PRINT** command assumes **60** lines per page, **6** lines per inch, with automatic page ejects. **PRINTDEF** can be used to override these defaults. The **LPP** parameter can override the lines per page without requiring a printer definition. **RAW** is used to pass spool files with HP 3000 escape sequences, and does not do any PCL conversion.

PRINT Syntax

```
O> PRINT subset [;NEWPRI =newpri     ]
                [;COPIES =copies     ]
                [;PRINTER=printername]
                [;LPP    =lines      ]
                [;BLOCK  =bytes      ]
                [;ASK                ]
                [;NOCCTL             ]
                [;SAVE               ]
```

User Tip. This command may be abbreviated to **PR**.

PRINT Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to be printed. Turn to Chapter 2 for information on using subsets.
newpri	This parameter specifies the new output priority of the original spool file after it is successfully printed. This may be a value from **0** to **14**.
copies	This parameter specifies the number of copies of the spool file to print. May be from **1** to **32767**.
printername	This parameter specifies the name of a configured printer definition. Printer definitions are maintained by the **PRINTDEF** program.
lines	This parameter specifies the number of lines per page. This does not include lines skipped by automatic page ejects.

Continued

Parameter	Description
bytes	This parameter specifies the maximum number of bytes to send to the terminal at one time. This parameter should be used if some of the data appears on the terminal instead of printing or other protocol problems appear. This can be between **32** and **256**.
ASK	This parameter prompts at each file to include for processing.
NOCCTL	This parameter ignores all carriage control directives in a spool file, except **%320**, which is **no space, no return**. This parameter is useful for dumping binary data to a printer, such as graphics.
SAVE	This parameter prevents the spool file from being purged upon successful completion of a print job.

PRINT Examples

In the following example, all spool files **QUADLIST** created by the logged on user at **132** columns, **8** lines per inch on a HP LaserJet, are printed.

```
O> PRINT QUADLIST,#*;PRINTER=LJ8LPI
```

or

```
O> PR QUADLIST,#*;P=LJ8LPI
```

In the following example, all **$STDLIST**'s created by users in the AP account are printed, and then their priorities are altered to **13**.

```
O> PRINT $,@.AP;NEWPRI=13
```

PRINTDEF Program

The **PRINTDEF** program enables users to customize local printing and LAN printing. Printer definitions can be setup to provide users the ability to specify how their reports should be printed. Default definitions exist for printing to HP laser printers allow reports to be printed in landscape or portrait, 8 lines per inch.

To run **PRINTDEF**, type:

```
:RUN PRINTDEF.PUB.NETBASE
Maintain Printer Definitions  [X.X]  Update X  (C) QUEST Software 1991

Enter a printer definition (or COPY, DELETE, LIST, PRINT, EXIT)
```

The **PRINTDEF** program recognizes the following commands:

Command	Description
COPY	This command allows you to copy an existing printdef to a new name so that you can make minor changes without reentering it completely.
DELETE ***definition name***	This command deletes a printer definition.
LIST ***definition name***	This command lists all printer definition names or one printer definition. This command may be abbreviated to **L**.
PRINT ***definition name***	This command prints all printer definition names or one printer definition to the formal file designator **PDEFLIST**. This command may be abbreviated to **P**.
EXIT	This command exits the **PRINTDEF** program. This command may be abbreviated to **E**.
//	This command aborts the current operation.

Anything else entered at the command line is assumed to be a printer definition name. The program will enter the **MODIFY** mode if the printer definition name exists. If the printer definition name does not exist, the program will enter the **ADD** mode. If a command is mistyped and the program inadvertently enters the **ADD** mode, simply enter (***//***) to return to the command line prompt.

PRINTDEF Fields

After a command is issued, the **PRINTDEF** program will prompt you for or display information for the specified printer definition. The defaults for these fields are displayed in parentheses.

Field	Description
Description	This entry is an optional description of the printer definition. This entry can not exceed **36** characters in length.
Lines per page (60)	The lines per page is used by NBSpool in converting a spool file from carriage control to flat printer output. NBSpool will expand form feed carriage control to as many writes as is necessary to fill a page.
Lines per inch (6)	The lines per inch is used by NBSpool in converting a spool file from carriage control to flat printer output.
Transparent mode (N)	If this is set to **Y**, NBSpool will not convert an MPE spool file. The spool file is printed as is. This is useful if the spool file has embedded escape sequences for the HP LaserJet.
Suppress C/R at end of line (N)	If this is set to **Y**, NBSpool does not add a carriage return at the end of each line printed to the local printer.
Suppress stripping of spaces (N)	If this is set to **Y**, NBSpool does not strip trailing spaces when the spool file is printed to the local printer.
Suppress final page eject (N)	If this is set to **Y**, NBSpool ignores a page eject if it is at the end of the spool file.
Suppress end-of-page formfeed (Y)	If this is set to **Y**, NBSpool ignores end-of-page formfeed and the lines per page value is not used.
Cannot print on perforation (N)	If this is set to **Y**, NBSpool prints on perforations.
Pass thru VFC control codes (N)	If this is set to **Y**, NBSpool passes VFC codes with the file to the printer.
Suppress first prespaced LF (N)	If this is set to **Y**, NBSpool ignores the first linefeed.

Continued

Field	Description
Send LaserJet page controls (Y)	NBSpool will send LaserJet page controls that allow printing more than **60** lines per page if perforation skipping is disabled in the spool file.
Strip PJL escape sequences (N)	If this is set to **Y**, NBSpool removes PJL sequences from a spool file. You would only need to use this if a printer is set to "postscript" and PJL is embedded in the spool file with PCL escape sequences. Another scenario for which you might want to use this is when postscript errors occur when printing non-postscript spool files.
Convert Roman-8 to IBM PC-8 (N)	NBSpool converts accented characters (**àáâçèü**) to be printed on a printer set to the PC-8 character set.
Send before printing	The control sequences to be sent preceding the file.
Send after printing	The control sequences to be sent following the file.

PRINTDEF Control Strings

Control strings may be defined to be sent to the printer before and after the spool file is printed. The control string is entered and displayed by entering or displaying the numeric value of the non-printable characters and by delimiting the printable characters with quotes. The two need to be separated by commas. For example:

```
27,"(s0p12H",27,"&l1H"
```

The control string may be up to **192** ASCII characters long. A long control string may be entered in one of two ways. Either continue typing until the entry is complete, allowing the terminal to perform wrap around on the display:

```
Send before printing :
27,"(s0p12H",27,"&l1H",27"&l#Z",27,"&a0G",27,"*c100G",27, "*t100R"
```

or enter two ampersands (**&&**) at the end of the line to signify a continuation line:

```
Send before printing : 27,"(s0p12H",27,"&l1H",27,"&l#Z",27,&&
                       "&a0G",27,"*c100G",27,"*t100R"
```

Note. Typing long control strings correctly can be challenging. If you prefer, you can type the escape sequences into a flat ASCII file. Keep that file unnumbered, and reference it by its fully qualified name (**file.group.account**) in the fields **Send Before Printing** or **Send After Printing**. For example, if you typed your control sequences into a file named **LJ5LAN.DATA.NETBASE** and kept it unnumbered, you would enter its name in the field:

```
Send Before Printing : LJ5LAN.DATA.NETBASE
```

PRINTDEF Example

In the following example, all spool files **QUADLIST** created by the logged on user at **132** columns, **8** lines per inch on a HP LaserJet, are printed.

```
O> MOVE QUADLIST,#*;PRINTER=LJ8LPI
```

In the following example, all currently defined printer definitions are listed.

```
:RUN PRINTDEF.PUB.NETBASE

Maintain Printer Definitions  [0.9.1]  Update 0  (C) QUEST Software 1991

Enter a printer definition (or LIST, DELETE, EXIT) LIST

LJ              HP Laserjet 80 Column Portrait
LJ132           HP Laserjet 132 column Portrait
LJ8LPI          HP Laserjet 132 column 8 LPI
LJLAND          HP Laserjet 132 column Landscape
LAND66          Landscape 66 lines
RAW             Raw
```

In the following example, the details of the printer definition **LJ8LPI** are listed.

```
Enter a printer definition (or LIST, DELETE, EXIT) LIST LJ8LPI

                         LJ8LPI : HP Laserjet 132 column 8 LPI

                 Lines per page : 80
                 Lines per inch : 8
               Transparent mode : N
    Suppress C/R at end of line : N
   Suppress stripping of spaces : N
      Suppress final page eject : N
  Suppress end-of-page formfeed : Y
    Cannot print on perforation : N
    Pass thru VFC control codes : N
    Suppress first prespaced LF : N
    Send LaserJet page controls : N
     Strip PJL escape sequences : N
    Convert Roman-8 to IBM PC-8 : N

Send before printing :
27,"E",27,"&l8d0O",27,"(0U",27,"(s0p16.66h8.5v0s0b0T"

Send after printing : 27,"E"
```

In the following example, the new printer definition **LJP** is added.

```
Enter a printer definition (or LIST, DELETE, EXIT) LJP

                              Add   LJP

                      Description : HP Laserjet 80 column Portrait
              Lines per page (60) :
               Lines per inch (6) : 8
             Transparent mode (N) :
  Suppress C/R at end of line (N) :
 Suppress stripping of spaces (N) :
    Suppress final page eject (N) :
Suppress end-of-page formfeed (N) :
  Cannot print on perforation (N) :
  Pass thru VFC control codes (N) :
  Suppress first prespaced LF (N) :
  Send LaserJet page controls (N) :
   Strip PJL escape sequences (N) :
  Convert Roman-8 to IBM PC-8 (N) :

Send before printing : 27,"&l0O"

 Send after printing :
```

In the following example, the printer definition **LJP** is modified.

```
Enter a printer definition (or LIST, DELETE, EXIT) LJP

                           Modify   LJP

                 Old description  : HP Laserjet 80 column Portrait
                      Description  :
              Lines per page (60) :
               Lines per inch (8) :
             Transparent mode (N) :
  Suppress C/R at end of line (N) :
 Suppress stripping of spaces (N) :
    Suppress final page eject (N) :
Suppress end-of-page formfeed (N) :
  Cannot print on perforation (N) :
  Pass thru VFC control codes (N) :
  Suppress first prespaced LF (N) :
  Send LaserJet page controls (N) :
   Strip PJL escape sequences (N) :
  Convert Roman-8 to IBM PC-8 (N) :

Send before printing : 27,"&l0O"

           Change to :

 Send after printing : 27,"&l1O"
```

In the following example, the printer definition **LJP** is printed.

```
Enter a printer definition (or LIST, DELETE, EXIT) PRINT LJP
```

In the following example, the printer definition **LJP** is deleted.

```
Enter a printer definition (or LIST, DELETE, EXIT) DELETE LJP
```

In the following example, the new printer definition **LAND66** is added.

```
Enter a printer definition (or LIST, DELETE, EXIT) LAND66

                            Add   LAND66

                     Description : LANDSCAPE 66 LINES
              Lines per page (60) : 66
               Lines per inch (6) : 12
             Transparent mode (N) :
  Suppress C/R at end of line (N) :
 Suppress stripping of spaces (N) :
    Suppress final page eject (N) :
Suppress end-of-page formfeed (N) :
  Cannot print on perforation (N) :
  Pass thru VFC control codes (N) :
  Suppress first prespaced LF (N) :
  Send LaserJet page controls (N) :
   Strip PJL escape sequences (N) :
  Convert Roman-8 to IBM PC-8 (N) :


Send before printing :
27,"E",27,"&l1O",27,"(0U",27,"(s0p16.66h8.5v0s0b0T",
27,"&l5C"

Send after printing : 27,"E"
```

In the following example, the new printer definition **RAW** is added.

```
Enter a printer definition (or LIST, DELETE, EXIT) RAW

                              RAW : Raw

                  Lines per page : 60
                  Lines per inch : 6
                Transparent mode : Y
      Suppress C/R at end of line : N
     Suppress stripping of spaces : Y
        Suppress final page eject : Y
    Suppress end-of-page formfeed : Y
      Cannot print on perforation : Y
      Pass thru VFC control codes : N
      Suppress first prespaced LF : N
      Send LaserJet page controls : N
       Strip PJL escape sequences : N
      Convert Roman-8 to IBM PC-8 : N

Send before printing : 27,"E"

Send after printing : 27,"E"
```

PURGE

The **PURGE** command purges all qualified spool files. The **PURGE** command operates only on spool files in the **READY** state. The execution of the command may be stopped by pressing **Ctrl+y**. If this command is run interactively, and more than one spool file qualifies, a question will be asked to confirm the purge. This helps to prevent accidentally deleting spool files.

The **PQ** form of this command streamlines the purge operation in that no questions are asked, and only one line of output is generated. This form of the command should be used with caution, since one can easily purge a large number of spool files.

PURGE Syntax

```
O> PURGE subset [;ASK   ]
                [;EMPTY ]
                [;NOLIST]
                [;SHOW  ]

O> PQ subset    [;EMPTY]
```

User Tip. This command may be abbreviated to **P**.

PURGE Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to be purged. Turn to Chapter 2 for information on using subsets.
ASK	This parameter prompts at each file to include for processing.
EMPTY	This parameter purges only empty spool files.
NOLIST	This parameter suppresses the listing of spool files being purged.
SHOW	This parameter causes the list of qualifying files to be displayed before asking to purge the files. This parameter overrides the **ASK** and **NOLIST** parameters.

PURGE Examples

In the following example, the **SHOW** command is first used to display the files that will be purged.

```
O> SHOW LP
4 Spool files Qualify

DFID    FILENAME  JOB     USER NAME     SECTORS  DEVICE  PRI  WHEN
CREATED
-------------------------------------------------------------------------
--
#O3445  LP        #S'457   MGR.NETBASE        48  LP        1 10/06/88
17:04
#O3436  LP        #S457    MGR.NETBASE        48  LP        1 10/06/88
17:04
#O3450  LP        #S'457   MGR.NETBASE        48  LP        1 10/06/88
17:04
#O3451  LP        #S'457   MGR.NETBASE        48  LP        1 10/06/88
17:04

Total of 192 sectors for displayed spool files
```

In the following example, the spool files to be purged are specified using selection criteria. If only one spool file qualifies, NBSpool will proceed to purge it. If more than one qualify, NBSpool will ask for permission to purge the spool files.

```
O> PURGE 3451
1 Spool file Qualifies

DFID    FILENAME  JOB     USER NAME         SECTORS  STATUS
-----------------------------------------------------------------
#O3451  LP        #S'457   MGR.NETBASE            48  Purged

O> PQ 3451
Purging 1 file for 48 sectors...
```

REDO

The **REDO** command allows a prior command to be modified and reexecuted. To repeat the last command simply type **REDO** at the NBSpool prompt, modify the line using standard **EDITOR** commands, and enter a carriage return to execute the command. The **REDO** command can also be used with the **LISTREDO** command as described below. Turn to the "LISTREDO" section in this chapter for more information.

REDO Syntax

```
O> REDO [cmdid]
```

REDO Parameters

Parameter	Description
cmdid	This parameter specifies the command to execute. The command may be specified by its relative or absolute order in the command line history stack, or by name (as a string). **(omitted)** Previous command (same as **Redo -1**) **-n** The nth command before the most recent one. **N** is a number in the command line stack relative to the most recent command, which is **-1**. **M** Command number m in the command line stack. The number **m** is absolute (not relative). **String** The most recent command beginning with string. The default is **-1**, the most recent command. NBSpool detects an error if you specify a **cmdid** that cannot be found in the history stack.
The following directives effect the current line:	
i<text>	**INSERT**. Inserts **<text>** at the position to the left of the **i**.
r<text>	**REPLACE**. Uses **<text>** to perform a one-for-one character replacement beginning at the position of the **r**.

Continued

Parameter	Description
d	**DELETE**. Deletes a character. You may specify multiple **d**s to delete a series of characters. Or, you may type multiple **d**s, followed by spaces, then followed by more **d**s to delete some characters while skipping others. You may follow this directive with other edits.
><text>	**APPEND TO EOL**. Appends the text to the end of the current line. If **>** is positioned beyond the end of the current line, then a replacement is performed instead

RESTORE

The **RESTORE** command recreates spool files that were stored using the NBSpool **STORE** command. When restoring, a specific tape file or all tape files may be specified for searching and restoring. This command normally executes much more quickly than the same command in **SPOOK**. Pressing **Ctrl+y** will stop the restore in progress. Incomplete spool files will be not be restored.

To denote the restored files, the job/session number will be altered to include an apostrophe, for example **#J'8**. By default, the original **OUTPRI** of the spool file will be retained. If a file to be restored resides on the second or later reel of a volume set, all reels must be searched to find the file. The formal file designator for the tape open is **NSPOOL**, which may be changed with a file equation if the volume name is different than the default.

A temporary file is created during the execution of this command. If disk space problems are experienced, the file limit may be reduced from the default of **1023**. Reducing this file's size may reduce restore performance on large restores or on heavily loaded systems. For example:

```
:FILE NBTAPEMF;DISK=500
```

RESTORE Syntax

```
O> RESTORE subset [;DEV   ={class }]
                  [       ={ldev1 }]
                  [;SEQ   ={@}     ]
                  [        {seq#}  ]
                  [;ALTDEV={class }]
                  [        {ldev2 }]
                  [;PRI   =outpri  ]
```

RESTORE Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files stored. Turn to Chapter 2 for information on using subsets. String and Forms message selection is not supported with this command.
class	This parameter specifies the device class name of the tape or serial disk device to be used for the restore.
ldev1	This parameter specifies the logical device number of the tape or serial disk device to be used for the restore.

Continued

Parameter	Description
@	This parameter scans all tape files during the restore operation. This will cause the restore to search all files on a volume set for the specified spool files. Qualifying spool files from all tape files will be restored.
seq#	This parameter specifies which tape file will be used for the restore. This is only applicable if the **STORE** command's **APPEND** parameter has been used to create multiple tape files on one tape. The first sequence number is **1**.
class	For **ALTDEV**, the device class to be used to create the new spool file if the class or **ldev** stored on the tape is nonexistent or invalid.
ldev2	This parameter specifies the logical device number to be used to create the new spool file if the **class** or **ldev** stored on the tape is nonexistent or invalid.
outpri	This parameter specifies the output priority of the new spool files. Must be an integer from **1** to **14**.

RESTORE Example

In the following example, all **$STDLIST**s created on 10/10/88 back from an NBSpool **STORE** format archive tape are recovered.

```
O> RESTORE $STDLIST,10/10/88;SEQ=@
Waiting for operator to mount tape... Tape mounted.

Tape File #1:  Files Qualifying = 1

DFID    FILENAME  JOB     USER NAME         SECTORS  STATUS
-------------------------------------------------------------------------
#O3473  $STDLIST #J1074   MGR.NETBASE            36  Restored as #O3496

Tape File #2:  Files Qualifying = 3

DFID    FILENAME  JOB     USER NAME         SECTORS  STATUS
-------------------------------------------------------------------------
#O3486  $STDLIST #J1080   MGR.NETBASE            40  Restored as #O3497
#O3488  $STDLIST #J1082   MGR.NETBASE            36  Restored as #O3498
#O3489  $STDLIST #J1083   MGR.NETBASE            36  Restored as #O3499

Number of spool files restored = 4    Not restored = 0
```

SET

The **SET** command sets run time and configuration options for NBSpool. The **USERCAP** keyword allows a user's normal MPE security to be changed for the purpose of manipulating spool files. This command has no effect on users with **SM** capability.

Note. This command cannot be used to give a user less security (**OPERATOR.SYS** cannot be given **AM** security). Also, MPE commands are not affected by this value.

Only users with **SM** capability can give **OP** capability. **AM** users can give any user in their account **AM** capability. **SM** users can set **AM** capability for users in accounts other than their log on accounts. The special **"NO"** capability takes away normal security from either **OP** or **AM** users. When set to **"NO"**, users can only operate on spool files they have created.

SET Syntax

```
O> SET ABORT={T | F}
O> SET FROMNODE=[nodename]
O> SET INPUTPASS=[password]
O> SET MAXPROCS=processes
O> SET PREVLIST
O> SET PRIVATE={T | F}
O> SET SEARCH=numrecords
O> SET SPSAVE={T | F}
O> SET SYSTEMLOG={ON | ALL | CUSTOM | OFF}
O> SET TRACKER=[nodename]
O> SET USERCAP=[capability];USER=username
O> SET VAR=varname;key=keyvalue[;VALUE[="string"]]
O> SET SUPPRESS={TRUE | CONSOLE | FALSE}
```

SET Parameters

Parameter	Description
ABORT	When set to **TRUE** (default), any unrecoverable error causes NBSpool to terminate immediately. Interactive users never abort due to syntax or other user recoverable errors.
FROMNODE	This parameter is used with the **MOVE** and **COPY** commands to set the node name used when connecting to a remote HP 3000 system. When a **DSLINE** transport is used to communicate to a remote HP 3000, the local node name is sent to the remote system so the remote system can connect back to the system running NBSpool. This parameter lets the user override the default node name so an alternate transport can be used. The remote system will use the name specified by this command to select the underlying transport to be used. Once this command is issued, all subsequent **MOVE/COPY** commands will use this name. If no node name is specified, the original default name will be used.
INPUTPASS	This parameter changes/sets the input mode password. This requires users to enter a password upon the first entry to input mode. Setting the password requires **SM** capability.
password	A string from **1** to **16** characters. If omitted, the input mode password will be removed.
processes	This parameter specifies the maximum number of XEQ processes that can concurrently run on the system. This may be any value between **0** and **99**. The default value is **8** processes.
PREVLIST	This parameter is used to save the current list of spool files specified with **!PREV** in the MPE variable named **PREVLIST**. This allows **!PREVLIST** to be used at a later time when **!PREV** would otherwise be unavailable.
PRIVATE	When set to **TRUE**, spool files with the **PRIVATE** flag set cannot be viewed by any user. A user must have **SM** capability to change this value.
SEARCH	This parameter sets the maximum number of records to be scanned when performing string searches as part of the subset. A value of **0** means that all records will be searched. When NBSpool is started, the default is to scan all records. The **LIST** command does not use this value.

Continued

Parameter	Description
SPSAVE	This parameter causes the **MOVE** command to respect the **SPSAVE** flag for spool files. If **SPSAVE** is set for a spool file, the **MOVE** command will not purge the original spool file. Instead, it will be put into the **SPSAVE** state when moved. If the default is **FALSE**, it purges the spool file after the move.
SYSTEMLOG	Setting the **SYSTEMLOG** parameter to **ON** causes NBSpool to write system log records (type 120, native mode spooler) to the system log files. These records are created when a spool file is moved to a non-HP 3000 system. The **ALL** parameter also enables log records for HP 3000 to HP 3000 moves. Certain fields in the log record are set to special values: **Device/Subset** Set to **32/0** for non-HP 3000's Set to **17/1** for HP 3000 destinations **Disposition** Set to **4** for the **MOVE** command Set to **0** for the **COPY** command **Device** Set to **Nodename** (first 8 bytes)
CUSTOM	This parameter disables system logging and enables NBSpool logging. This provides more information than is available for system logging. The log files **SPLG####.LOG.NETBASE** are created in a similar manner to system log files. The format is in **SPLOG.DOC.NETBASE**. The **SM** capability is required.
TRACKER	This parameter is used to set the node name to log all spool file activity to. Spool file tracking must be already installed. To turn off spool file tracking, do not specify a node name. Refer to the "Tracker Administrator's Guide" and the "Tracker User's Guide" for more information.
capability	Specifies the user capability equivalent. This value, if specified, must be **AM** or **OP**. The user specified is treated as though they have the assigned capability. Not specifying this value removes the set value. A special value of **"NO"** takes away the special capabilities of **OP** and **AM** users. **SM** users always have full capability.
username	Specifies the user whose capability is being overridden.
VAR	Creates a lookup variable for use in a **WHILE** command.

Continued

Parameter	Description
varname	A **1** to **8** character alphanumeric name. The first byte must be alphabetic.
key	One of the following values: **DEVICE** Spool file device used as a key **JOBNAME** Spool file job/session name **NAME** Spool file name **USER** Spool file creator user/account
keyvalue	The actual device, job name, file name or user.
SUPRESS	Affects error messages which would be displayed either on the console or on the standard list only. If **SUPPRESS** is set to **CONSOLE**, then those error messages going to the console are displayed to the standard list instead. If **SUPPRESS** is set to **YES** or **TRUE**, then all error messages are suppressed.

SET Examples

The examples in this section are for the **INPUTPASS**, **USERCAP**, **VAR** and **SPSAVE** parameters.

INPUTPASS Parameter Examples

In the following example, password protection for **INPUT** mode is enabled.

```
0> SET INPUTPASS=SECRET
```

In the following example, an input mode password is removed.

```
0> SET INPUTPASS=
```

USERCAP Parameter Examples

In the following example, the user **BOB.MFG** is set to have access to any spool files in the MFG account.

```
0> SET USERCAP=AM;USER=BOB.MFG
```

In the following example, the same user is given access to all spool files on the system.

```
O> SET USERCAP=OP;USER=BOB.MFG
```

In the following example, a user capability override is deleted.

```
O> SET USERCAP=;USER=BOB.MFG
```

VAR Parameter Examples

To create a variable that will have the value **"GLREPORT.ARCHIVE"** for all reports on the device class **GLPRINT**, enter:

```
O> SET VAR=FOLDER;DEVICE=GLPRINT;VALUE="GLREPORT.ARCHIVE"
```

To delete this variable, enter:

```
O> SET VAR=FOLDER;DEVICE=GLPRINT
```

SPSAVE Parameter Example

To enable the **MOVE** command to respect the spool file's **SPSAVE** flag, enter:

```
O> SET SPSAVE=T
O> MOVE ASDF,STATE=READY TO...
```

Note. The **STATE=READY** is necessary to prevent duplicate moves of the same spool files.

SHOW

The **SHOW** command provides a listing of a specified spool subset. The three keywords **DATES**, **LINES** and **USERS** cause the display to be formatted in one of three different ways. Once one of these keywords is specified, all subsequent **SHOW** commands will use the same format until another format keyword is specified. This command may be interrupted at any time by pressing **Ctrl+y**.

In the **LINES** and **USERS** formats, the state of the spool file is abbreviated to a single character to leave room for more interesting information. These abbreviations are:

A Active	**C** Create	**D** Delpnd	**L** Locked
O Opened	**P** Problem	**R** Ready	**S** Spsave
T Transfer	**W** Defer (waiting)		

If a file is currently **TEXT**ed, it will appear with a star (*****) in front of the file name. The subset specified in the **SHOW** command is saved for later reuse if so desired. If any command uses **!** as the spool file subset, the last subset specified in the **SHOW** command will be used.

SHOW Syntax

```
O> SHOW [subset][;AGE | DATES | LINES | USERS]
                [;FORMS]
```

User Tip. This command may be abbreviated to **S**.

SHOW Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to be shown. Turn to Chapter 2 for information on working with subsets.
AGE	This parameter displays creation dates and the number of days old for qualifying spool files.
DATES	This parameter displays the creation dates of all ready spool files. This parameter can be abbreviated to **;D**.

Continued

Parameter	Description
LINES	This parameter replaces the creation date in the listing with the number of records in the spool file as well as the number of copies. This parameter can be abbreviated to **;L**. This is the default.
USERS	This parameter specifies that the job/session names be included in the display. Due to space limitations, the creation date is not displayed. This parameter can be abbreviated to **;U**.
FORMS	This parameter displays, on a second line, the forms message associated with a spool file, if any.

SHOW Examples

The **SHOW** command performs much in the same way as **SPOOK**s. The files displayed are only those that the user has access to. For example, the following command was issued from a user that has **SM** capability. It illustrates the three different show formats:

```
O> SHOW;D

DFID    FILENAME  JOB     USER NAME      SECTORS  DEVICE  PRI  WHEN CREATED
-------------------------------------------------------- ----------------
#O10    $STDLIST #J4      OPERATOR.SYS        36  LP        1 10/03/88 14:51
#O13    $STDLIST #J6      OPERATOR.SYS        40  LP        1 10/05/88 10:51
#O45    $STDLIST #J17     OPERATOR.SYS        36  LP        1 10/03/88 14:34

Total of 112 sectors in 3 spool files


O> SHOW;U

DFID    FILENAME  JOB     SESSION  USER NAME      SECTORS  DEVICE  PRI STATE
-------------------------------------------------------------------------------
#O10    $STDLIST #J4      RRJOB    OPERATOR.SYS        36  LP        1   R
#O13    $STDLIST #J6      RRJOB    OPERATOR.SYS        40  LP        1   R
#O45    $STDLIST #J17     RRJOB    OPERATOR.SYS        36  LP        1   R

Total of 112 sectors in 3 spool files


O> SHOW;L

DFID    FILENAME  JOB     USER NAME     SECTORS  DEVICE  PRI CPYS RECORDS S
-------------------------------------------------------------------------------
#O10    $STDLIST #J4      OPERATOR.SYS       36  LP        1   1       38 R
#O13    $STDLIST #J6      OPERATOR.SYS       40  LP        1   1       57 R
#O45    $STDLIST #J17     OPERATOR.SYS       36  LP        1   1       49 R

Total of 112 sectors in 3 spool files
```

In the following example, the **SHOW** format **AGE** displays the number of days or how old a file is.

```
O> show 46473;age

DFID    FILENAME  JOB     USER NAME      SECTORS  DEVICE  PRI CREATED
AGE
-------------------------------------------------------------------------
--
#O46473 $STDLIST #J'19    MGR.NETBASE         16  LP        1 10/20/92
29
```

In the following example, the **SHOW** format **FORMS** displays the **formid**.

```
O> show 9999999;forms

SFID    FILENAME  JOB     USER NAME      SECTORS  DEVICE  PRI CPYS RECORDS S
-------------------------------------------------------------------------
9999999 BACKUP    #1997   OPERATOR.SYS         6  LP        2  1        12 R
FormId: BLUE
```

SORT

The **SORT** command allows you to specify the order in which all other commands will display lists of spool files. The default is that no sorting will be done. The most minor sort will always be done by device file ID number if any sorting is specified. Using the **OFF** parameter specifies a return to the default state. The default sorting order is by **DFID** number.

SORT Syntax

```
O> SORT {[sortspec][,sortspec][,...]] [;DESC]}
        {OFF                                 }

where

sortspec = C or CREATION
           D or DEVICE
           F or FILENAME
           J or JOB
           N or NAME  (job/session name)
           P or PRI
           S or SIZE
           U or USER
```

SORT Parameters

Parameter	Description	
sortspec	This parameter specifies the order in which all listings will be produced. Specifying more than one **sortspec** will cause the major sort to be the first **sortspec**, with additional sorting on the other more minor **sortspec**s. Each **sortspec** may be shortened to as few as one character if desired. **Sortspec** is expressed as one of the following:	
	CREATION	Sort by creation date and time.
	DEVICE	Sort by device class and logical device. Logical devices sort before device classes.
	FILENAME	Sort by spool file name.
	JOB	Sort by job/session number.
	NAME	Sort by job/session name. NM Spooler only.
	PRI	Sort by output priority.
	SIZE	Sort by spool file size
	USER	Sort by account and user.

Continued

Parameter	Description
DESC	This parameter specifies that the sort should be done in descending order. This applies to all **sortspec** keys at once.
OFF	This parameter specifies that no sorting is to be done.

SORT Examples

The following example illustrates the before and after effects of the **SORT** command. In this example, the first **SHOW** uses the default. In the second example, the spool files are shown sorted first by spool file name and then by outpri:

```
O> SHOW
14 Spool files Qualify

DFID    FILENAME  JOB     USER NAME      SECTORS  DEVICE  PRI  WHEN CREATED
-------------------------------------------------------------------------
#O580   CATLIST  #S62     MGR.NETBASE         84  LP        1 07/29/88 11:03
#O3445  LP       #S'457   MGR.NETBASE         48  LP        1 10/06/88 17:04
#O3404  $STDLIST #J1052   MGR.NETBASE         40  LP        1 10/03/88 14:51
#O3436  LP       #S457    MGR.NETBASE         48  LP        1 10/06/88 17:04
#O3087  LOCRPOUT #J936    JOB.FT             256  LP        8 09/12/88 14:25
#O3450  LP       #S'457   MGR.NETBASE         48  LP        1 10/06/88 17:04
#O505   BIGLIST  #J242    MGR.NETBASE       6916  LP        1 07/28/88 14:22
#O3289  PRINTER  #S415    MGR.NETBASE         36  LP        8 09/20/88 17:25
#O3415  $STDLIST #J1058   MGR.NETBASE         36  LP        1 10/05/88 10:51
#O3384  QUADLIST #S'36    MGR.NETBASE         32  LP        8 09/30/88 12:04
#O3399  $STDLIST #J1049   MGR.NETBASE         36  LP        1 10/03/88 14:34

Total of 7716 sectors for displayed spool files

SORT F,P


O> SHOW
14 Spool files Qualify

DFID    FILENAME  JOB     USER NAME      SECTORS  DEVICE  PRI  WHEN CREATED
-------------------------------------------------------------------------
#O3399  $STDLIST #J1049   MGR.NETBASE         36  LP        1 10/03/88 14:34
#O505   BIGLIST  #J242    MGR.NETBASE       6916  LP        1 07/28/88 14:22
#O580   CATLIST  #S62     MGR.NETBASE         84  LP        1 07/29/88 11:03
#O3087  LOCRPOUT #J936    JOB.FT             256  LP        8 09/12/88 14:25
#O3436  LP       #S457    MGR.NETBASE         48  LP        1 10/06/88 17:04
#O3445  LP       #S'457   MGR.NETBASE         48  LP        1 10/06/88 17:04
#O3450  LP       #S'457   MGR.NETBASE         48  LP        1 10/06/88 17:04
#O3419  OFFLINE  #S452    MGR.NETBASE         64  LP        8 10/05/88 11:30
#O3289  PRINTER  #S415    MGR.NETBASE         36  LP        8 09/20/88 17:25
#O3384  QUADLIST #S'36    MGR.NETBASE         32  LP        8 09/30/88 12:04

Total of 7716 sectors for displayed spool files
```

START

The **START** command starts the background execution of various **NBSPOOL** services such as **BOOTP** and UNIX receiving. With this command, additional jobs for the running of these services are unnecessary.

Once a background service is started, it remains running until either a **STOP** command is executed, or the **QUIT** command is detected. If **NBSPOOL** is run from a job, it will suspend when the **EXIT** command is executed unless all background services are explicitly stopped.

START Syntax.

```
O> START {BOOTP | LPD | RECV | SPOOLING}
```

Note. This command cannot be issued from an interactive session.

START Parameters

Parameter	Description
BOOTP	Starts the **BOOTP** service. This is used to configure LAN based devices such as printers. This is only available on MPE/iX 4.0 and later.
LPD	Starts the LPD service. This service receives spool files from UNIX and other systems.
RECV	Starts the NBSpool UNIX receiving process. This is used to receive spool files from UNIX that support the NBSpool UNIX Transport, a proprietary but reliable spooling transport.
SPOOLING	Starts up the **SPOOLCOP** process which is used to control all spoolers via the NBSpool **SPOOLER** command. Note that no individual spoolers will be started, only the control processes.

STOP

The **STOP** command stops the specified background services. These services are terminated immediately. For **BOOTP**, this command must be executed from the same NBSpool process that originally started the background **BOOTP** service. Any user with **OP** capability can stop the **RECV** or **LPD** processes.

STOP Syntax.

```
O> STOP {BOOTP | LPD | RECV | SPOOLING}
```

STOP Parameters

Parameter	Description
BOOTP	This parameter stops the **BOOTP** service.
LPD	This parameter stops the **LPD** service.
RECV	This parameter stops **UNIX** receiving process.
SPOOLING	This parameter stops all spooling processes.

STORE

The **STORE** command saves spool files to tape for archival purposes and to facilitate inter-computer spool file transfers. This command uses and requires labeled tapes. The formal file designator is **NSPOOL**, and a file equation may be used to change the volume name or expiration dates if desired.

This command is much faster than the equivalent **SPOOK** command and consumes considerably less tape. Tapes are not compatible with **SPOOK**, unless the **SPOOK** parameter is specified. Specifying the **SPOOK** parameter results in a serious performance degradation and requires more tapes. By default, the **OUTPRI** will not be changed on stored files, unlike **SPOOK** which changes all **OUTPRI**s to **1**.

For MPE/XL systems running version 2.2 or later, the MPE parameter can be used to create a **STORE** format tape. Tapes in this format can only be read by other MPE/XL systems running a similar version of MPE/XL.

Note. NBSpool uses the highest density available on the specified drive unless there is an override via a file equation.

Stop! This command **CANNOT** be stopped by pressing **Ctrl+y**. If you wish to terminate a **STORE** command, you will have to abort the program. However, if the **PURGE** parameter is specified, pressing **Ctrl+y** will prevent any purging or will stop a purge in process.

STORE Syntax

```
O> STORE subset [;DEV   ={class}]
                [       ={ldev} ]
                [;NEWPRI=outpri ]
                [;APPEND        ]
                [;ASK           ]
                [;PURGE         ]
                [;RELEASE       ]
                [;SPOOK         ]
                [;MPE [="parms"]]
```

STORE Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to be stored. Turn to Chapter 2 in this guide for information on working with subsets.
class	The device class of the tape or serial disk device used to store the spool files.
ldev	The logical device number of the tape or serial disk device used to store the spool files.
outpri	The output priority that all successfully stored spool files will have after being stored. Must be an integer between **0** and **14**.
APPEND	This parameter appends the current **STORE** set to an existing tape.
ASK	This parameter prompts at each file to include for processing.
PURGE	This parameter purges all spool files stored after the tape is completely written.
RELEASE	This parameter allows any user to restore any spool file on this tape file.
SPOOK	This parameter causes the tape to be written in **SPOOK** format. This necessarily causes the store to run much slower. This may not be used with the **APPEND** parameter.
MPE	This parameter causes the tape to be written in MPE **:STORE** format. This option is valid only on MPE/XL systems with the native mode spooler.
parms	Parameters to be passed to the **:STORE** command, such as **"SHOW=LONG"** or any other valid **STORE** parms.

STORE Examples

The following example demonstrates one method that can be used to archive all spool files to tape periodically through out the day appending to the same tape.

```
O> SHOW $STDLIST
3 Spool files Qualify

DFID    FILENAME  JOB     USER NAME      SECTORS  DEVICE  PRI  WHEN CREATED
-------------------------------------------------------------------------
#O3473  $STDLIST #J1074   MGR.NETBASE         36  LP        1 10/10/88 13:01
#O3415  $STDLIST #J1058   MGR.NETBASE         36  LP        1 10/05/88 10:51
#O3399  $STDLIST #J1049   MGR.NETBASE         36  LP        1 10/03/88 14:34

Total of 108 sectors for displayed spool files
O> STORE $STDLIST,%1;NEWPRI=2;APPEND
3 Spool files Qualify

Waiting for operator to mount tape...
```

Meanwhile, at the system console there will be a request to mount the tape labeled **NSPOOL**. If such a tape is present no reply is necessary. If no such tape exists, the label will be created by replying to the mount request:

```
?13:20/#S463/26/Mount tape of volumeset NSPOOL (ANS)
:REPLY 26,7
```

And back at NBSpool:

```
Tape mounted.

DFID    FILENAME  JOB     USER NAME         SECTORS  STATUS
-------------------------------------------------------------
#O3473  $STDLIST #J1074   MGR.NETBASE            36  Stored
#O3415  $STDLIST #J1058   MGR.NETBASE            36  Stored
#O3399  $STDLIST #J1049   MGR.NETBASE            36  Stored

Rewinding...

Number of spool files stored = 3    Not stored = 0
```

The outpri is being used here to flag what **$STDLIST**s have been archived to tape. The list below displays some more **$STDLIST**s that need to be appended to the tape.

```
O> SHOW $STDLIST
6 Spool files Qualify

DFID    FILENAME  JOB     USER NAME      SECTORS  DEVICE  PRI  WHEN CREATED
-------------------------------------------------------------------------------
#O3486  $STDLIST #J1080   MGR.NETBASE         40  LP        1 10/10/88 13:22
#O3473  $STDLIST #J1074   MGR.NETBASE         36  LP        2 10/10/88 13:01
#O3488  $STDLIST #J1082   MGR.NETBASE         36  LP        1 10/10/88 13:22
#O3489  $STDLIST #J1083   MGR.NETBASE         36  LP        1 10/10/88 13:22
#O3415  $STDLIST #J1058   MGR.NETBASE         36  LP        2 10/05/88 10:51
#O3399  $STDLIST #J1049   MGR.NETBASE         36  LP        2 10/03/88 14:34

Total of 220 sectors for displayed spool files
O> STORE $STDLIST,%1;NEWPRI=2;APPEND
3 Spool files Qualify

Waiting for operator to mount tape... Tape mounted.

DFID    FILENAME  JOB     USER NAME         SECTORS  STATUS
-------------------------------------------------------------------------------
#O3486  $STDLIST #J1080   MGR.NETBASE            40  Stored
#O3488  $STDLIST #J1082   MGR.NETBASE            36  Stored
#O3489  $STDLIST #J1083   MGR.NETBASE            36  Stored

Rewinding...

Number of spool files stored = 3    Not stored = 0
O> EXIT
```

Note. Since the NSPOOL tape already existed no reply from the operator was required. All that is necessary is that the tape be placed online.

SUBMIT

The **SUBMIT** command translates the specified spool files into fixed ASCII files, then submits them to an IBM host via **SNA NRJE**. If the file is successfully submitted, it will optionally be purged or altered. The **SUBMIT** command can process spool files of up to **100,000** records. To increase this size, enter the following file equation before executing a **SUBMIT** command:

```
:FILE NBSPNRJE;DISC=500000  (or some other large number)
```

Also, the **SUBMIT** command assumes the **DIRECT** parameter which causes translation of the spool file to occur during the transmission to the host.

Note. This command requires that **SNA NRJE** be installed on the system. If it is not, the command will be rejected.

SUBMIT Syntax

```
O> SUBMIT subset TO wsid [;JCL=[front][,back] ]
                         [;JOBNAME=jobname    ]
                         [;LPP=lines          ]
                         [;MAXREC =recsize    ]
                         [;NEWPRI =newpri     ]
                         [;PRI    =priority   ]
                         [;PRINTER=printername]
                         [;ASK                ]
                         [;PURGE              ]
```

User Tip. This command may be abbreviated to **SUB**.

SUBMIT Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to be submitted. Turn to Chapter 2 for information on using subsets.
wsid	This parameter specifies the workstation ID to which the spool files will be submitted.
front	This parameter specifies the name of an MPE file that will be placed in front of each spool file in the subset.
back	This parameter specifies the name of an MPE file that will be placed at the end of each spool file in the subset.
JOBNAME	This parameter specifies the job name used when the spool files are submitted. The default name used is **NRJE**.
lines	This parameter specifies the number of lines per page on the report. The default value is **60** lines per page.
MAXREC	This parameter specifies the maximum expected record size. Must be an integer between **40** and **252**. Records up to 504 bytes are supported without truncation, since NBSpool breaks up and reassembles large records.
newpri	This parameter specifies the output priority of the original spool file after it has been submitted. The value may be from **0** to **14**.
priority	This parameter specifies the priority of the submitted spool file. The value must be between **1** and **14**.
printername	A **1** to **8** character name of a printer definition defined in the **PRINTDEF** program. This allows certain default information to be overridden, such as lines per page, perforation control etc.
ASK	This parameter prompts at each file to include for processing.
PURGE	This parameter specifies that the original spool file is to be purged after it is successfully submitted.

SUBMIT Examples

To submit all the **GLREPORT** spool files to the workstation **BIGBLUE**, and to purge the spool files as they are submitted, enter:

```
O> SUBMIT GLREPORT TO BIGBLUE;PURGE
```

To include a file named **ERRORS** containing OS/JCL in front of all spool files that were created today, and to give them a job name of **BADSTUFF**, enter:

```
O> SUBMIT ERRORS,=TODAY TO BIGBLUE;J=BADSTUFF
```

To submit all the **GLREPORT** spool files to the workstation **RMT8**, and to purge the spool files as they are submitted, enter

```
O> SUBMIT GLREPORT TO RMT8;JCL=FRONT,BACK;PURGE
```

Below is an example of the IBM JCL used for submitting spool files to the **HOST**. The IBM JCL will need to be customized for each installation. A different "front file" can be used for each distribution list or printer destination on the IBM. The JCL contained in the file **FRONT** will cause the spool files moved to the IBM remote node **RM08** to print on the **RM155** printer.

```
//RM08JOB JOB
/*JOBPARM LINECT=60
/*ROUTE PRINT RM08
/*OUTPUT DIST DEST=RM155
//STEP1    EXEC PGM=NBSPIBM
//STEPLIB  DD DSN=RM00.LIBRARY,DISP=SHR
//PRINT    DD SYSOUT=(A,,DIST),DCB=(RECFM=FBA,LRECL=133,BLKSIZE=133)
//CARD     DD *
```

This JCL file is then used when submitting/transferring the MPE spool files to the IBM Host. The JCL contained in a file **BACK**:

```
/*
//
```

To send all spool files, with device class **RM105** created today with priority greater than **1**, to the IBM node name **RMT2**, and to create **2** copies and, after they are moved, change the priority to **1**, enter:

```
O> SUBMIT DEV=RM105,=TODAY,>%1 TO RMT2;JCL=RM105,BACK;NEWPRI=1
```

Where **RM105** contains the following JCL:

```
//RM02JOB JOB
/*JOBPARM LINECT=60
/*ROUTE PRINT RMT2
/*OUTPUT DIST DEST=RM105,COPIES=2
//STEP1    EXEC PGM=NBSPIBM
//STEPLIB  DD DSN=RM00.LIBRARY,DISP=SHR
//PRINT    DD SYSOUT=(A,,DIST),DCB=(RECFM=FBA,LRECL=133,BLKSIZE=133)
//CARD     DD *
```

To send all spool files with device class **RM115** to the IBM node name **RMT2** with banner pages, and with an **NRJE** reader priority of **12**, and then to purge the spool files transmitted, enter:

```
O> BANNER DEV=RM105
O> SUBMIT !PREV TO RMT2;JCL=RM115,BACK;PRI=12;PURGE
```

TAPEDIR

The **TAPEDIR** command displays the directory of one or all tape files on a NBSpool created **STORE** tape. The format is the same as the **SHOW** command's listing. If the tape is in **SPOOK** format, the keyword **SPOOK** must be specified. The size of files in sectors will be replaced with the number of records in the spool file, due to a lack of information needed to compute the size of the spool file.

The formal file designator for the tape file is **NSPOOL**.

TAPEDIR Syntax

```
O> TAPEDIR [{seq  }] [;DEV={class}]
           [{@    }] [     {ldev} ]
           [{SPOOK}]
```

User Tip. This command may be abbreviated to **TAP**.

TAPEDIR Parameters

Parameter	Description
seq	This parameter specifies which of the various tapes files will be listed. Numbering is sequential, starting at **1**. If omitted, the default is **1**.
@	This parameter specifies that all tape files on the current volume set will be listed. Applicable only if the **APPEND** parameter was used on this tape.
SPOOK	This parameter specifies the tape is in **SPOOK** format.
class	This parameter specifies the device class on which the tape or serial disk is mounted.
ldev	This parameter specifies the logical device on which the tape or serial disk is mounted.

TAPEDIR Examples

The following example shows how **TAPEDIR** can be used to display all spool files stored using the **STORE** command.

```
O> TAPEDIR @

Waiting for operator to mount tape... Tape mounted.

Tape Directory for File #1, created on 10/10/88 13:21:32

DFID    FILENAME  JOB     USER NAME      SECTORS  DEVICE  PRI  WHEN CREATED
-------------------------------------------------------------------------------
#O3473  $STDLIST #J1074   MGR.NETBASE         36  LP        1 10/10/88 13:01
#O3415  $STDLIST #J1058   MGR.NETBASE         36  LP        1 10/05/88 10:51
#O3399  $STDLIST #J1049   MGR.NETBASE         36  LP        1 10/03/88 14:34

Tape file contains 3 spool files for 108 sectors

Tape Directory for File #2, created on 10/10/88 13:24:13

DFID    FILENAME  JOB     USER NAME      SECTORS  DEVICE  PRI  WHEN CREATED
-------------------------------------------------------------------------------
#O3486  $STDLIST #J1080   MGR.NETBASE         40  LP        1 10/10/88 13:22
#O3488  $STDLIST #J1082   MGR.NETBASE         36  LP        1 10/10/88 13:22
#O3489  $STDLIST #J1083   MGR.NETBASE         36  LP        1 10/10/88 13:22

Tape file contains 3 spool files for 112 sectors
```

TEXT

The **TEXT** command opens a **READY** or **OPENED** spool file for use with the **LIST** command. If a subset specification qualifies more than one spool file, you will be prompted to select one of the qualifying spool files. If no subset is specified, the currently **TEXT**ed spool file, if any, is closed.

TEXT Syntax

```
O> TEXT [subset]
```

User Tip. This command may be abbreviated to **T**.

TEXT Parameters

Parameter	Description
subset	This parameter specifies a subset of spool files to be processed. Turn to Chapter 2 for information on using subsets.

TEXT Examples

In this example the user requested to text in the spool file **$STDLIST**:

```
O> TEXT $STDLIST
4 Spool files Qualify

SEQ DFID    FILENAME  JOB     USER NAME  SECTORS  DEVICE  PRI  WHEN CREATED
-------------------------------------------------------------------------
  1 #O3399  $STDLIST #J1049   MGR.NETBASE     36  LP        1 10/03/88 14:34
  2 #O3404  $STDLIST #J1052   MGR.NETBASE     40  LP        1 10/03/88 14:51
  3 #O3415  $STDLIST #J1058   MGR.NETBASE     36  LP        1 10/05/88 10:51
  4 #O3434  $STDLIST #J1065   MGR.NETBASE    384  LP        1  OPENED
```

Since the file **$STDLIST** is not unique, NBSpool displays all qualifying files and asks the user to resolve the ambiguity:

```
Enter SEQ or DFID number of desired file: 4

Opened spool file #O3434 ($STDLIST), last line is 40.
WARNING: SPOOL FILE IS OPEN
```

To close a spool file that was previously opened, issue the **TEXT** command without any parameters:

```
O> TEXT
Closed spool file #O3434
```

UNARCHIVE

The **UNARCHIVE** command recreates spool files that were archived with the **ARCHIVE** command. Any subset of spool files in the archive may be extracted. If possible, the original device of the spool file will be used when recreating the file. Pressing **Ctrl+y** will terminate the unarchiving and will purge any partially recreated spool files.

If a user is unarchiving data from a **RELEASED** archive, this will be the only opportunity for the user to alter the spool file unless the user normally has access to the spool file. Once the spool file is unarchived, normal NBSpool security may prevent further changes to the spool file's priority, copies, and device.

The **NOQUOTE** parameter can be used to retain the original "look" of the job/session numbers when the files are unarchived. This is most useful when recreating spool files after a **COOLSTART** or **START NORECOVERY**.

UNARCHIVE Syntax

```
O> UNARCHIVE [subset]  ;FILE=fileset
                      [;DEV ={class}]
                      [      {ldev }]
                      [;PRI =outpri ]
                      [;ASK         ]
                      [;NEWTIME     ]
                      [;NOQUOTE     ]
```

User Tip. This command may be abbreviated to **UNARC**.

UNARCHIVE Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to be unarchived. Turn to Chapter 2 for information on using subsets. Forms message selection is not supported for this command.
fileset	This parameter specifies a filename or fileset (like **:LISTF**) which specifies the file(s) to be searched.

Continued

Parameter	Description
class	This parameter specifies the device class assigned to the new spool files. Must be a valid spooled output device class.
ldev	This parameter specifies the logical device number of the new spool files. Must be a valid spooled output device.
outpri	This parameter specifies the output priority of the new spool files. Must be an integer from **1** to **14**. Default is the original outpri of the spool file.
ASK	This parameter prompts at each file to include for processing.
NEWTIME	This parameter uses the current date and time rather than the original creation date/time when restoring the spool file. This causes all spool files of the same output priority to print in the order in which the files were archived (native mode spooler only).
NOQUOTE	This parameter specifies that the spool files will be created without the single quote in the job/session number. This applies only to spool files that originally did not have a single quote in the job/session number. Parameter requires **OP** or **SM** capability.

UNARCHIVE Examples

The following example retrieves all spool files except for **BIGLIST** from the **A111188** archive file:

```
O> UNARC ~BIGLIST,*LP;FILE=A111188

DFID    FILENAME  JOB     USER NAME        SECTORS  STATUS
------------------------------------------------------------------------
---
#O6     LIST      #S463   MGR.NETBASE           44  Unarchived as #O351
#O8     PRINTER   #S415   MGR.NETBASE           36  Unarchived as #O352
#O9     PORT      #S222   MGR.NETBASE           40  Unarchived as #O353
#O275   OFFLINE   #S35    MGR.NETBASE           76  Unarchived as #O354
#O278   OFFLINE   #S35    MGR.NETBASE           32  Unarchived as #O355
#O281   OFFLINE   #S35    MGR.NETBASE           32  Unarchived as #O356
#O348   OFFLINE   #S35    MGR.NETBASE           32  Unarchived as #O357
#O284   OFFLINE   #S35    MGR.NETBASE           32  Unarchived as #O358
#O287   OFFLINE   #S35    MGR.NETBASE           32  Unarchived as #O359
#O295   $STDLIST #J132    MGR.NETBASE           36  Unarchived as #O360
#O296   OFFLINE   #S35    MGR.NETBASE          184  Unarchived as #O361

Unarchived 11 spool files for 640 sectors
```

To extract all spool files of outpri **7** from the archive **STUFF**, enter:

```
O> UNARC %7;FILE=STUFF
```

To extract all spool files from the archive **RESTART** without changing the job/session number display, enter:

```
O> UNARC @;FILE=RESTART;NOQUOTE
```

To extract all spool files for device class **LPSLOW**, and change the device to **LPFAST**, enter:

```
O> UNARC *LPSLOW;DEV=LPFAST;FILE=ARCFILE
```

VDIR

The **VDIR** command displays a formatted listing of the spool files saved in a VISTA Plus folder file. The format of the display is similar to the **SHOW** command. A sector count shows how many sectors in the folder are used by each spool file, not the original number of sectors in the spool file.

Information about the size of the folder and its directory is displayed before the listing of spool files. The available space in a folder is also displayed. Because of MPE security, users without **OP** capability may not be able to see the contents of a VISTA Plus folder unless they are the creator.

VDIR Syntax

```
O> VDIR filename
O> VDIR subset;FILE=filename
```

User Tip. This command may be abbreviated to **VD**.

VDIR Parameters

Parameter	Description
filename	This parameter specifies the name of the folder file. This file must be a valid VISTA Plus folder file.
subset	This parameter specifies the subset of spool files to be displayed. Turn to Chapter 2 for information on using subsets.

VDIR Examples

```
O> VDIR PERU.ARCHIVE
Directory for Folder created on 02/13/92 11:27:30

Folder Directory Limit      = 6        Folder Limit in Sectors  = 3399
Directory Entries Available = 0        Folder Sectors Available = 0

FILENAME  JOB     SESSION  USER NAME        PAGES    SECTORS   WHEN CREATED
-------------------------------------------------------------------------
PERU     #J'24    FORMLOAD MGR.LJPLUS          1          0  01/31/92 13:35
PERU     #J'24    FORMLOAD MGR.LJPLUS          1          8  01/31/92 13:35
PERU     #S'139            ARTHUR.LOG         24       1684  01/31/92 12:06
PERU     #J'24    FORMLOAD MGR.LJPLUS          1          0  01/31/92 13:35
PERU     #J'24    FORMLOAD MGR.LJPLUS          1          8  01/31/92 13:35
PERU     #S'139            ARTHUR.LOG         24       1684  01/31/92 12:06
```

VERIFY

The **VERIFY** command is used to display the current value of the NBSpool configuration options. When you enter the command with an option, the value of that option is returned.

VERIFY Syntax

```
O> VERIFY ABORT
O> VERIFY MAXPROCS
O> VERIFY PRIVATE
O> VERIFY SEARCH
O> VERIFY SPSAVE
O> VERIFY SYSTEMLOG
O> VERIFY USERCAP
O> VERIFY VAR=[varname];key
```

VERIFY Parameters

Parameter	Description
varname	This parameter specifies a **1** to **8** character alphanumeric name of a variable.
key	One of the following lookup keys: **DEVICE** **JOBNAME** **NAME** **USER**
SUPPRESS	Affects error messages which would be displayed either on the console or on the standard list only. If **SUPPRESS** is set to **CONSOLE**, then those error messages going to the console are displayed to the standard list instead. If **SUPPRESS** is set to **YES** or **TRUE**, then all error messages are suppressed.

VERIFY Examples

The **VERIFY** command is used to display the current value of the NBSpool configuration options. When you enter the command with an option, the value of that option is returned.

```
O> verify abort
Aborting on Errors is set to TRUE
O> verify private
Private Access not allowed is set to FALSE
O> verify systemlog
System Logging for network printing is DISABLED
O> verify usercap

--USER-- --ACCT-- EQ

OPUSER   NETBASE  AM
REGUSER  NETBASE  NO
TESTIT   NETBASE  OP
AMUSER   SPACCT   OP
OPUSER   SPACCT   AM
```

VFILE

The **VFILE** command provides a method of adding non-spool files to a VISTA Plus folder. The **VFILE** command operates on any ASCII file with a record size of no more than 512 bytes. The block size must be less than 8192 bytes. The default page parameters of **60** lines per page will be used for page formatting unless overridden with the **LPP** or **PRINTER** parameters.

The **VFILE** command also provides a method of saving unlinked spool files. These files are spool files that do not reside in the **OUT.HPSPOOL** group. If a file is not a fixed ASCII file or a spool file, it will be ignored and a warning message will be displayed. Turn to the "VSAVE" section in this chapter for more information on using VISTA Plus folders.

Note. When using **VDIR** to display a folder, disk files will not show a job number. Also, the **JOB NAME** will actually be the group where the file originally existed.

VFILE Syntax

```
O> VFILE fileset[,TEMP];FILE=[filename]
                       [;DESC="description" ]
                       [;LIMIT=files,sectors]
                       [;LPP=lines          ]
                       [;PRINTER=printername]
                       [;APPEND             ]
                       [;CCTL               ]
                       [;FFSCAN[="ffdelim"] ]
                       [;INDEX              ]
                       [;PURGE              ]
                       [;RELEASE            ]
```

User Tip. This command may be abbreviated to **VF**.

VFILE Parameters

Parameter	Description
fileset	This parameter specifies the set of disk files to be saved. The format of this **fileset** is the same as that used by MPE **:LISTF** command. Only ASCII and spool files will be used.
TEMP	This parameter specifies that only files in the temporary domain will be processed.
filename	This parameter specifies the formal file designator of the new folder file. This file cannot exist prior to the execution of the command unless **APPEND** or **LIMIT** is also specified. If the file name is omitted, the file name used will be the current date.
description	This parameter specifies a **1** to **48** byte string used to describe the contents of the folder. Used by the VISTA Plus viewer program to aid in determining the contents of a folder.
files	This parameter specifies the maximum number of spool files that may be put into the folder.
sectors	This parameter specifies the size, in sectors, of the folder.
PURGE	When the entire folder is successfully created and closed, all spool files saved will be purged.
APPEND	This parameter appends the disk files to an existing folder file. Automatically enabled if **LIMIT** is specified.
CCTL	This parameter forces all files in the fileset to treat the first byte in each record as carriage control.
FFSCAN	This parameter scans the contents of each file for form feed characters to determine page breaks.
ffdelim	This parameter overrides the default page break character from a formfeed to the specified string.
INDEX	If indexing has been set up for any of the reports in the folder, NBSpool will perform the indexing after saving the disk files.
lines	This parameter specifies the number of lines per page that will be assumed for each spool file. This must be a value between **4** and **88**. Default is **60** lines.

Continued

Parameter	Description
printername	A **1** to **8** character name of a printer definition defined by the **PRINTDEF** program. This allows certain default information to be overridden, such as lines per page, perforation control etc.
RELEASE	This parameter allows any user to view spool files from the folder file. By default, only the creator may view these files.

VFILE Examples

To add all files in the **DOC** group to the folder **DOCFILES**:

```
O> VFILE @.DOC;FILE=DOCFILES
```

VIEW

The **VIEW** command allows a set of spool files to be displayed one after another on the terminal. After a spool file is completely listed or after press **Ctrl+Y**, the user will be prompted with one of the following messages:

```
* Alter, Next, Purge, or Relist?
* Next, Purge, or Relist?
* Hit RETURN to continue or EXIT to stop:
```

The first question is asked if any of the **ALTER**-like parameters are specified. The second is asked if no **ALTER** parameters are used. The last command is asked if the spool file is **OPENED** or if some error occurred during the listing. Press **E** or **//** to stop the execution of the command.

VIEW Syntax

```
O> VIEW subset [;PRI   =outpri ]
               [;COPIES=copies ]
               [;DEV   ={class}]
               [        {ldev }]
               [;WIDE          ]
               [;NUM           ]
               [;OPEN          ]
               [;NOPAUSE       ]
```

User Tip. This command may be abbreviated to **V**.

VIEW Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to viewed. Turn to Chapter 2 for information on using subsets.
outpri	This parameter specifies the new output priority that will be assigned all spool files qualified by the **subset** parameter. This must be an integer from **1** to **14**.
copies	This parameter specifies the new number of copies that will be assigned to all qualified spool files. This must be an integer from **1** to **127**.

Continued

Parameter	Description
class	This parameter specifies the new device class assigned to all qualified spool files. This must be a valid spooled device class.
ldev	This parameter specifies the new logical device number assigned to all qualified spool files. This must be a valid spooled output device.
WIDE	This parameter changes the display to **132** column mode for the duration of command execution. This parameter is ignored if the terminal cannot display **132** columns.
NUM	This parameter displays line numbers as each spool file is listed. This also suppresses carriage control execution.
OPEN	This parameter allows viewing of **OPENED** spool files in addition to **READY** spool files.
NOPAUSE	This parameter prevents the terminal from waiting for input when a full screen of data is displayed.

VIEW Examples

```
O> VIEW $STDLIST
3 Spool files Qualify

DFID    FILENAME  JOB     USER NAME      SECTORS  DEVICE  PRI  WHEN CREATED
------------------------------------------------------------------------------
#O3399  $STDLIST #J1049   MGR.NETBASE         36  LP        1 10/03/88 14:34
==============================================================================
:JOB NETBASE,MGR.NETBASE,PUB
PRIORITY = DS; HIPRI; TIME = UNLIMITED SECONDS
JOB NUMBER = #J1049
MON, OCT  3, 1988, 10:02 AM
HP 3000 / MPE V  G.B3.02 (BASE G.B3.02).
:RUN NBCOP.PUB.NETBASE

NetBase Control Program  [0.8.2]  (C) QUEST Software 1987
10:02:29 NBN/NetBase Control Process  [0.8.2]
10:02:38 NBI03/NETBASE Shadow Importing STARTED for SYS-XL
10:02:40 NBSP/NETBASE Remote Spooling STARTED
10:02:44 NBN/NETBASE Local Access STARTED
10:02:45 NBN/NETBASE Remote Access STARTED
10:02:45 NBN/NETBASE Ready
JOB ABORTED BY SYSTEM MANAGEMENT
CPU SEC. = 30.  ELAPSED MIN. = 273.  MON, OCT  3, 1988,  2:34 PM

Next, Purge, or Relist?//
```

VSAVE

The **VSAVE** command processes and saves spool files for later viewing by the VISTA Plus online report viewer. Compression and translation of the spool files occurs as the command executes. If necessary, default parameters about the page format can be overridden with the **LPP** or **PRINTER** parameters. The **VSAVE** command operates only on spool files in the **READY** state that are not empty. Pressing **Ctrl+y** will terminate this command.

The folder file is created by this command. If a file with the same name already exists, it will be purged unless the **APPEND** or **LIMIT** parameters are specified. Folder files are created with a file code of **878** to identify them from other files on the system. If the **PURGE** parameter was specified, all of the spool files will be purged after being saved into the folder.

The default lines per page is assumed to be **60** lines. This value is used only if the original spool file does not explicitly contain form feeds. The **VSAVE** command will automatically page break after the proper number of lines per page if no form feeds are encountered.

If the **LIMIT** parameter is specified, the folder file will be built with enough directory space to contain the requested number of files. If the limit is specified, the size of the folder (in sectors) must also be specified. If this parameter is omitted, the folder will be built large enough to hold the current spool file subset only. This parameter is ignored if the folder already exists.

The **APPEND** parameter will append the current spool file subset to an existing folder file. If the folder does not exist, this parameter is ignored. A **LIMIT** parameter must be specified when the folder is created for an **APPEND** to be used later in that folder file.

Two parameters affect the condition of the spool files. If the **NEWPRI** parameter is used, each spool file will have its outpri changed to the specified value as each file is successfully saved. The **PURGE** parameter causes the saved spool files to be purged after all files are saved.

To save a spoolfiles form message, **VSAVE** works in conjunction with the following **VISTAINI** parameter: **$PRINT-USE-FORMID-FORMS**.

VSAVE Command Syntax

```
O> VSAVE [subset] ;FILE=[filename]
                 [;DESC="description"   ]
                 [;FLAG=errorflag       ]
                 [;LIMIT=files[,sectors]]
                 [;LPP=lines            ]
                 [;NEWPRI=outpri        ]
                 [;OVERSTRIKE={Y|N|C}   ]
                 [;PRINTER=printername  ]
                 [;RDESC="reportdesc"   ]
                 [;START=firstrec       ]
                 [;APPEND               ]
                 [;ASK                  ]
                 [;FFSCAN[="ffdelim"]   ]
                 [;INDEX                ]
                 [;NOCOMP               ]
                 [;NOSTRIP              ]
                 [;PURGE                ]
                 [;RELEASE              ]
```

User Tip. This command may be abbreviated to **VS**.

VSAVE Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to be saved. Turn to Chapter 2 for information on using subsets.
filename	This parameter specifies the formal file designator of the new folder file. This file cannot exist prior to the execution of the command unless the **APPEND** or **LIMIT** parameter is also specified. If the file name is omitted, the file name used will be the current date.
description	This parameter specifies a **1** to **48** byte string used to describe the contents of the folder. Used by the VISTA Plus viewer program to aid in determining the contents of a folder.
errorflag	This parameter specifies an error condition that is displayed by VISTA Plus when the report is shown on the "Select Report" screen. The values for this field can be **OK**, **WARN**, **ERROR** or **FATAL**.

Continued

Parameter	Description
files	This parameter specifies the maximum number of spool files that may be put into the folder.
sectors	This parameter specifies the size in sectors of the folder.
outpri	This parameter specifies the output priority that all successfully saved spool files will have after being processed. This parameter must be between **0** and **14**.
lines	This parameter specifies the number of lines per page that will be assumed for each spool file. This must be a value between **4** and **120**. Default is **60** lines.
printername	This parameter specifies a **1** to **8** character name of a printer definition defined by the **PRINTDEF** program. This allows certain default information to be overridden, such as lines per page and perforation control, etc.
reportdesc	This parameter specifies a **1** to **48** character string that is displayed by VISTA Plus to help identify a report. Each report can have a different description.
firstrec	This parameter specifies the first record of the spool file that will be saved. All previous records are ignored.
APPEND	This parameter appends the spool files to an existing folder file.
ASK	This parameter prompts at each file to include for processing.
FFSCAN	This parameter scans the contents of each report for form feed characters to determine page breaks.
ffdelim	This parameter overrides the default page break character from a formfeed to the specified string.
INDEX	If indexing has been set up for any of the reports in the folder, NBSpool performs the indexing after saving the spool files.
NOCOMP	This parameter disables data compression. This can save time at the expense of consuming more disk space.
NOSTRIP	This parameter causes all PCL information found at the front of a spool file to be retained. By default, these escape sequences are removed.

Continued

Parameter	Description
OVERSTRIKE	This parameter determines if VISTA Plus will treat lines that have been overstriked as separate display lines or not. If set to **Y**, overstriked lines will appear as one line on the screen display.
PURGE	When the entire folder is successfully created and closed, all spool files saved will be purged.
RELEASE	This parameter allows any user to view spool files from the folder file. By default, only the creator may view these files.

VSAVE Examples

To save all **GLREPORT**s to the already existing folder **GL.ARCHIVE**:

```
O> VSAVE GLREPORT;FILE=GL.ARCHIVE;APPEND
```

To save every spool file with a priority of **7** and then print them:

```
O> VSAVE %7;FILE=SPOOLARC;NEWPRI=13
```

To save all **INVOICES** (that have a page length of 72) and to create the **VSAVE** file **INV.ARCHIVE** if it does not exist, enter:

```
O> VS INVOICES;LPP=72;LIMIT=1000,300000;DESC="Invoices";File=INV.ARHIVE
```

To save the spool files created by any **MONTHEND** job, and to use the page format specified by the printer definition **SPECIAL**, enter:

```
O> VS MONTHEND.@.@;FILE=MOEND.DATA;PRINTER=SPECIAL
```

WIDTH

The **WIDTH** command changes the display width on certain Hewlett-Packard terminals to either **80** or **132** columns. The command will only work on Hewlett-Packard terminals that support this line width. All other terminals will ignore this command. The **WIDE** option is reset when the program terminates or following the completion of a subsequent **VIEW** command that specifies **WIDE**.

WIDTH Syntax

```
O> WIDTH {WIDE  }
         {NARROW}
```

User Tip. This command may be abbreviated to **W**.

WIDTH Parameters

Parameter	Description
WIDE	This parameter changes the display to **132** columns.
NARROW	This parameter changes to **80** columns.

CHAPTER 4

NBSpool Input Commands

NBSpool provides a set of valid input commands that can be utilized to control input spool files. This chapter describes each input command, with information on the operation, syntax and parameters for each command. Examples are also provided. Review the “Command Summary” section for a brief overview of the input commands covered in this chapter. The NBSpool input commands appear in alphabetical order in this chapter.

The majority of the commands discussed in this chapter can be performed on subsets of spool files. Subsets allow you to quickly perform a command on multiple spool files that share a common attribute. Turn to Chapter 2 in this guide for more information on working with subsets of spool files.

Note. The prompt for the NBSpool input commands is **I>**.

In This Chapter

Command Summary

This section summarizes the available NBSpool input commands. The input commands are listed in alphabetical order.

Command	Function
I>ALTER	This command changes local job characteristics such as **INPRI** and **OUTDEV**.
I>COPY	This command copies jobs from one computer to another.
I>EXIT	This command exits NBSpool. This command suspends NBSpool if it is running as a son process from another program.
I>HELP	This command provides online help on NBSpool commands for current mode. Turn to the "Administrative Commands" section in Chapter 2 for more information.
I>KEEP	This command copies the currently texted spool file to a disk file.
I>LIST	This command lists a range of lines of the currently **TEXT**ed job.
I>LISTREDO	This command displays a list of previously entered commands. Turn to the "LISTREDO" section in Chapter 3 for more information.
I>MERGE	This command copies a subset of spool files into one disk file.
I>MOVE	This command moves jobs from one computer to another.
I>OUTPUT	This command changes the operating mode of NBSpool from input spool files (jobs) to output spool files.
I>PRINT	This command prints a spool file to a locally slaved printer. Turn to "PRINT" section in Chapter 3 for more information.
I>PURGE	This command purges (aborts) a subset of spool files.
I>QUIT	This command exits NBSpool. This command kills NBSpool if it is running as a son process from another program.
I>REDO	This command repeats the last entered command for editing and executing. Turn to the "REDO" section in Chapter 3 for more information.
I>SET	This command can be used with the **INPUTPASS** parameter to prevent users from accessing the NBSpool input commands.

Continued

Command	Function
I>SHOW	This command displays a subset of the local jobs.
I>SORT	This command specifies sort criteria to be used whenever a list of jobs is displayed.
I>START	This command starts the background execution of various NBSpool services. Turn to the "START" section in Chapter 3 for more information.
I>STOP	This command stops the specified background services. Turn to the "STOP" section in Chapter 3 for more information.
I>STREAM	This command streams a file with optional password insertion and scheduling.
I>TEXT	This command opens a job for listing with the **LIST** command.
I>VERIFY	This command displays the current value of NBSpool configuration options.
I>VIEW	This command displays one or more jobs on the terminal. Each file may be altered, purged or relisted after displaying.
I>WHILE	This command executes a series of commands for each spool file in a subset.
I>WIDTH	This command changes the display on certain HP terminals to **132** columns and back to **80** columns.
I>XEQ	This command executes a sequence of NBSpool commands as a background job. Turn to Chapter 5 for more information on background processing.
I>XEQSTOP	This command stops an executing NBSpool background process. Turn to Chapter 5 for more information on background processing.

Input Commands

The following sections describe the NBSpool input commands in detail. For each command, you will find information on the operation, syntax and parameters. Examples are also provided. The NBSpool input commands appear in alphabetical order.

ALTER

The **ALTER** command allows changes to groups of files using local job characteristics such as **INPRI** and **OUTDEV**. Each qualifying job will be displayed as it is altered. This command works exactly like the MPE **ALTJOB** command. The command may be stopped at any time by pressing **Ctrl+y**.

ALTER Syntax

```
I> ALTER subset [;PRI   =inpri  ]
                [;DEV   ={class}]
                [        {ldev }]
                [;ASK           ]
```

User Tip. This command may be abbreviated to **A**.

ALTER Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to be altered. Turn to Chapter 2 for information on working with subsets.
inpri	This parameter specifies the new input priority that will be assigned to all jobs qualified by the subset parameter. This parameter must be an integer from **1** to **14**.
class	This parameter specifies the new device class assigned to all qualified jobs. This parameter must be a valid spooled device class.
ldev	This parameter specifies the new logical device number assigned to all qualified jobs. This parameter must be a valid spooled output device.
ASK	This parameter prompts at each file to include for processing.

Note. This command allows **PRI** and **DEV** to be abbreviated to as little as one character.

COPY

The **COPY** command moves an exact copy of a waiting or scheduled job to a remote computer without purging the original jobs. If wild cards are specified, all jobs meeting the specified criteria will be copied to the remote computer. The original copies will not be modified unless the optional **NEWPRI** parameter is specified to alter the **INPRI**s of the original jobs upon successful completion of the copy.

The correct passwords are inserted in the **:JOB** command on the remote computer. If a job streams another job, imbedded **:JOB** commands will *not* be modified to include any appropriate passwords.

Note. This command requires **SM** capability on the **REMOTE** session to insert passwords automatically on the remote computer. The local user does not require **SM** capability.

By default, scheduling information will be preserved across systems. To create the job remotely without any scheduling values, use the **NOSCHED** parameter. The **DEV**, **COPIES** and **OUTPRI** parameters only affect the **$STDLIST** of the remote job. If a **DEV** is not specified, the default device for **$STDLIST**s on the remote computer will be used.

If NBSpool is running in a NetBase environment, a remote session to the node receiving the spool file is not required since NetBase automatically handles the transfer. The node name or node number used in the command should be consistent with the node names or numbers used in the NetBase configuration.

If NetBase is not installed, the RPM service of **NS** will be used to create the **NBSPOOLT** process on the remote computer. A **DSLINE** command is required to specify the destination node. Programmatic logons are supported if the **LOGON=** parameter is specified in the **DSLINE** command and a remote session does not exist in the environment.

On some slow network links, it is possible that a **COPY** command will continually encounter errors. These errors can be reduced by adjusting the size of the spool file transfer packets. By setting the JCW **SPOOLPACKET** to **1024** or any multiple of **1024** up to **8192**, these errors can be eliminated. Set this JCW before entering NBSpool.

This command may be stopped at any time by pressing **Ctrl+y**. If a copy is in process, the unfinished remote job will be purged.

COPY Syntax

```
I> COPY [subset] TO {nodename} [;PRI   =outpri       ]
                    {*envname} [;COPIES=copies       ]
                               [;DEV   ={class}      ]
                               [        {ldev }      ]
                               [;INPRI =inpri        ]
                               [;NEWPRI=outpri       ]
                               [;ASK                 ]
                               [;NOSCHED             ]
                               [;RETRY               ]
                               [;RETRYDELAY=seconds  ]
```

User Tip. This command may be abbreviated to **CO**.

COPY Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to be copied. Turn to Chapter 2 for information on working with subsets.
nodename	This parameter specifies the name of the destination node. This is the name specified in a **DSLINE** command. If NetBase is installed, the ***envname** parameter must be used.
envname	This parameter specifies that the node name is an environment created with a **DSLINE** command. Used to access nodes not defined in the NetBase configuration. If NetBase is not installed, this parameter is the same as the **nodename** parameter.
outpri	This parameter specifies the output priority of the job's **$STDLIST** on the remote computer. This parameter must be between **1** and **13**.
copies	This parameter specifies the number of copies used when creating the **$STDLIST** on the remote computer.
class	This parameter specifies the device class used when creating the **$STDLIST** on the remote computer. This parameter must be a valid spooled device class.
ldev	This parameter specifies the logical device number used when creating the spool file on the remote computer. This parameter must be a valid spooled output device.

Continued

Parameter	Description
inpri	This parameter specifies the input priority of the job on the remote computer. This parameter must be between **0** and **15**. A value of **15** is the same as specifying **HIPRI**.
ASK	This parameter prompts at each file for processing.
NOSCHED	This parameter eliminates all scheduling information when creating the job on the remote computer.
RETRY	Specifies that during a **MOVE**, if the destination node is unavailable, a delay of five seconds should be followed by an attempt to reconnect.
RETRYDELAY	Specifies **RETRY**, as above, with a delay in seconds as specified, instead of the default time of five seconds.

COPY Examples

The following example copies all jobs named **JOBLIST** onto node **MASTER**. This command will leave the original job on the local computer:

```
:DSLINE MASTER;LOGON=NBSPOOL,OPERATOR.SYS
ENVIRONMENT 1: MASTER.QUEST.SOFTWARE
:RUN NBSPOOL.PUB.NETBASE
NetBase Spooling Utility  [x.x.x]  Release n  (C) QUEST Software 1988

QUEST Software, Inc.

I> COPY JOBLIST TO *MASTER
1 Spool file Qualifies

Connecting with MASTER...

DFID     JOB     JOBNAME  USER NAME       RECORDS  STATUS
-------------------------------------------------------------
#I21    #J21     JOBLIST  MGR.NETBASE          84  Copied as #J19
```

The **COPY** command is often used in background jobs to continually copy jobs from one computer to another. If a line or computer goes down, it is often preferable to have NBSpool keep trying to connect until the remote computer comes back up, for example:

To copy all jobs with a priority of **2** to **6** to the remote computer **VGER** every **60** seconds:

```
:JOB COPYJOBS,OPERATOR.SYS
:
:DSLINE VGER;LOGON=SPXFER,OPERATOR/SECRET.SYS
:
:RUN NBSPOOL.PUB.NETBASE
INPUT
XEQ;WAIT=60;ERROR IGNORE
COPY %2-6 TO *VGER;NEWPRI=7
END
EXIT
:EOJ
```

The **DSLINE** command with the **LOGON=** parameter will cause NBSpool to automatically log on to the remote machine with a “programmatic” logon. If the remote computer **VGER** goes down, NBSpool will log on again without any operator intervention.

KEEP

The **KEEP** command copies the currently texted job into a permanent disk file. The new file will not contain any passwords, and all sequence numbers will be stripped off. Turn to the "STREAM" section in this chapter for more information. If a job is in the scheduled state, the first record of the file will contain the scheduling information. The NBSpool **STREAM** command will use this information when restreaming the job, if desired. MPE's **STREAM** command will ignore the first record (after printing a warning).

By default, all passwords are stripped from the output file for security reasons. If the **PASS** parameter is specified, the original passwords will be in the output file. This parameter is required if a job creates or modifies MPE accounting structure, since the corresponding **STREAM** will not be able to obtain the correct passwords when restreaming.

Note. Files created with the **PASS** parameter will be saved with creator access to prevent unauthorized access.

KEEP Syntax

```
I> KEEP filename [;REC=[recsize]
                       [,[blkfact]
                       [,[F|V]
                       [,[ASCII|BINARY]]]]]
                  [;PASS]
                  [;RANGE=first[/last]]
```

User Tip. This command may be abbreviated to **K**.

KEEP Parameters

Parameter	Description
filename	This parameter specifies the name of the file to create. If it exists, you will be asked for permission to overwrite it.
recsize	This parameter specifies the record size for the keep file. Negative for bytes. The default is 80 byte records.

Continued

Parameter	Description
blkfact	This parameter specifies the blocking factor for the new file. If omitted, the optimum blocking factor will be determined.
F	This parameter indicates that the keep file should have fixed length .
V	This parameter indicates that the keep file should have variable length records. This is the default.
ASCII	This parameter indicates that the keep file should be **ASCII**. This is the default.
BINARY	This parameter indicates that the keep file should be **BINARY**.
PASS	This parameter includes original passwords in the output file. This parameter requires **SM** capability.
range	This parameter specifies the range of lines to be retained. If this parameter is not specified, all lines will be retained. Range is expressed as one of the following: **ALL** Selects all lines in the spool file. @ Selects all lines in the spool file. **line** Line designator. A line is one of the following: **line#** A positive integer specifying a particular line in the file. The first line in a spool file is line 0. **FIRST** The first line in the spool file. **LAST** The last line in the spool file. ***** The current line of the spool file. Any of these can be followed by a positive or negative number to indicate a displacement from the specified line. **/line** Causes a range of lines to be listed. Must be equal to or greater than the first specified line.

KEEP Examples

To keep the currently texted job as a flat ASCII file with the 72 byte record length:

```
I> KEEP MYFILE;REC=-72
```

LIST

The **LIST** command displays some or all of the job opened by a prior **TEXT** command. The format of the command closely approximates that of the contributed library program **QUAD**. Any of the text subcommands in the **LIST** command may be shortened to as little as one character. For example, **FIRST** may be abbreviated to **F**. Each subcommand must be separated by a space.

Note. JOB records will have passwords stripped off. If the user does not have **SM** capability, lockwords will be stripped out.

LIST Syntax

```
I> LIST [range] [CCTL          ]
                [OFFLINE       ]
                [PAUSE         ]
                [REMOVE        ]
                [TRUNCATE      ]
                [UNN           ]
                [VARS          ]
                [string        ]

where

range = {ALL          }
        {@            }
        {[line][/line]}
```

User Tip. This command may be abbreviated to **L**. All uppercase parameters described above may also be abbreviated to as little as one character. For example, **U**, **UN** and **UNN** are equivalent.

LIST Parameters

Parameter	Description
range	This parameter specifies the range of lines to be displayed. If this parameter is not specified, only one line will be listed (the current line). Range is expressed as one of the following: **ALL** Selects all lines in the spool file. @ Selects all lines in the spool file. **line** Line designator. A line is one of the following: **line#** A positive integer specifying a particular line in the file. The first line in a spool file is line 0. **FIRST** The first line in the spool file. **LAST** The last line in the spool file. ***** The current line of the spool file. Any of these can be followed by a positive or negative number to indicate a displacement from the specified line. **/line** Causes a range of lines to be listed. Must be equal to or greater than the first specified line.
CCTL	This parameter does nothing but indent the listing, since input spool files have no carriage control.
OFFLINE	This parameter causes all output to be directed to the new **NBSPLIST** file, which by default is directed to device class **LP**. File equations may redirect this file.
PAUSE	This parameter causes the terminal to wait for input after a full screen of data is displayed (24 lines). If **UNN** or **OFFLINE** is specified, this option is ignored.
REMOVE	This parameter removes all nonprintable characters from the listing. Each occurrence of a nonprintable character is replaced with a period.
TRUNCATE	This parameter prevents terminal wraparound by truncating all output to **79** or **131** characters, depending on screen width.
UNN	This parameter suppresses line numbers in the listing.

Continued

Parameter	Description
VARS	When selected, two **CI** variables (or JCW's on MPE/V) are created: **NBFIRSTLINE** and **NBLASTLINE**. These variables contain the line numbers of the first and last line listed. If nothing is listed, the values will be **-1** (or **65535** on MPE/V).
string	This parameter causes only those lines containing the specified string to be listed. Strings may be delimited by single (') or double quotes ("). If no line range is specified, all lines in the file will be searched for the string.

LIST Examples

To list all lines that contain the string **"fun"**, enter:

```
I> LIST "fun"
```

To copy the last 100 lines of the current job to a spool file, enter:

```
I> LIST LAST-99/LAST OFFLINE UNN
```

or

```
I> L L-99/L O U
```

MERGE

The **MERGE** command merges a subset of spool files together to form one new disk file. The order in which the files will be merged is determined by the **SORT** command. If the output file is a disk file, it will be created if it does not exist. If it does exist, it will be purged unless a file equation is issued with **ACC=APPEND**. Append access will do just that, append to an existing file.

Like the **KEEP** command, sequencing information and passwords will be stripped out. In addition, scheduled jobs will have an additional record placed before each **JOB** command which is used by NBSpool's **STREAM** command when restreaming.

Note. Only waiting and scheduled jobs will be merged.

MERGE Syntax

```
I> MERGE [subset]  ;FILE=filename
                  [;REC=[recsize]
                        [,[blkfact]
                        [,[F|V]
                        [,[ASCII|BINARY]]]]]
                  [;NEWPRI=inpri]
                  [;ASK         ]
                  [;PASS        ]
                  [;PURGE       ]
```

MERGE Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to be merged. Turn to Chapter 2 for information on working with subsets.
filename	This parameter specifies the name of the file to create. If it exists and is a disk file, the user will be asked to purge it.
recsize	This parameter specifies the record size for the output file. Negative for bytes. The default is 2044 byte records.
blkfact	This parameter specifies the blocking factor for the new file. If omitted, the optimum blocking factor will be determined.
F	This parameter indicates that the keep file should have fixed length records.
V	This parameter indicates that the keep file should have variable length records. This is the default.
ASCII	This parameter indicates that the keep file should be **ASCII**. This is the default.
BINARY	This parameter indicates that the keep file should be **BINARY**.
inpri	This parameter specifies the new input priority of all successfully merged jobs.
ASK	This parameter prompts at each file for processing.
PASS	This parameter includes original passwords in the output file. This parameter requires **SM** capability.
PURGE	This parameter purges all successfully merged jobs.

MERGE Examples

To merge all **WAITING** and **SCHEDULED** jobs into a disk file, enter:

```
I> MERGE @;FILE=ALLJOBS
```

To merge all jobs for the **NETBASE** and **PAYROLL** accounts, enter:

```
I> MERGE @.NETBASE,@.PAYROLL;FILE=OUT
```

MOVE

The **MOVE** command is functionally identical to the **COPY** command with one very important difference; the **MOVE** command purges the original jobs upon completing the transfer to the remote node. If wild cards are specified, all jobs meeting the specified criteria will be moved to the remote computer. The correct passwords are inserted in the **:JOB** command on the remote computer. If a job streams another job, imbedded **:JOB** commands will *not* be modified to include any appropriate passwords.

Note. Because passwords are automatically inserted on the remote computer, this command requires **SM** capability on the **REMOTE** session. The local user does not require **SM** capability.

By default, scheduling information will be preserved across systems. To create the job remotely without any scheduling values, use the **NOSCHED** parameter. The **DEV**, **COPIES** and **OUTPRI** parameters only affect the **$STDLIST** of the remote job. If a **DEV** is not specified, the default device for **$STDLIST**s on the remote computer will be used.

If NBSpool is running in a NetBase environment, a remote session to the node receiving the spool file is not required since NetBase will automatically handle the transfer. The node name or node number used in the command should be consistent with the node names or numbers used in the NetBase configuration.

If NetBase is not installed, the RPM service of **NS** will be used to create the **NBSPOOLT** process on the remote computer. A **DSLINE** command is required to specify the destination node. Programmatic logons are supported if the **LOGON=** parameter is specified in the **DSLINE** command and a remote session does not exist in the environment.

On some slow network links, it is possible that a **COPY** command will continually encounter errors. These errors can be reduced by adjusting the size of the spool file transfer packets. By setting the JCW **SPOOLPACKET** to **1024** or any multiple of **1024** up to **8192**, these errors can be eliminated. Set this JCW before entering NBSpool.

This command may be stopped at any time by pressing **Ctrl+y**. If a copy is in process, the unfinished remote job will be purged.

MOVE Syntax

```
I> MOVE [subset] TO {nodename} [;PRI   =outpri       ]
                    {*envname} [;COPIES=copies       ]
                               [;DEV   ={class}      ]
                               [        {ldev }      ]
                               [;INPRI =inpri        ]
                               [;ASK                 ]
                               [;NOSCHED             ]
                               [;RETRY               ]
                               [;RETRYDELAY=seconds  ]
```

User Tip. This command may be abbreviated to **MO**.

MOVE Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to be moved. Turn to Chapter 2 for information on working with subsets.
nodename	This parameter specifies the name of the destination node. This is the name specified in a **DSLINE** command. If NetBase is installed, the ***envname** parameter must be used.
envname	This parameter specifies that the node name is an environment created with a **DSLINE** command. Used to access nodes not defined in the NetBase configuration. If NetBase is not installed, this parameter is the same as the **nodename** parameter.
outpri	This parameter specifies the output priority of the job's **$STDLIST** on the remote computer. This parameter must be between **1** and **13**.
copies	This parameter specifies the number of copies used when creating the **$STDLIST** on the remote computer.
class	This parameter specifies the device class used when creating the **$STDLIST** on the remote computer. Must be a valid spooled device class.

Continued

Parameter	Description
ldev	This parameter specifies the logical device number used when creating the spool file on the remote computer. This parameter must be a valid spooled output device.
inpri	This parameter specifies the input priority of the job on the remote computer. This parameter must be between **0** and **15**. A value of **15** is the same as specifying **HIPRI**.
ASK	This parameter prompts at each file for processing.
NOSCHED	This parameter eliminates all scheduling information when creating the job on the remote computer.
RETRY	Specifies that during a **MOVE**, if the destination node is unavailable, a delay of five seconds should be followed by an attempt to reconnect.
RETRYDELAY	Specifies **RETRY**, as above, with a delay in seconds as specified, instead of the default time of five seconds.

MOVE Examples

The following example moves all jobs named **JOBLIST** onto node **MASTER**. This command differs from the **COPY** command in that once a job has been successfully transferred, it is automatically purged from the local computer:

```
:DSLINE MASTER;LOGON=NBSPOOL,OPERATOR.SYS
ENVIRONMENT 1: MASTER.QUEST.SOFTWARE
:RUN NBSPOOL.PUB.NETBASE
NetBase Spooling Utility  [x.x.x]  Release n  (C) QUEST Software 1988

QUEST Software, Inc.

I> MOVE JOBLIST TO *MASTER
1 Spool file Qualifies

Connecting with MASTER...

DFID     JOB     JOBNAME  USER NAME         RECORDS  STATUS
-----------------------------------------------------------------
#I21    #J21     JOBLIST  MGR.NETBASE            84  Moved as #J19
```

The **MOVE** command is often used in background jobs to continually move jobs from one computer to another. If a line or computer goes down, it is often preferable to have NBSpool keep trying to connect until the remote computer comes back up.

To move all jobs with a priority of **2** to **6** to the remote computer **VGER** every **60** seconds:

```
:JOB MOVEJOBS,OPERATOR.SYS
:
:DSLINE VGER;LOGON=SPXFER,OPERATOR/SECRET.SYS
:
:RUN NBSPOOL.PUB.NETBASE
INPUT
ERROR IGNORE
XEQ;WAIT=60
MOVE %2-6 TO *VGER
END
EXIT
:EOJ
```

Note. The **NEWPRI=** prevents the same spool files from being copied every time the command executes, since the copied spool files will be raised above the subset selection criteria.

The **DSLINE** command with the **LOGON=** will cause NBSpool to automatically log on to the remote machine with a “programmatic” logon. If the remote computer **VGER** goes down, NBSpool will log on again without any operator intervention.

OUTPUT

The **OUTPUT** command changes the operating mode of NBSpool from input spool files (jobs) to output spool files. The prompt will change to show the new mode. If a file is texted when switching modes, it will be closed. In addition, the sorting order will be reset when switching modes.

OUTPUT Syntax

```
I> OUTPUT
```

OUTPUT Parameters

No parameters exist for the **OUTPUT** command.

PURGE

The **PURGE** command purges (aborts) all qualified jobs. The execution of the command may be stopped by pressing **Ctrl+y**. If this command's **ASK** parameter is included, a question will be asked to confirm the purge. This helps to prevent accidentally deleting jobs.

The **PQ** form of this command streamlines the purge operation in that no questions are asked and only one line of output is generated. This form of the command should be used with caution, since one can easily purge a large number of waiting jobs.

Note. Only **WAITING** and **SCHEDULED** jobs can be purged.

PURGE Syntax

```
I> PURGE subset [;ASK   ]
                [;NOLIST]
                [;SHOW  ]

I> PQ subset
```

User Tip. This command may be abbreviated to **P**.

PURGE Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to be purged. Turn to Chapter 2 for information on working with subsets.
ASK	This parameter prompts at each file for processing.
NOLIST	This parameter suppresses the listing of jobs being purged.
SHOW	This parameter causes the list of qualifying files to be displayed before asking to purge the files.

SET

The **SET** command sets run time and configuration options for NBSpool. This command can be used with the **INPUTPASS** parameter to prevent users from accessing the NBSpool input commands.

SET Syntax

```
I> SET {INPUTPASS=[password]}
```

SET Parameters

Parameter	Description
INPUTPASS	This parameter changes/sets the input mode password. This requires users to enter a password upon the first entry to input mode. Setting the password requires **SM** capability.
password	This parameter specifies a string from **1** to **16** characters. If omitted, the input mode password will be removed.

SHOW

The **SHOW** command provides a listing of a specified job subset. Specifying the **STATE** parameter allows further selection of jobs by their current state. Omitting the **STATE** parameter will cause all jobs to be displayed. If a file is currently **TEXT**ed, it will appear with a star (*****) in front of the file name.

The subset specified in the **SHOW** command is saved for later reuse if so desired. If any command uses **!** as the job subset, the last subset specified in the **SHOW** command will be used. This command may be interrupted at any time by pressing **Ctrl+y**.

SHOW Syntax.

```
I> SHOW [subset] [;STATE=statespec[,statespec[,...]]]

where

statespec = I  or INTRO
            W  or WAIT
            E  or EXEC
            SC or SCHED
            SU or SUSP
```

User Tip. This command may be abbreviated to **S**.

SHOW Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to be displayed. Turn to Chapter 2 for information on working with subsets.
INTRO	This parameter shows jobs in the **INTRO** state (being streamed).
WAIT	This parameter shows jobs in the **WAIT** state.
EXEC	This parameter shows executing jobs.
SCHED	This parameter shows scheduled jobs.
SUSP	This parameter shows jobs in the suspended state.

SORT

The **SORT** command allows you to specify the order in which all other commands will display lists of jobs. The default is no sorting. The most minor sort will always be done by device file **ID** number if any sorting is specified. Using the **OFF** parameter specifies a return to the default state. The default sorting order is **EXEC** jobs first, then waiting jobs, then scheduled jobs.

SORT Syntax

```
I> SORT {[sortspec][,sortspec][,...]] [;DESC]}
        {OFF                                 }

where

sortspec = C or CREATION
           D or DEVICE
           F or FILENAME
           J or JOB
           N or NAME (job/session name)
           P or PRI
           S or SIZE
           U or USER
```

SORT Parameters

Parameter	Description
sortspec	This parameter specifies the order in which all listings will be produced. Sortspec is expressed as one of the following: **CREATION** Sort by time it was introduced, or the scheduled execution time. **DEVICE** Sort by device class and logical device. Logical devices sort before device classes. **FILENAME** Sort by job name (always **$STDIN**). **JOB** Sort by job number. **NAME** Sort by job/session name. **PRI** Sort by input priority. **SIZE** Sort by spool file size. **USER** Sort by session, account and user. Specifying more than one sortspec will cause the major sort to be the first sortspec, with additional sorting on the other, more minor, sortspecs. Each sortspec may be shortened to as few as one character if desired.
DESC	This parameter specifies that the sort should be done in descending order. This applies to all **sortspec** keys at once.
OFF	This parameter specifies that no sorting is to be done.

STREAM

The **STREAM** command processes a stream file for password insertion, then streams the jobs. If the file contains scheduling information, those jobs will be streamed with their original scheduling information unless the **NOSCHED** parameter is specified.

Password processing is subject to MPE security restraints. Passwords will be automatically inserted into a job only if the user executing the **STREAM** command has enough capability to access the passwords through other means. In other words, **SM** capability is required to stream jobs for every user on the system. However, **AM** capability is sufficient to stream jobs for the user's account only.

If the user does not possess the required security, passwords will be prompted for as each job is processed. If after three attempts the password is still invalid, the entire job will be skipped and not streamed. The **NOPASS** parameter prevents any automatic password insertion. This is used if the file being streamed already contains the correct passwords.

The **STREAM** command assumes that jobs start with either the **!** or **:** characters. Imbedded jobs do not follow this restriction. The **JOB** commands may not be broken into two or more lines before the end of the user information. For example, the following is valid:

```
:JOB USER,MGR.TELESUP,PUB &
:  ;HIPRI
```

The following is *not* valid:

```
:JOB STUFF,&
:  MANAGER.SYS
```

STREAM Syntax

```
I> STREAM filename[,char] [;NOSCHED   ]
                          [;NOPASS    ]
                          [;schedparms]
```

STREAM Parameters

Parameter	Description
file	This parameter specifies the name of the file to be streamed. This file can be any valid stream file. All passwords in the file will be ignored.
char	As with the MPE **STREAM** command, this causes the **STREAM** command to look for command lines to start with the specified character.
NOSCHED	This parameter ignores all scheduling information in the file, if it exists. All jobs will be streamed for execution at the time the command is executed.
NOPASS	This parameter prevents automatic password insertion.
schedparms	Any of the valid scheduling parameters, including **IN=**, **AT=**, **DAY=** and **DATE=**. Specifying any of these parameters automatically enables the **NOSCHED** parameter.

STREAM Examples

To stream a job from a file created by the **MERGE** command and to ignore all scheduling information in the file, enter:

```
I> STREAM JOBS;NOSCHED
```

TEXT

The **TEXT** command opens a **READY** or **OPENED** job for use with the **LIST** command. When the job is opened, its state will be changed to **LOCKED** if it is currently **READY**. If a subset specification qualifies more than one job, the user will be prompted to select one of the qualifying jobs. If no subset is specified, the currently **TEXT**ed job, if any, is closed.

TEXT Syntax

```
I> TEXT [subset]
```

User Tip. This command may be abbreviated to **T**.

TEXT Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to be selected. Turn to Chapter 2 for information on working with subsets.

VERIFY

The **VERIFY** command is used to display the current value of the NBSpool configuration options. When you enter the command with an option, the value of that option is returned.

VERIFY Syntax

```
I> VERIFY ABORT
I> VERIFY MAXPROCS
I> VERIFY PRIVATE
I> VERIFY SEARCH
I> VERIFY SPSAVE
I> VERIFY SYSTEMLOG
I> VERIFY USERCAP
I> VERIFY VAR=[varname];key
```

VERIFY Parameters

Parameter	Description
varname	This parameter specifies a **1** to **8** character alphanumeric name of a variable.
key	One of the following lookup keys: **DEVICE** **JOBNAME** **NAME** **USER**
SUPRESS	Affects error messages which would be displayed either on the console or on the standard list only. If **SUPPRESS** is set to **CONSOLE**, then those error messages going to the console are displayed to the standard list instead. If **SUPPRESS** is set to **YES** or **TRUE**, then all error messages are suppressed.

VERIFY Examples

The **VERIFY** command is used to display the current value of the NBSpool configuration options. When you enter the command with an option, the value of that option is returned.

```
O> verify abort
Aborting on Errors is set to TRUE
O> verify private
Private Access not allowed is set to FALSE
O> verify systemlog
System Logging for network printing is DISABLED
O> verify usercap

--USER-- --ACCT-- EQ

OPUSER   NETBASE  AM
REGUSER  NETBASE  NO
TESTIT   NETBASE  OP
AMUSER   SPACCT   OP
OPUSER   SPACCT   AM
```

VIEW

The **VIEW** command allows a set of jobs to be displayed one after another on the terminal. After a job is completely listed or after pressing **Ctrl+y**, the user will be prompted with one of the following messages:

```
* Alter, Next, Purge, or Relist?
* Next, Purge, or Relist?
* Hit RETURN to continue or EXIT to stop:
```

The first question is asked if any of the **ALTER**-like parameters are specified. The second question is asked if no **ALTER** parameters are used. The last command is asked if the job is **OPENED** or if some error occurred during the listing. Entering **E** or ***//*** will stop the execution of this command.

VIEW Syntax

```
I> VIEW subset [;PRI   =inpri  ]
               [;DEV   ={class}]
               [        {ldev }]
               [;WIDE          ]
               [;NUM           ]
               [;NOPAUSE       ]
```

User Tip. This command may be abbreviated to **V**.

VIEW Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to be viewed. Turn to Chapter 2 for information on working with subsets.
inpri	This parameter specifies the new input priority that will be assigned to all jobs qualified by the subset parameter. Must be an integer from **1** to **14**.
class	This parameter specifies the new device class assigned to all qualified jobs. Must be a valid spooled device class.
ldev	This parameter specifies the new logical device number assigned to all qualified jobs. Must be a valid spooled output device.
WIDE	This parameter changes the display to **132** column mode for the duration of command execution. This parameter is ignored if the terminal cannot display **132** columns.
NUM	This parameter displays line numbers as each job is listed. This also suppresses carriage control execution.
NOPAUSE	This parameter prevents the terminal from waiting for input when a full screen of data is displayed.

WHILE

Like the **XEQ** command, the **WHILE** command allows you to repeatedly execute a set of commands. Unlike **XEQ**, the **WHILE** command executes the series of commands once per qualifying spool file. Once all spool files are processed, the command terminates.

The subset is evaluated at the time the **WHILE** command is entered. Any spool files qualifying at that time will be used. Any files created after the **WHILE** command is entered will be ignored, whether they meet the subset or not.

To make this command work, two special NBSpool parameters are available during the execution of the **WHILE** command:

Parameter	Description
!CURRENT	This parameter specifies the current spool file **ID** being processed. This value changes each time through the **WHILE** loop.
!NEW	If an NBSpool command causes a new spool file to be created, this parameter will be set to the new spool file's **ID**. The value will remain available until either another command which creates spool files is executed or when the end of the current list of commands is reached.

These values are available anywhere in an NBSpool command line and act like actual MPE variables. Note, however, that no MPE variables are set. Type **HELP VARIABLES** for more information on these variables.

The **WHILE** command also supports the **ERROR** and **END** commands, and they have the same function as in the **XEQ** command. Turn to Chapter 5 for more information on the **XEQ** command.

WHILE Syntax

```
I> WHILE subset [;FILE=filename]
                [;SHOW]
```

WHILE Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to be passed to the following commands. Turn to Chapter 2 for information on working with subsets.
filename	This parameter specifies the name of an **ASCII** file containing one or more NBSpool commands.
SHOW	This parameter displays each command as they are executed. By default, only commands that fail are displayed.

WHILE Examples

To store all **$STDLIST**s to a sequence of disk files, enter:

```
I> :SETJCW COUNT 0
I> WHILE $STDLIST
W> T !CURRENT
W> :SETJCW COUNT COUNT+1
W> K DISC!COUNT.DATA
W> END
```

Note. The **COUNT** JCW can be substituted anywhere in a command within NBSpool. In this example, the currently texted file will be kept to a disc file called **DISKnnn.DATA**, where **nnn** is the number of spool files qualifying.

WIDTH

The **WIDTH** command changes the display width to either **80** or **132** columns. The command will only work on Hewlett-Packard terminals that support this line width. All other terminals will ignore this command.

The **WIDE** option is reset when the program terminates or following the completion of a subsequent **VIEW** command that specifies **WIDE**.

WIDTH Syntax

```
I> WIDTH {WIDE  }
         {NARROW}
```

User Tip. This command may be abbreviated to **W**.

WIDTH Parameters

Parameter	Description
WIDE	This parameter changes the display to **132** columns.
NARROW	This parameter changes the display to **80** columns.

CHAPTER 5

Background Processing

NBSpool's background processing capability is another, very powerful feature of this product. Certain commands or groups of commands may be executed repetitively as a background task. Background processing is available through two methods — a background job that invokes NBSpool and its **XEQ** command, or **SPOOLCMD** files that contain NBSpool commands to operate on spool files based on their device class. The first part of this chapter addresses background jobs. The "SPOOLER" section discusses the second form of background processing — **SPOOLCMD** files.

Note. It is recommended that this feature be used within a job, as it can tie up a terminal indefinitely.

In This Chapter

Overview

NBSpool background jobs may contain several different components:

- JCWs to modify NBSpool's behavior (For a list of available JCWs, turn to the "JCWs for Network Printing" section in Chapter 7.)
- **RUN NBSPOOL.PUB.NETBASE**
- **XEQ** command

    WHILE command to limit the spool files affected by this **XEQ** loop

        ERROR command defining what the job should do if it encounters an error

        NBSpool commands to be performed repeatedly

    END command (for **WHILE** loop)

END command (for **XEQ**)

Exit NBSpool

The **XEQ** command executes a list of commands either once or repetitively. If the **REPEAT** or the **WAIT** parameter is specified, the execution of the command list is implemented as a background task. Using this type of background job, an additional NBSpool command is useful: **XEQSTOP**. This command allows you to stop individual **XEQ** processes, or all processes.

To allow for the stopping of this repeated execution, each NBSpool process using **XEQ** repeating is assigned a process number. This number will be displayed on the console and **$STDLIST**, and can be used with the **XEQSTOP** command to stop the background processing.

XEQ Command File

The **XEQ** command will execute a list of commands from a command file. When the **XEQ** command is executed, NBSpool first parses all the commands in the command file. If any command is not valid, the entire **XEQ** command is terminated. As each command is parsed, it will be displayed with a special **X>** prompt. Continuation lines are valid up to **254** characters.

The command file contains the commands to be executed, one command to a line. If a command line begins with an asterisk (*****), the entire command line will be ignored. This allows comments to be inserted in the **XEQ** file.

Not all commands are valid in a **XEQ** command file. In general, all commands which require interaction with a user are disabled, such as **TEXT**, **LIST** and **VIEW**. Any responses normally entered by the user will be suppressed, so any **YES** or **NO** questions will be assumed to be answered **YES**.

When commands are being executed, the actual command will not be displayed unless the **SHOW** parameter is specified on the original **XEQ** command. If **SHOW** is not used, commands will be displayed only if one or more spool files qualifies for the command. In this case, a timestamp will also be appended to the ***n* Spool Files Qualify** message.

Note. By default, NBSpool allows a maximum of *eight* XEQ processes.

Increasing the Maximum Number of XEQ Processes

To use more than eight **XEQ**s in an NBSpool background job, perform the following:

```
:RUN NBSPOOL.PUB.NETBASE
O>SET MAXPROCS=n
       When n is between 9 and 99.
```

This is necessary so that NBSpool will create communication files to allow the **XEQ**s to communicate with the background main program.

Background Execution

More than one **XEQ** command can be executed simultaneously in one job or session by using the **XEQ...;BACKGROUND** option. This option starts a son process, and executes in the background. Each son process has its option routed to a spool file named **XEQOUTn**, where **n** is a number from **1** to **8** of the process in question. All output from the son processes is directed to one of these files. To increase the maximum number of processes, use the NBSpool **SET** command.

If background processes are started from an interactive session, the **EXIT** and **QUIT** command will be rejected until all background processes complete or are stopped with **XEQSTOP** commands. If an **EXIT** or **QUIT** is found in a job, the original process will suspend until all background processes are complete. The following commands are valid in an **XEQ** command file.

ALTER	**ARCDIR**	**ARCHIVE**	**BANNER**
COPY	**DUP**	**END**	**ERROR**
INPUT	**MERGE**	**MOVE**	**OUTPUT**
PURGE	**RESTORE**	**SHOW**	**SORT**
STORE	**STREAM**	**TAPEDIR**	**UNARCHIVE**
VDIR	**VFILE**	**VSAVE**	**WHILE**

All of these commands except **END** and **ERROR** are standard NBSpool commands and are described in Chapters 3 and 4 in this guide. The **END** and **ERROR** commands are used only in an **XEQ** command file and are described in this section.

Background Jobs With XEQ

This section discusses background jobs that invoke NBSpool and its **XEQ** command. The NBSpool commands that are used in the background job are **XEQ**, **XEQSTOP**, **END**, **ERROR** and **WHILE**.

XEQ Command

The **XEQ** command causes a file of commands to be executed either once or repetitively. The major use of this command is to execute various NBSpool functions as a background task. This command can be issued from either **INPUT** or **OUTPUT** command modes. The format of the command file is described in the beginning of this section.

When a **REPEAT** or **WAIT** parameter is specified, the **XEQ** command will repeat its list of commands from the beginning after pausing for the desired time. To allow for the stopping of this repeated execution, each NBSpool process using **XEQ** repeating will be assigned a process number. This number will be displayed on the console and the **$STDLIST** and can be used with the **XEQSTOP** command.

When commands are being executed, the actual command will not be displayed unless the **SHOW** parameter is specified on the original **XEQ** command. If the **SHOW** parameter is not used, commands will be displayed only if one or more spool files qualifies for the command. In this case, a time stamp will also be appended to the **n Spool Files Qualify** message.

Upon the completion of all commands, one of three things occurs. If the **WAIT** or **REPEAT** parameter is specified, the command will pause the desired number of seconds and then repeat from the beginning. If neither parameter was specified or if the repeat count has been reached, the command stops. Finally, if an **XEQSTOP** command was entered for this process, the command will terminate.

XEQ Syntax

```
O> XEQ [filename] [;REPEAT=count]
                  [;WAIT=seconds]
                  [;PROCNUM=number]
                  [;BACKGROUND]
                  [;DEVICE=dev[,dev[,...]]]
                  [;PRI=priority]
                  [;SHOW]
                  [;SHORT]
```

User Tip. This command may be abbreviated to **X**.

XEQ Parameters

Parameter	Description
filename	This parameter specifies the name of the file that contains the commands to be executed. If omitted, the commands will come from **$STDIN**. The format of the command file is described in the beginning of this section.
count	This parameter specifies the number of times to execute the commands. The default is **1** unless a **WAIT=** parameter is specified, in which case the default is repeat forever.
seconds	This parameter specifies the number of seconds to delay between executions of the commands. The default is **60** seconds. *Setting this parameter no lower than **15** is recommended.*
number	This parameter specifies the **XEQ** process number to be used for this instance of **NBSPOOL**. This must be an integer from **1** to **8**. Specifying **1** uses the default. This is useful when maintaining numerous **XEQ** processes.
BACKGROUND	This parameter executes the specified command as a son process in the background. Control is returned to the original process when the background process is started. *This is required if multiple **XEQ**s are in the job.*
DEVICE	This parameter specifies a list of actual spooled devices. This parameter is used to activate waiting spooler processes. If a spool file becomes ready for an device or device class specified, it will cause a waiting **XEQ** command to begin processing commands. This parameter can only be specified from a NBSpool spooler process.
Priority	When executing in **BACKGROUND**, allows control over the execution priority. Can be a value of **CS**, **DS** or **ES**.
SHOW	This parameter causes all commands to be echoed as they are executed.
SHORT	This parameter causes the output of headers and commands to be suppressed. This can drastically reduce the size of the **$STDLIST** for **XEQ** jobs.

XEQ Examples

The file **MOVECMDS.SPOOL** is an ASCII file containing a number of **MOVE** commands. To repeat these **MOVE** commands every 20 seconds, enter:

```
O> XEQ MOVECMDS.SPOOL;WAIT=20
```

To execute the same file only once and to show the commands as they occur, enter:

```
O> XEQ MOVECMDS.SPOOL;SHOW
```

To enter a list of commands that should be repeated **100** times every **60** seconds (the default wait time), enter:

```
O> XEQ;REPEAT=100
```

Notes

By default, **XEQOUTn** processes have a priority of **1**. To change the priority, issue file equations in the NBSpool background job, prior to **:RUN NBSPOOL** in the job.

```
!FILE XEQOUT1;DEV=LP,3
```

XEQSTOP Command

The **XEQSTOP** command is used to stop an executing NBSpool background process. An NBSpool process is one which is executing an **XEQ** command with either a repeat or wait option. The process number is assigned when the process is first started, and is displayed in the **$STDLIST** and on the console. The **XEQSTOP** command takes effect when the executing process reaches the end of its list of commands to execute.

Note. This command requires **SM** or **OP** capability.

XEQSTOP Syntax

```
O> XEQSTOP { procnum }
           { ALL     }
```

Note. **O> XEQSTOP ALL** will stop all the executing processes, rather than stopping each process individually.

XEQSTOP Parameter

Parameter	Description
procnum	This parameter specifies the process number to be stopped. This number can be obtained from the **$STDLIST** of an executing process or from the console when the process starts.
ALL	This parameter stops all executing **XEQ** processes.

END Command

The **END** command terminates the parsing phase of the **XEQ** command and ignores any additional records in the file. This command is only needed if the commands are being entered from **$STDIN**.

END Syntax

```
X> END
```

END Parameters

No parameters exist for the **END** command.

END Examples

To copy and purge all spool files with a priority of **8** to **14** to the remote computer every **60** seconds, and repeat ten times, enter:

```
O> XEQ ;WAIT=60;REPEAT=10
X> MOVE %8-14 TO MASTER;NEWPRI=7
X> END
```

ERROR Command

By default, if a command in the command list should fail, execution of the **XEQ** command terminates immediately. However, with the **ERROR** command this action can be altered a number of ways. NBSpool can be directed to either abort, ignore the error or execute the file up to the command that caused the error.

Unlike the MPE command **:CONTINUE**, once an **ERROR** command is encountered it stays in effect until another **ERROR** command is found or the end of the **XEQ** list is reached. For example, if an "**ERROR IGNORE**" is the first line of an **XEQ** file, any errors encountered on any command in the **XEQ** list will be ignored.

ERROR Syntax

```
X> ERROR {ABORT }
         {IGNORE}
         {SKIP  }
         {STOP  }
```

ERROR Parameters

Parameter	Description
ABORT	Immediately terminate NBSpool.
IGNORE	Ignore the error and continue with the next command.
SKIP	Skip to the end of the **XEQ** command file and stop or wait, depending on whether the file was executed with a **WAIT** parameter.
STOP	Stop the execution of the **XEQ** command. This is the default setting.

ERROR Examples

The following command file will copy all class **LP $STDLIST** files to one computer, and all other **$STDLIST** files to another computer:

```
*THIS IS A COMMENT
ERROR IGNORE
COPY $,*LP TO N1
COPY $,~*LP TO N2
```

The command file may then be executed with a wait time specified to operate continuously:

```
O> XEQ COPYSTD.SPOOL;WAIT=120
```

The following background job operates once a minute, moving spool files with output priorities between **8** and **14** to another machine.

```
!JOB MOVEJOB,OPERATOR.SYS
!
!DSLINE ENGINE;LOGON=SPXFER,OPERATOR/SECRET.SYS
!
!RUN NBSPOOL.PUB.NETBASE
XEQ;WAIT=60
MOVE %8-14 TO *ENGINE
END
EXIT
!EOJ
```

WHILE Command

Like the **XEQ** command, the **WHILE** command allows the user to repeatedly execute a set of commands. Unlike **XEQ**, the **WHILE** command executes the series of commands once per spool file qualifying. Once all spool files are processed, the command terminates.

Note. Do not attempt to execute the **XEQ** command from the **WHILE** command.

The subset is evaluated at the time the **WHILE** command is entered. Any spool files qualifying at that time will be used. Any files created after the **WHILE** command is entered will be ignored, whether they meet the subset or not.

Note. The **WHILE** command only operates on **READY** spool files. If a file is texted by the user, it will not be included in the **WHILE** command.

To make this command work, two special NBSpool variables are available during the execution of the **WHILE** command:

Variable	Description
!CURRENT	Specifies the current spool file ID being processed. This value changes each time through the **WHILE** loop.
!NEW	If an NBSpool command causes a new spool file to be created, this variable will be set to the new spool file's ID. The value will remain available until either another command which creates spool files is executed or when the end of the current list of commands is reached.

These values are available anywhere in an NBSpool command line and act like actual MPE variables. However, no MPE variables are set. Type **HELP VARIABLES** for more information on these variables.

The **WHILE** command also supports the **ERROR** and **END** commands, and they have the same function as in the **XEQ** command. Turn to the "XEQ" section in this chapter for more information.

WHILE Syntax

```
O> WHILE subset [;FILE=filename]
                [;SHOW]
```

WHILE Parameters

Parameter	Description
subset	This parameter specifies the subset of spool files to be passed to the following commands. Turn to Chapter 2 for information on working with subsets.
filename	This parameter specifies the name of an ASCII file containing one or more NBSpool commands.
SHOW	This parameters displays each command as they are executed. By default, only commands that fail are echoed.

WHILE Examples

To save all **$STDLIST**s to a sequence of disk files, enter:

```
O> :SETJCW COUNT 0
O> WHILE $STDLIST
W> T !CURRENT
W> :SETJCW COUNT COUNT+1
W> K DISK!COUNT.DATA
W> END
```

Note. The **COUNT** JCW can be substituted anywhere in a command within NBSpool. In this example, the currently texted file will be kept to a disk file called **DISKnnn.DATA**, where **nnn** is the number of spool files qualifying.

Using WHILE for Complex Processing

The **WHILE** command can be used inside an **XEQ** block to cause a sequence of commands to be executed on spoolfiles one at a time for each spoolfile, rather than each command operating on all qualifying spoolfiles at once, for example:

```
XEQ;WAIT=60
       WHILE $,STATE=READY,PRI=8
              ALTER !CURRENT,"CIERR","FSERR","ABORT";PRI=1
              VSAVE !CURRENT,%1;FILE=ERRORS.ARCHIVE
              BANNER !CURRENT,%1
              ALTER !CURRENT,%1;PRI=13
              VSAVE !CURRENT,%8;FILE=STDLIST.ARCHIVE;PURGE
       END
END
```

This section is a step by step explanation of the previous example:

1) The **XEQ** loop contains a **WHILE** block that will run with a **60** second delay between executions.

2) The **WHILE** command selects **$STSLIST**s that are in the **READY** state at a priority of **8**. This should match exactly all newly completed **$STDLIST** spoolfiles.

3) For *each* spoolfile that the **WHILE** command selects, it will execute the following commands (up to the next **END** command). The **NBSPOOL** pseudo-variable **!CURRENT** is set to the spoolfile number of the first matching spoolfile, and the commands are executed. Then it is set to the number of the next selected spoolfile and the commands are executed again, until each spoolfile has been processed.

4) Within the **WHILE** block, the **!CURRENT** selection criteria is used to ensure that only the current spoolfile will be operated on.

5) In this example **WHILE** block, the first command is an **ALTER** command that will change the priority on the current spoolfile to **1** if any of the strings **"CIERR"**, **"FSERR"** or **"ABORT"** are included. If the spoolfile does not contain any of these strings, the **ALTER** command will not select it and the priority will be left alone. Because the **WHILE** command was to select spoolfiles at priority **8**, after executing this command, the spoolfile will either be a priority **1** (if it contains one of the error strings) or at priority **8** (if it does not contain an error). This priority can be used as selection criteria for determining whether or not errors exist. The spoolfile will be scanned once for errors, rather than on each command which would be inefficient.

6) The next three commands have the selection criteria **!CURRENT,%1**, the current spoolfile only if it is at priority **1** (contains an error). First, **VSAVE** puts it into a special VISTA Plus folder for **$STDLIST**s with errors. Then, we put a banner on it and finally alter its priority so that it will print. If the spoolfile did not contain one of the error strings, these commands will not do anything because the **%1** in the selection criteria will not match the spoolfile.

7) If no errors are found in the spoolfile, the final command's selection criteria of **!CURRENT,%8** will match the spoolfile and **VSAVE** the file into a VISTA Plus folder for ordinary error free **$STDLIST**s, and purge it.

Tips on Writing Background Jobs

This section provides some tips on writing background jobs. These tips include information on choosing a value for the **;WAIT=** parameter and avoiding faulty logic in XEQ loops.

Choosing a Value for the WAIT= Parameter

When choosing values for the **;WAIT=** parameter in the **XEQ** command, you must consider the following effects:

- The load that **NBSPOOL** will place on the system
- The delay that will elapse between the time a spoolfile becomes ready for **NBSPOOL** to perform some action on it
- The time that the action takes place

The parameter is specified in seconds, so typical values are **60** or **120** (one or two minutes). For simple processes values as low as **10** or **20** seconds can be used without placing a significant load on the system. If you run very complex **XEQ** scripts or many **NBSPOOL** processes in parallel (with the **;BACKGROUND** option), and the **NBSPOOL** CPU usage becomes noticeable, you may wish to increase the **;WAIT=** values.

Sample XEQ Loops

The following sections are two examples of XEQ loops. The first example has faulty logic. The second example shows how to successfully handle adding banners to spoolfiles.

Incorrect Example

```
XEQ;WAIT=60
       BANNER MGR.PROD
       ALTER MGR.PROD;PRI=13
END
```

This sample adds banner pages to all spoolfiles created by **MGR.PROD**. It changes the output priority on all spoolfiles created by **MGR.PROD** to **13** (so that they will print), and delays for **60** seconds before starting over again.

In this example, the user intends that all spoolfiles created by **MGR.PROD** be printed with a banner. Two problems exist with this. The first problem is that spoolfiles can get printed without a banner, and the second problem is that some spoolfiles may end up getting multiple banners added to them.

The reason that a spoolfile could get printed (altered to **pri=13**) without a banner added is that each command in the **XEQ** loop executes independently. The **BANNER** command will seek out all spoolfiles owned by **MGR.PROD** (it only operates on **READY** spoolfiles) and add a banner to them. The **ALTER** command changes the priority on all spoolfiles created by **MGR.PROD** to **13**. The problem is that a spoolfile may become available *between the execution of the two commands,* so that the **ALTER** will execute, but the **BANNER** will not.

If this process adds a banner and raises priority to **13** for the spoolfile, but does not start printing before the **60** second delay has expired, then the **BANNER** command will add *another* banner to the spoolfile. If the printer is offline, the spoolfile would get larger as more banner pages are added, and may cause the system to run out of disk space.

Correct Example

Here is a corrected version of the above **XEQ** loop:

```
XEQ;WAIT=60
 BANNER MGR.PROD,%1-11;PRI=12
 ALTER MGR.PROD,%12;PRI=13
END
```

This example is different in the following ways. First, the **BANNER** command has been changed to operate only on spoolfiles that have output priorities of **1** through **11** (in **NBSPOOL**, **%** is short for output priority; you can also use **PRI=1-11**). Second, after each spoolfile is bannered, the priority on the spoolfile is changed to **12**. Because the **BANNER** command does not select spoolfiles at priority **12**, there is no chance that the **BANNER** command will be executed more than once for the same spoolfile. Similarly, the **ALTER** command *only* selects spoolfiles at priority **12** to operate on, so it will not print a spoolfile until after the banner has been added to it.

This example assumes that the system **OUTFENCE** is at least **12**, so that the **BANNER** command will not cause the spoolfile to start printing. Also, the **ALTER** command could be removed if the **BANNER** command was altered to **13** instead of **12**.

Some key points to remember are:

- If a command does not dispose (**MOVE**, **PURGE** or any command with **;PURGE** option) of a spoolfile, then use an option such as **;PRI=** with the command to alter the spoolfile so that it is not processed by the same command on the next execution.

- If you need a sequence of commands to operate on the same spoolfile in a specific order, use the priority trick above to hand the spoolfile from one command to another, or use the **WHILE** command.

Example

The following example shows a background job that has multiple **XEQ**s and **WHILE** loops within a single job:

```
!JOB NBSPOOL,MGR.NETBASE
!
!RUN NBSPOOL.PUB.NETBASE
START LPD
!
XEQ;WAIT=15;BACKGROUND;PROCNUM=1
  ERROR IGNORE
  MOVE *LJ4A TO QUEST;LPR;DEST="LJ4MX"
END

XEQ;WAIT=15;BACKGROUND;PROCNUM=2
  ERROR IGNORE
  MOVE *LJ4B TO QUEST;LPR;DEST="LJ3SI"
END

XEQ;WAIT=15;BACKGROUND;PROCNUM=3
  ERROR IGNORE
  MOVE *LJ8 TO LJ2;PTYPE=LJ;PRINTER=RAW
END

XEQ LJ4XEQ;WAIT=15;BACKGROUND;PROCNUM=5

XEQ;WAIT=15;BACKGROUND;PROCNUM=6
  WHILE *LANACC,*LANACC2,*LANACC3
    ERROR IGNORE
    MOVE !CURRENT,*LANACC TO LANLJ1;PTYPE=LJ
    MOVE !CURRENT,*LANACC2 TO LANLJ1;PTYPE=LJ;PRINTER=LJ132
    MOVE !CURRENT,*LANACC3 TO LANLJ1;PTYPE=LJ;PRINTER=LJLAND
  END

XEQ;WAIT=15;BACKGROUND;PROCNUM=7
  WHILE *605,%7
    ERROR IGNORE
    MOVE !CURRENT TO LADC;LPR;DEST="LADCREP-S -J/nb/nff";PRINTER=RAW
  END

END

EXIT
!
!EOJ
```

Background Processing With SPOOLCMD Files

This section discusses background processing with **SPOOLCMD** files, which contain NBSpool commands to operate on spool files based on their device class. The NBSpool command that is used in this background processing is the **SPOOLER** command.

SPOOLER Command

The **SPOOLER** command controls the execution of background NBSpool spooler processes. These processes run under the control of the process **SPOOLCOP**, which must be running in order for this command to execute. Spooler processes are executions of NBSpool with a command file used as the **$STDIN** for each process. These command files are ASCII files stored in the **SPOOLCMD.NETBASE** account. The name of the command file is the same as the spooler name.

Each spooler process will redirect its output to a spool file with the same name as the spooler. By default, these output files are sent to the device LP with an outpri of **1**. Two **CI** variables can be used to redirect the output:

```
:SETVAR SPOOLOUTPRI 5      (change outpri to 5)
:SETVAR SPOOLOUTDEV "MYLP" (change device to MYLP)
:SETVAR SPOOLOUTDEV "$STDLIST"  (output goes to $STDLIST)
```

An additional feature of **SPOOLER** processes is they can immediately cause the **XEQ** command to begin processing if the **DEVICE=** parameter is used with the **XEQ** command. When a spool file is closed, the **SPOOLCOP** process will wake up any spooler processes that are waiting on a device class or **ldev** specified by the **DEVICE=** parameter of the **XEQ** command. If more than one spooler is waiting on the same device, the first available spooler process will process the file.

The **STOP** command does not immediately stop the execution of a spooler process. It functions in the same manner as the **XEQSTOP** command unless the **NOW** parameter is specified.

Note. The **WAIT=** parameter must be specified on the **XEQ** command. Use a larger value if the **DEVICE=** parameter is specified on the **XEQ** command.

SPOOLER Syntax.

```
O> SPOOLER spoolname;{START}
                     {STOP[;NOW]}
                    ;SHOW
```

SPOOLER Parameters

Parameter	Description
spoolname	Name of the spooler command file. This file must exist in the **SPOOLCMD.NETBASE** group. It consists of a list of commands, normally with an **XEQ** command, that will be executed by the background spooler process. This file will be used as the **$STDIN** for the **NBSPOOL** process. If the **STOP** command is used, a name of @ will stop all spoolers.
START	This parameter causes the specified NBSpool spooler process to be started.
STOP	This parameter stops the specified NBSpool spooler process at the completion of the current **XEQ** loop.
NOW	This parameter interrupts the current **MOVE**/**COPY** command in process immediately. The **MOVE** in process will be terminated.

SHOW	Displays any **spoolcmd** files not running.
	`O> spooler @;show`
	`ADAMLP  Spooler is not running`
	`BEVLP   Spooler is not running`
	`DANLP   Spooler is not running`
	`KIMLP   Spooler is not running`
	`MHNLLP  Spooler is not running`
	`TESTLP  Spooler is not running`

SPOOLER Examples

The file **MYLJ.SPOOLCMD.NETBASE** contains the following records:

```
XEQ;WAIT=300;DEVICE=LJ5,102
ERROR IGNORE
VSAVE *LJ5,AR@;FILE=ARFOLDER.ARCHIVE;APPEND;LIMIT=100,10000
MOVE *LJ5,*102 TO APJET;PRINTER=LJLAND
END
EXIT
```

The following example starts the spooler command file executing:

```
O> SPOOLER MYLJ;START
```

Below is a sample job that can be used to start the spooler control process and the individual spooler command files:

```
!JOB NBSPJOB,MGR.NETBASE
!RUN NBSPOOL.PUB.NETBASE
START SPOOLING
SPOOLER MYLJ;START
EXIT
!EOJ
```

Notes

- Altering a spool file with MPE/iX's **SPOOLF** or **ALTSPOOLFILE**, will not trigger the background process. The **NBSPOOL ALTER** command triggers the background process.
- Command files created in **SPOOLCMD.NETBASE** must be kept unnumbered.
- Once the **START SPOOLING** command has been issued, the file **SPOOLXL.PUB.NETBASE** will be loaded. It does not get unloaded until the system is rebooted or until the NetBase job is aborted.
- Stopping all the spooler processes may be done within NBSpool via the **SPOOLER @;STOP** command.

CHAPTER 6

Banner Maintenance

The **BANNER** command is used to add banners to spool files. However, this command requires the existence of a banner database. The layouts for the banners, the spooler devices, reports and distribution lists are defined in the database. The banner maintenance program, **BANMAIN**, maintains the banner database.

In This Chapter

- **Getting Started**
- **Running Banner Maintenance**
- **Report Search Logic**
- **Banner Page**
- **Distribution List**
- **Banner Maintenance Program**

Background Processing With SPOOLCMD Files

The **BANNER** database is created as part of the NBSpool installation process with some default entries so that any file can be bannerized without running **BANMAIN**. When using **BANMAIN** for the first time, check the following notes:

- The banner page may include information about the spool file, the distribution, or the device. Turn to the "Banner Page" section in this chapter for a detailed description of the banner page.
- Most of the banner page is taken up by what is called the banner or banner layout. It consists of four large print lines formatted by the user. The Define Banners screen allows you to define any number of banner layouts by name. The default banner is called **SYSTEM**.
- The Banner Control Information screen contains both a default message and a default banner layout. These are defined when the database is created, but they may be changed. These defaults for the message and banner fields are provided every time a new report is defined in the Report Maintenance screen.

The Report Maintenance Screen is used to attach a printer and optional formatting information to a report. For the **BANNER** command to find a report that has been defined in **BANMAIN**, the report name must be entered correctly. Also, the Report Search Sequence field must include a matching template. Be sure to read about this in the "Report Search Logic" section before defining a report.

Running Banner Maintenance

Reports are defined using a file name, job name, user name, account and device name. When the **BANNER** command is issued, the banner function uses the spool file name, session name, user name account and device name. These are from the spool file that is specified to find a match in the reports defined in the banner database. If a match is not found, the command displays an error message.

The banner function's searching logic allows it to search until the best match is found. In this way, a report does not have to be defined for every spool file that may require banners. Reports can be defined that will provide the banner layout and distribution list for a subset of spool files.

The banner page includes four lines of banner header and a detail area. The banner header lines are printed in a large font, taking up most of the banner page. The detail area includes the distribution list name, the name of the spool file and its creator, and also a five-line message.

The information that you define for a report controls the printing of the banner. A distribution list may be attached to a report name. If a distribution list is defined, the banner function will print a copy of the spool file for each name on the distribution list. An option on the **BANNER** command allows the user to print a consolidated distribution list on each spool file.

The banner maintenance program allows the user to define reports and their distribution lists. The program also has screens to define banner headers and spool file devices. In short, the maintenance program allows the user to tailor the banner function to their individual and changing needs.

To run the program, type the following command:

```
:RUN BANMAIN.PUB.NETBASE
```

Report Search Logic

The Report Maintenance screen attaches printing and layout information to a specific report or set of reports. For flexibility, the report name can be defined by its filename, job name, user name, account name or device name. Use the @ sign for any part of the report name that is undefined, for example:

```
GLDLRPT.GENLEDG.GLUSER.PROD.LP
GLDLRPT.GENLEDG.@.@.@
GLDLRPT.@.@.@.@
@.GENLEDG.GLUSER.PROD.@
```

The Report Search Sequence field allows you to define the search logic for the reports in the banner database. This is accomplished with a sequence of search templates located in the Banner Control Information screen of the maintenance program.

A search template is defined as:

```
[1:1] = ‘F’ or ‘@’  (filename)
[2:1] = ‘J’ or ‘@’  (job name)
[3:1] = ‘U’ or ‘@’  (user name)
[4:1] = ‘A’ or ‘@’  (account name)
[5;1] = ‘D’ or ‘@’  (device name)
```

If the first character in the template is **‘F’**, the filename specified in the **BANNER** command must match the filename defined in the report name in the database. If the first character is @, the report filename must be @. This is the same for session name, user name, account name and device name.

Up to eight of these templates can be defined in the maintenance program. The default values used by **BANMAIN** are:

```
‘FJUAD’
‘F@UA@’
‘F@@@@’
‘@@@@@’
‘     ’
‘     ’
‘     ’
‘     ’
```

The templates are used in series. If the templates are defined as above, and the name of the report specified in the **BANNER** command is **GLDLRPT.JOHN.MGR.PROD.LP**, then:

1. First, the banner function searches the database for a report named **GLDLRPT.JOHN.MGR.PROD.LP.**
2. Second (if the above name is not found), it searches for **GLDLRPT.@.MGR.PROD.@.**
3. Third (if the above name is not found), it searches for **GLDLRPT.@.@.@.@.**
4. Fourth (if the above name is not found), it searches for @.@.@.@.@.

The **BANNER** database is created with a default report of @.@.@.@.@. This is useful at the start, but if the user's report is not defined correctly, or it does not match one of the search templates, the **BANNER** command will bannerize the report using the default report of @.@.@.@.@.

For instance, if a report is defined in the database as **GLDLRPT.GENLEDG.**@.@.@, and the spool file specified in the banner command is **GLDLRPT.GENLEDG.MGR.PROD.**@, the above search templates would create a banner using the default report. The **BANNER** command cannot find the report defined for that spool file unless the following search template is added to the search sequence:

```
'F@@@@'
'FJ@@@'
'@@@@@'
```

When defining a report, always make sure that the Report Search Sequence field includes a template that matches the report.

Banner Page

The banner page is divided into two parts. The banner header is printed at the top in large scale print. A detail area is printed at the bottom. The detail area includes the spool file and distribution information.

The banner header is four lines of text printed in a large scale font. The information that is printed in the header is variable and may be defined at the time the banner is printed. This is accomplished with control words. A control word is replaced by data specific to the banner at the time the banner is printed.

 **Note.** Control words must be entered into the banner definition in lower case characters.

Valid control words are:

Control Word	Description
filename	The filename
jobname	The creator session name
jobid	The creator job number (in the format **#Jnnnn**)
username	The creator user name
acctname	The creator account name
bin	The bin location if using multiple distribution
distname	The first eight characters of the distribution list name
dfid	The spool file **DFID** (in the format **#Onnnn**)
device	The spool file device class name
phone	The telephone number of the user
dept	The department of the user
beginend	Prints **/*BEGIN*/** for the banner page and **/*END*/** for the trailer page

For instance, a banner may be defined as follows:

```
BIN:  bin
NAME:  distname
FILE:  filename
  beginend
```

Then, if the banner is printed for file **GLREPORT**, and this copy of the report is to be distributed to **John Stuart** at bin location **LU 234**, the banner header will be printed:

```
BIN:  LU 234
NAME:  JOHN STUART
FILE:  GLREPORT
  /*BEGIN*/
```

The banner function uses one of two large fonts for the header. The larger of the two fonts allows **10** characters per line and the smaller of the two allows **18** characters per line. If after the control words are replaced, any one of the four lines is longer than **10** characters, the smaller font will be used. Otherwise, the larger font is used.

The character used for the larger of the two fonts is defined in the banner maintenance program. The smaller of the two fonts will use the character of the letter it is printing for the large font character. For instance:

```
SSSS  M    M   AAA   L      L
S      MM  MM  A   A  L      L
 SSS   M MM M  AAAAA  L      L
    S  M    M  A   A  L      L
SSSS   M    M  A   A  LLLLL  LLLLL
```

```
***            *******    ********       *******    ***********
***           *********   *********     *********   ***********
***          ****   ****  ***   ****   ****   ****  ***
***          ***     ***  ***    ***   ***          ***
***          ***********  **********   ***   *****  *********
***          ***********  *********    ***   *****  ***
***          ***     ***  ***   ***    ****    ***  ***
***********  ***     ***  ***    ***    *********   ***********
***********  ***     ***  ***     ***    *******    ***********
```

The banner header and the detail information are printed on the banner page in the following format:

```
[Control 1]

[Form feed 1]

[Banner line 1]

[Banner line 2]

[Banner line 3]

[Banner line 4]


<Detail area>                                                    [Date Stamp]
*************************************************************************
* BIN      NAME                              DEPT   PHONE      * [Message 1]
*
* -------- -------------------------------- ------ ---------- * [Message 2]
*
* [Distribution 1]                                             * [Message 3]
*
* [Next distribution]                                          * [Message 4]
*
*      .                                                       * [Message 5]
*
*      .                                                       *
*      .                                                       * [Spool file]
*
* [Last distribution listed]                                   * [Creator]
*
*************************************************************************
[Form feed 2]
[Control 2]
```

The following table provides descriptions of the fields in the banner page.

Field	Description
Control 1	This is an optional device control string that may be defined for a particular spool device. The control string will only be printed if the spool device is defined in the banner database, and a control string is defined for that device.
Form feed 1	A form feed that may be sent to the printer before the trailer banner page. This is used for reports that do not have a terminal page eject. The flag that controls this feature is defined in the Report Maintenance screen.
Banner line 1-4	These four lines make up the banner header. These lines are printed in a large text font. The data that is printed is variable and is defined using control words that are substituted at the time of printing.
Date stamp	The date and time that the banner was generated.
Detail area	The detail area includes the distribution information, the spool file information and a five line optional message. The character used for the border of the detail area is defined in the Banner Control Information screen of the maintenance program.
Message 1-5	Five lines of message may be printed in the detail area. A default message may be defined that will be printed on all reports, or a message may be defined for each individual report.
Distribution 1	This will normally be the distribution location and name for this copy of the report. However, if the **BANNER** command is issued with the **SINGLE** option, this is the first distribution in the list.
Next distribution	This is the next distribution in the list if the banner is printed with the **SINGLE** option.
Spool file	The spool file information, printed in the following format: **`Spool file: <dfid#>  <filename>`**

Continued

Field	Description
Last distribution listed	If the banner is printed with the **SINGLE** option, the banner function attempts to print the entire distribution list. One of the parameters in the Banner Control Information screen determines the number of banner pages. If the distribution list cannot fit on one page, and the number of banner pages is greater than one, the list will be completed on the next page.
Creator	The creator information, printed in the following format: **`Creator: <job#>  <session name, user name.account>`**
Form feed 2	A form feed may be sent to the printer after the banner page, or pages, is printed. This is used for reports that do not have an initial page eject. The flag that controls this feature is defined in the Report Maintenance screen.
Control 2	This is an optional device control string that may be defined for a particular spool device. The control string will only be printed if the spool device is defined in the banner database and a control string is defined for that device.

Distribution List

A feature of NBSpool's banner function is the ability to attach a distribution list to a report. The distribution list is a list of people who will receive a copy of the report. For each person in the list, the program allows you to enter a department, phone number and bin location. The device information can also be specified for different distributions.

If banners are added to a report that has a distribution list, the banner function creates a copy of the report for each person on the list. In the detail area of each copy is printed the bin location, name, department and phone number. In addition, the bin location or the distribution list name may be printed in the banner header.

If the **BANNER** command is issued with the **SINGLE** option, the banner function prints a consolidated distribution list on the report. The printed list will be sorted by bin location. The banner function prints as much of the list as will fit on the first banner page. If the list is too long to be printed on one page, the rest of the list may be printed on consecutive banner pages. The number of banner pages is defined in the Banner Control Information screen of **BANMAIN**.

Banner Maintenance Program

The main screen in the banner maintenance program is shown in the illustration below. From this screen the user can enter screens to modify Banner Control Information, define spool devices for reports, define the banner layouts for reports and make distribution lists for reports.

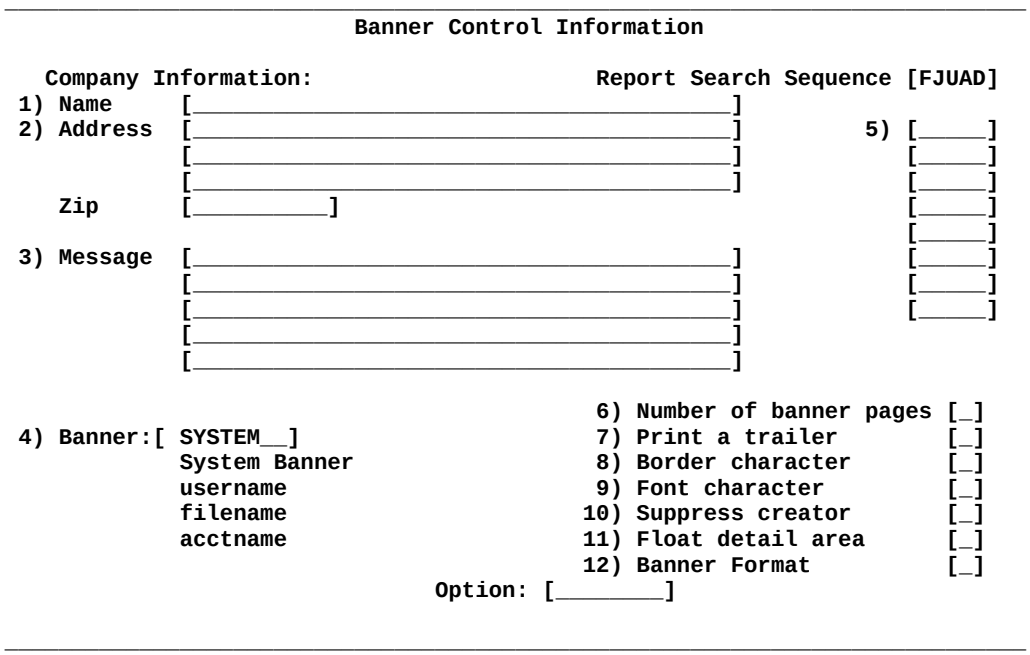
```
s.VV
                    QUEST Banner Maintenance Program


                        1.  Banner Control Information

                        2.  Define Devices

                        3.  Define Banners

                        4.  Report Maintenance

                        5.  Name Maintenance

                        6.  Define Distribution Lists

                        7.  Banner Configuration Reports


                            Option: [  ]
```

The following table provides descriptions of the fields in the Banner Maintenance Program screen.

Field	Description
Option	The option field is used to enter a banner maintenance screen or to exit the program. Any command that is valid in this field may be abbreviated to the first character. The valid values for this field are: **1** Display the Banner Control Information screen **2** Display the Define Devices screen **3** Display the Define Banners screen **4** Display the Report Maintenance screen **5** Display the Name Maintenance screen **6** Display the Define Distribution Lists screen **7** Display the list of Banner Configuration Reports **EXIT** Exit this program

Banner Control Information Screen

The Banner Control Information screen is shown in the illustration below. The Banner Control Information screen is used for entering company information, the report search logic, a default message, a default banner header and a number of banner controls.



The following table provides descriptions of the fields in the Banner Control Information screen.

Field	Description
1) Name	The company name
2) Address	The company address-this field is optional
Zip	The company zip code-this field is optional
3) Message	This is the default detail area message. This is a five line message that is printed in the detail area of the banner page. The message also may be defined for individual reports.
4) Banner	The default banner header. The value of this field is the banner name as it appears in the Define Banners screen. A default banner must be defined.
5) Report Search Sequence	This is a series of eight, five-character templates used to determine the search logic for the spool file specified in the **BANNER** command. Each five-character field may be blank or defined as follows: **[1:1] = F or @** **[2:1] = J or @** **[3:1] = U or @** **[4:1] = A or @** **[5;1] = D or @** Turn to the "Report Search Logic" section in this section for more information.
6) Number of banner pages	The number of banner pages that will be printed. The number must be a value from **1** to **9**.
7) Print a trailer	If **Y**, add a trailer page to the spool file. Otherwise do not add a trailer page to the spool file.
8) Border character	The character used for the border of the detail area.
9) Font character	The character used for the larger of the two banner header fonts.

Continued

Field	Description
10) Suppress creator	If **Y**, suppress the printing of the creator name and job number in the detail area.
11) Float detail area	If **Y**, the detail area will be printed immediately following the last non-blank banner line. This overrides the usual banner format where the detail area is printed at the bottom of the page.
Option	The option field is used to modify the information described in this screen. Any command that is valid in this field may be abbreviated to the first character. The valid values for this field are: **nn** Modify field **#nn**. **ALL** Modify all fields. **EXIT** Exit this screen. **<return>** Exit this screen.
12) Banner format	If **1** is entered, the Description and Message fields from the Report Maintenance screen will print.

Define Devices Screen

The Define Devices screen is shown in the illustration below. This screen is used to define the spool devices used for the reports.

```
                              Define Devices


   Device [________]

   1)  Description   [________________________________________]

   2)  Lines Per Page    [____]

   3)  Number of copies  [____]
       Output priority   [____]
       Record size       [____]


   4)  Control Strings:
         Before printing   [______________________________________________]
         After printing    [______________________________________________]

   5)  Printer controls on spoolfile [_]


                              Option: [________]
```

The following table provides descriptions of the fields in the Define Devices screen.

Field	Description
Device	The device class name of a spool device. This is the key for the device set. Enter **E** or **EXIT** to exit this screen. To list all devices to the screen enter *****. Each device will be displayed and the user will be prompted to modify this device or list the next device.
1) Description	The device description-this field is optional
2) Lines Per Page	This is the number of lines per page. The default is 60 lines per page.
3) Number of copies	This is the number of copies to be printed when this device is used. Valid values are **1-127**.
Output priority	The output priority of the bannerized spool file written to this device. Valid values are **1-13**.
Record size	The record size for this device. Valid values are **1-132**.
4) Control Strings	A string of control characters that may be sent to this device. Enter the non-alphanumeric by their decimal value. The alphanumeric characters are delimited by quotes and all are separated by commas, for example: **27,"m1O",27,"P"**
Before printing	A control string sent to the device before the banner or trailer page is printed.
After printing	A control string sent to the device after the banner or trailer page is printed.
5) Printer controls on spool file	If **Y**, then the **After printing** control string on the banner page will be suppressed so the controls in the **Before printing** control string will affect the printing of the spool file. The **After printing** control string will be sent to the printer on the trailer page.

Continued

Field	Description
Option	The option field is used to modify the information described in this screen. Any command that is valid in this field may be abbreviated to the first character. The valid values are: **nn** Modify field #nn. **ALL** Modify all fields. **DELETE** Delete this device class definition. **EXIT** Update this device and exit this screen. **<return>** Update this device and prompt for a new device. **//** Clear the screen, prompt for a new device name. If an ***** has been entered in the Device field and the program is listing all devices, the following values are valid: **nn** Modify field #nn. This ends the listing of devices. **ALL** Modify all fields. This ends the listing of devices. **DELETE** Delete this device class definition and list the next device. **EXIT** Exit this screen. **<return>** Display the next device. **//** End the listing of devices and prompt at the option field.

Define Banners Screen

The Define Banners screen is shown in the illustration below. This screen is used to define the banner layouts used for the reports.

Note. The default banner opens from the Banner Control Information screen and is named **SYSTEM**.

```
                              Define Banners

  Banner Name [________]

  1)  Description   [________________________________________]

  2)  Banner Layout [__________________]
                    [__________________]
                    [__________________]
                    [__________________]





                               Option: [________]
```

The following table provides descriptions of the fields in the Define Banners screen.

Field	Description
Banner Name	An eight character name used to identify this banner layout. The banner name is used to attach a banner layout to a report, or to define the default banner layout in the Banner Control Information screen. To list all banner layouts to the screen enter *****. Each banner will be displayed and the user will be prompted to modify this banner or list the next banner.
1) Description	The banner description-this field is optional
2) Banner Layout	This is the four line layout for the banner header. The banner layout consists of upper case text and lower case control words. The valid control words are: **filename** The spool file name **Jobname** The creator session name **Jobid** The creator job number (in the format **#Jnnnn**) **Username** The creator user name **Acctname** The creator account name **Bin** The bin location if using multiple distribution **Distname** The first eight characters of the distribution list name **Dfid** The spool file **DFID** (in the format **#Onnnn**) **Device** The spool file device class name **Phone** The user's telephone number **Dept** The user's department number **Beginend** Prints **/*BEGIN*/** for the banner page and **/*END*/** for the trailer page. Turn to the "Banner Page" section in this chapter for more information about the banner header.

Continued

Field	Description
Option	The option field is used to modify the information described in this screen. Any command that is valid in this field may be abbreviated to the first character. The valid values for this field are: **nn** Modify field **#nn**. **ALL** Modify all fields. **DELETE** Delete this banner layout definition. **EXIT** Update this banner and exit the screen. **<return>** Update this banner and prompt for a new banner. **//** Clear the screen, prompt for a new banner name. If an ***** has been entered in the Banner Name field and the program is listing all banners, the following values are valid: **nn** Modify field **#nn**. This ends the listing of banners. **ALL** Modify all fields. This ends the listing of banners. **DELETE** Delete this banner layout definition and list the next banner. **EXIT** Exit this screen. **<return>** Display the next banner layout. **//** End the listing of banners and prompt at the option field.

Report Maintenance Screen

The Report Maintenance screen is shown in the illustration below. This screen is used to define the banner and distribution list for a report. If a field has defaults, the default value is displayed. The default values are explained in the detail information for the fields.

```
                              Report Maintenance

Report Name:
  File [________]       1) Desc    [_____________________________________]
  Job  [________]       2) Message [_____________________________________]
  User [________]                  [_____________________________________]
  Acct [________]                  [_____________________________________]
  Dev  [________]                  [_____________________________________]
                                   [_____________________________________]
3)  Device  [________]
                                         5) Banner:[________]
4)  Copies      [____]
    Outpri      [____]
    Recsize     [____]


6)  Form feed after header        [_]    10) Distribution List
7)  Form feed before trailer      [_]
8)  Suppress banner pages         [_]
9)  Truncate distribution list    [_]

                                 Option: [________]
```

The following table provides descriptions of the fields in the Report Maintenance screen.

Field	Description
Report Name	The report name is the key for the report set. The key is made up of four eight character fields; the file name, the job name, the user name and the account name. To list all reports to the screen enter *****. Each report will be displayed and the user will be prompted to modify this report or list the next report. To continue listing reports to the screen enter (*I*). Reports will be displayed starting with the report following the last one modified. This entry is only valid after breaking from a serial display (started by entering *****).

Continued

Field	Description
1) Desc	The report description. This field is optional.
2) Message	A five line message that is printed in the detail area of the banner page. If no entry is made in this field, **BANMAIN** will display the default. The default detail message is defined in the Banner Control Information screen.
3) Device	The spool device used for this report. If this field is not entered, the device will be determined by NBSpool. Enter ***** to select from the defined devices. The user will be prompted to keep the displayed device or list the next device.
4) Copies	The number of copies of this report to be printed. If no entry is made in this field, and a device is defined in the device field, the number of copies for the device will be displayed.
Outpri	The output priority of the spool file for this report. If no entry is made in this field, and a device is defined in the device field, the output priority for the device will be displayed.
Recsize	The record size of the spool file for this report. If no entry is made in this field, and a device is defined in the device field, the record size for the device will be displayed.
5) Banner	The banner layout of the banner page for this report. If no entry is made in this field, the default banner will be displayed. The default banner is defined in the Banner Control Information screen. Enter ***** to select from the defined banners. The user will be prompted to keep the displayed banner or list the next banner.
6) Form feed after header	If the value of this field is **Y**, a form feed will be sent to the printer after the banner header is printed. This is used for reports that do not have an initial page eject.
7) Form feed before trailer	If the value of this field is **Y**, a form feed will be sent to the printer before the banner trailer is printed. This is used for reports that do not have a terminal page eject.
8) Suppress banner pages	If the value of this field is **Y**, the printing of the defined banner will be suppressed. This is used to take advantage of other report definition features without necessitating the printing of the banner.

Field	Description
9) Truncate Distribution List	If the value of this field is **Y**, the Distribution List will be truncated to one page.
10) Distribution List	Display the Distribution List screen. This screen is used to enter and modify a distribution list for this report.
Option	The option field is used to modify the information described in this screen. Any command that is valid in this field may be abbreviated to the first character. The valid values are: **nn** — Modify field **#nn**. Enter **8** to modify the distribution list for this report **ALL** — Modify all fields **DELETE** — Delete this report definition **EXIT** — Update this report and exit the screen **<return>** — Update this report and prompt for a new report **//** — Clear the screen and prompt for a new report name If an ***** has been entered in the Report Name field and the program is listing all reports, the following values are valid: **nn** — Modify field **#nn**. This ends the listing of reports **ALL** — Modify all fields. This ends the listing of reports **DELETE** — Delete this report definition and list the next report **EXIT** — Exit this screen. **<return>** — Display the next report. **//** — End the listing of reports and prompt at the option field.

Name Maintenance Screen

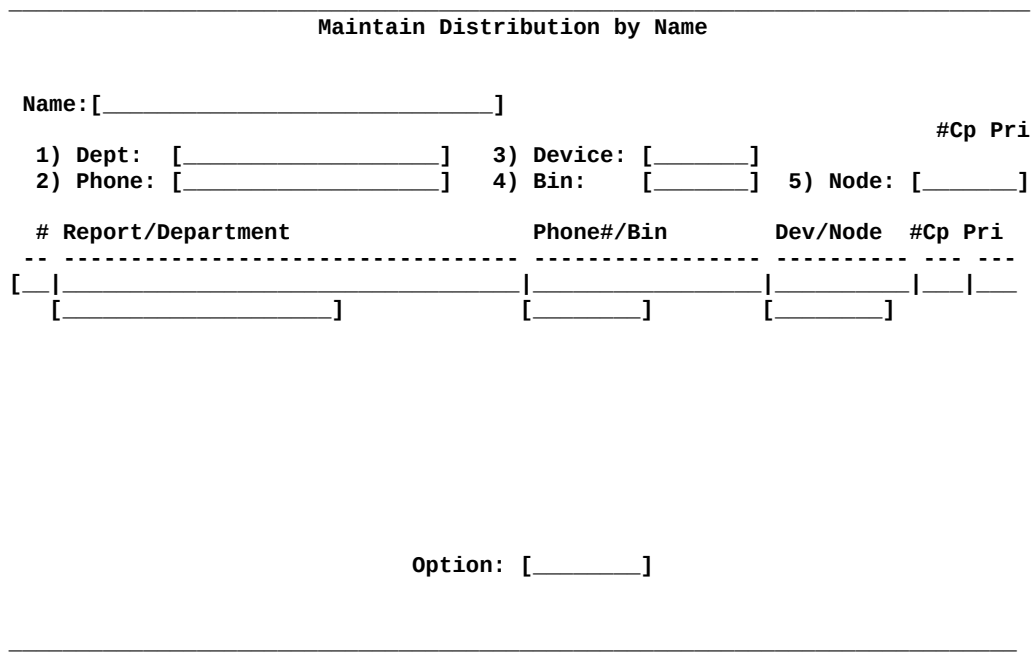
The Name Maintenance screen is shown in the illustration below. This screen maintains the default values for a name used in a distribution. Every name used in a distribution list has a default set of values for the department, phone number, device, bin and node. This screen is used to modify the default values.

The screen also lists the entry for the name in all distribution lists that includes the name. The entry values for department, phone number, bin, node, device, number of copies and output priority may also be modified. Also, the name may be added to and deleted from reports using this screen. If the master entry of the name is deleted, all entries of the name in the distribution lists are also deleted. A new name may also be entered and added to some or all reports.

The first time this screen is entered, the list of distribution entries is displayed with the fields condensed so as to fit all the information on one line. Also, any field whose value is the same as the default for this name is hidden. If the entry for a distribution is modified, or if the name is added to a distribution, the display is altered to allow the entry of each field.

```
                                Name Maintenance

 Name:[_____________________________]
                                                                    #Cp Pri
  1) Dept:  [___________________]  3) Device: [_______]
  2) Phone: [___________________]  4) Bin:    [_______]  5) Node: [________]

  # Report                           Dept.   Phone    Bin   Dev #Cp  Pri Node
 -- ------------------------------ ------- -------- ----- ---- -- --- ----
|  |                              |       |        |     |    |  |   |    |



                              Option: [________]
```

The Maintain Distribution by Name screen is shown in the illustration below. This is the Name Maintenance screen as it appears for the full listing of the reports. Notice that although either screen may be used for listing the reports, only the following screen is used when the name associated with a report is modified.



The following table provides descriptions of the fields in the Name Maintenance screen.

Field	Description
Name	The distribution name. Enter a name that already exists in a distribution, a new name, or **E** to exit this screen. If a distribution name is entered, the program will display the default information for the name and it will list all the reports that have the name in its distribution list with the information for each report. If a new name is entered, the program will prompt for the default information.
1) Dept	The default department for the name
2) Phone	The default phone number for the name

Continued

Field	Description
3) Device	The default device for the name. If a device is entered in this field, the number of copies and the output priority for the device are displayed to the right. These are the default number of copies and output priority for the name in a distribution list. Enter ***** to display and choose from all defined devices.
4) Bin	The default bin for the name
5) Node	This is the default node for the name. The node name as it appears in the NetBase configuration is displayed. When entered, only a NetBase node is valid. Enter ***** to display and choose from all defined nodes.
#	The line number of this report. The line number is used to modify the values for this report or to delete the distribution of the name from this report.
Report/Department	**Report** is the name of a report whose spool file distribution list includes this name. When adding the name to a new report the report name is entered in this field. Enter the report name using the following format: `filename.jobname.username.account` Note that the program defaults any undefined part of the name to @. For instance, the report name **GLRPT.DATA**.@.@ may be entered as **GLRPT.DATA**. • Enter ***** to display and choose from all defined reports. • Enter **ADD ALL** to add the name to all defined reports. • Enter **//** to end add mode. **Department** is the department for the distribution name when receiving this spool file. When listed, if this field is blank then the department is same as the default. To display all defaults, enter **V** or **VIEW** at the option prompt.
Phone#/Bin	**Phone#** is the phone number for the distribution name when receiving this spool file. When listed, if this field is blank then the phone number is same as the default. **Bin** is the bin for the distribution name when receiving this spool file. When listed, if this field is blank then the bin is same as the default.

Field	Description
Dev/Node	**Dev** is the device for the distribution name when receiving this spool file. When listed, if this field is blank then the device is same as the default. **Node** is the node for the distribution name when receiving this spool file. When listed, if this field is blank then the node is same as the default. Enter ***** to display and choose from all defined devices or nodes.
#Cp	The number of copies of this spool file to be created for this name. The default copies is the number of copies for the device, if a device is entered. If no device is entered then the default copies is the number of copies for the device on the report.
Pri	The output priority of this spool file to be created for this name. The default output is the output priority for the device, if a device is entered. If no device is entered then the default output is the output priority for the device on the report.

Continued

Field	Description
Option	The option field is used to modify the information described in this screen. Any command that is valid in this field may be abbreviated to the first character. However, only **DELETE** may be used to delete the name. These valid options apply to the distribution name: **1** Modify the default department. **2** Modify the default phone number. **3** Modify the default device. **4** Modify the default bin. **5** Modify the default node. **ALL** Modify all defaults for this name. **DELETE** Delete this name and prompt for a new name. **EXIT** Exit this screen. **//** Clear all changes and prompt for a new name. The following valid options apply to the list of report distributions that include the distribution name: **MODIFY nn** Modify all fields for report number **nn**. **ADD** Add this name to new reports. **ADD ALL** Add this name to all defined reports. **DELETE nn** Delete this name from report number **nn**. **NEXT** Display next page of detail list. **PREV** Display previous page of detail list. **VIEW** Show defaults for names in the detail list. **HIDE** Hide defaults for names in the detail list. **FULL** Display full detail in the detail list. **SHORT** Abbreviate detail to fit in one line for list.

Define Distribution Lists Screen

The Define Distribution Lists screen is shown in the illustration below. This screen is used to enter a distribution list for a report. Turn to the "Distribution List" section in this chapter for more information.

```
                          Define Distribution List

Distribution List

#  Name/Department                 Phone#/Bin         Dev/Node  #Cp  Pri
-- ------------------------------  ---------------  ---------   --  ---




                                Option: [________]
```

The following table provides descriptions of the fields in the Name Maintenance screen.

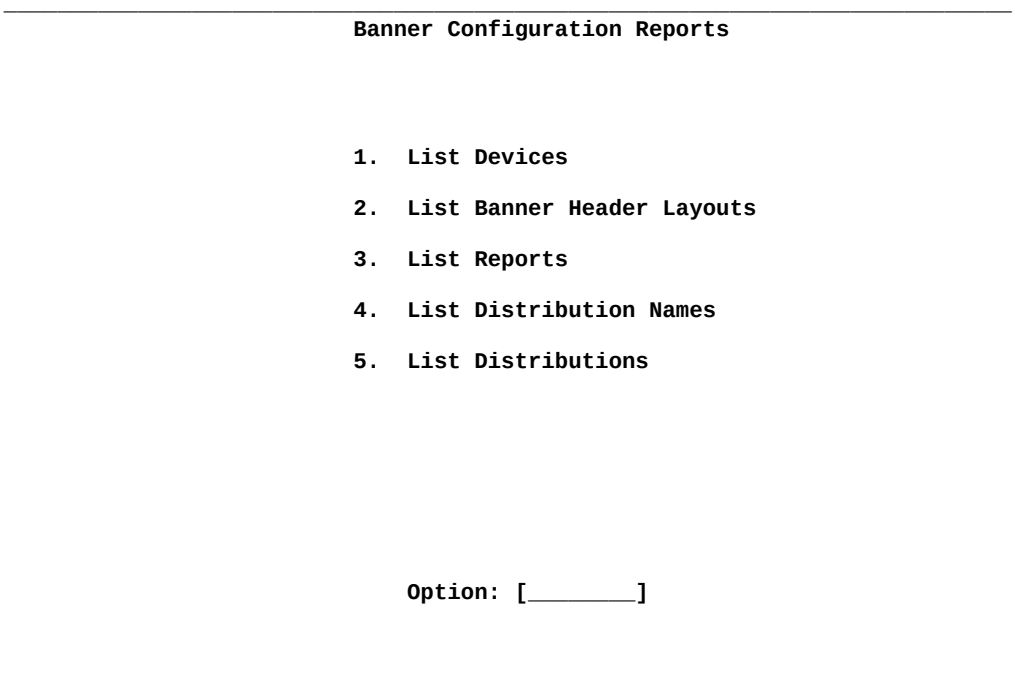
Field	Description
Dist	The name of the distribution list
#	The line number of this distribution. The line number is used to identify a distribution for modifying and deleting.
Name/Department	**Name** is the name of the recipient of the report. **Department** is the recipient's department.
Phone#/Bin	**Phone#** is the phone number of the recipient. **Bin** is the bin number of the recipient.

Continued

Field	Description
Dev/Node	**Dev** is the device used for this distribution. If no entry is made in this field, and a device is defined for the report, the device for the report will be displayed in this field. **Node** is the node for this distribution. The node must be a valid NetBase node name or number. Enter ***** display and choose from all defined devices or nodes.
#Cp	The number of copies of the report for this distribution. If no entry is made in this field, and a device is defined for this distribution, the number of copies for the distribution device will be displayed. If no entry is made in this field, and a distribution device is not defined, the number of copies for the report device will be displayed.
Pri	The output priority of the report for this distribution. If no entry is made in this field, and a device is defined for this distribution, the output priority for the distribution device will be displayed. If no entry is made in this field, and a distribution device is not defined, the output priority for the report device will be displayed.
Option	The option field is used to modify the information described in this screen. Any command that is valid in this field may be abbreviated to the first character. The valid values for this field are: **ADD** Add to the distribution list. **Nn** Modify distribution number **nn**. **MODIFY nn** Modify distribution number **nn**. **DELETE nn** Delete distribution number **nn**. **LIST** List the first page of distributions. **NEXT** List the next page distributions. **PREV** List the previous page of distributions. **EXIT** Exit this screen and return to Report Maintenance. **DIST** To enter a previously defined distribution list name. ***** Displays all distribution lists defined.

Banner Configuration Reports

The Banner Configuration Reports screen is shown in the illustration below. This screen provides reports on different aspects of the **BANNER** database. Selecting one of the options on this screen causes **BANMAIN** to stream a job that reads the **BANNER** database and produces a report. The job number is printed in the message window at the bottom of the screen. The report filename is **BANREP0#**, where **#** is replaced by the option number of the report.



CHAPTER 7

Troubleshooting NBSpool

This chapter provides NBSpool troubleshooting information. The list of the error messages includes explanations of the messages and also actions to take. If the explanation for an error message indicates that you should contact Quest Technical Support, please note the error message number and the version of the software you are running. If the error message had specific details, such as an error number, please note the message exactly as it appeared in your environment.

For information on troubleshooting network printing, turn to the “Troubleshooting Network Printing” section in Chapter 1.

In This Chapter

JCWs for Network Printing

NBSpool supports numerous JCWs for modifying the way NBSpool runs. These JCWs must be set prior to running NBSpool (above the **RUN** statement in the background job).

JCW	Description
spoolackfreq=1	By default, NBSpool sends an acknowledgement to the printer after every 5 packets. Setting this JCW forces NBSpool to send an acknowledgement after every packet.
spoolpacket=1024	By default, NBSpool sends 8096 byte packets. This JCW reduces the packet size to its minimum. This JCW may be set in increments of **1024** up to **8096**.
lpdraw=warn	To send tiff files via LPR to an LPD destination.
lpdoutpri=n	Sets the priority of the spoolfile as it is received on the HP3000.
lpdtimeout=n	Sets the number of seconds before the LPD daemon on the HP3000 times out. Usually suggested to be **180**.
releasetimeout=1800	Sets the number of seconds before NBSpool releases a connection, giving the printer ample time to close its connection first. The default is **120** seconds.
nbmovetime=1	This forces NBSpool to display a number before and after each **CONNECT** and **MOVE**. The difference between the numbers displayed is the difference in time, in milliseconds.
qmstimeout	When sending **;PTYPE=QMS**, this allows you to set the amount of time prior to a QMS printer timing out.
nbmovetrydelay	This specifies how many minutes to wait between trying to move spoolfiles to a remote system after a communication error.
LPP=nnn	This JCW sets the default LPP (which would otherwise be **60**). All commands that deal with printdefs or **LPP=** parameters can override this value. Valid values are between **4** and **120**.

Error Messages

The following NBSpool error messages are listed in alphabetical order. Some error messages require that you contact Quest Technical Support for correction. If you encounter a message that is not listed here, please contact Quest Technical Support. Make sure that you note the error message, any details included in the message, and also the version of NBSpool that you are running.

A few of the following error messages have some similarities. To reduce the repetition of the explanations, the following codes have been assigned:

***1** When NBSpool encounters this message while running as a background job, the job terminates.

***2** This message sets **JCW=FATAL**. If the job has **IF JCW=FATAL, THEN ABORT** logic, the job terminates in an error state.

Error Message	Explanation/Action
"APPEND" AND "RELEASE" ARE NOT VALID FOR SPOOK TAPES	You may not specify **APPEND** or **RELEASE** for **SPOOK** tapes. ***2**
"AUTO" PARAMETER IS NOT SUPPORTED FOR THIS COMMAND	You may not specify the **AUTO** parameter for this command. ***2**
"OFF" CANNOT BE SPECIFIED WITH OTHER SORT SPECIFICATIONS	You may specify **SORT OFF** or **SORT *sortoption***, but you may not specify **OFF** with a list of other sort options. ***2**
#CANNOT EXECUTE COMMAND: NETWORK TRANSPORT STOPPED	The command you entered requires the network to be running. Currently the transport is down. Ask your network coordinator to start the network. ***2**
#CANNOT EXECUTE COMMAND: NO RESPONSE FROM REMOTE COMPUTER	The remote computer is not responding. The command failed as a result. Ask your network operator to research why the remote computer is not responding. ***2**
#CANNOT EXECUTE COMMAND: SPECIFIED NODE IS DOWN	The node you requested is not functioning. Ask your network operator to correct the situation. ***2**

Continued

Error Message	Explanation/Action
#THE GATEWAY IS AT CAPACITY OR THE GATEWAY SOFTWARE IS NOT RUNNING	Ask your network administrator to verify that the Gateway software is running. If it is, its number of connections may need to be increased. ***2**
$BACK IS NOT SUPPORTED	You may not specify the MPE **BACK** command within NBSpool. ***2**
47UNABLE TO WRITE ON REMOTE	NBSpool cannot write a file to the remote. This message appears from the remote in response to a data block request, indicating a possible lack of disk space on the remote. ***2**
A DESTINATION PRINTER NAME IS REQUIRED	You must specify a printer name for the destination. ***2**
ABORTED BY CONTROL-Y	You pressed **CTRL-Y** during the processing of the command. The command was aborted.
BANNER ERROR: No BANNER data base found	Stream **BANNERIN.JOB** to build a **BANNER** data base.
BANNER NOT ADDED	The banner you specified was not added. Verify your commands and retry.
BLOCK SIZE > 8192 BYTES	The block size you stated exceeded NBSpool's limit of 8192 bytes. Restate the block size.
CANNOT BUILD SPOOL FILE	NBSpool failed to build the spool file. Perhaps your system is low on disk space. Contact your system manager.
CANNOT CLOSE QUEUE FILE	NBSpool cannot close the network queue.
CANNOT CONTINUE COMMAND DUE TO PREVIOUS ERROR	Due to a previous problem, NBSpool cannot continue. ***2**
Cannot create file, NBSPOOL user cannot access directory	User **NBSPOOL** needs to be granted file creation rights to the specified directory with **GRANT** utility.
CANNOT EXECUTE COMMAND: NETBASE IS NOT RUNNING	The command you entered required NetBase which is not running. Ask you system operator why NetBase is not running. ***2**

Error Message	Explanation/Action
CANNOT KEEP SPOOL FILE IN THE "OPENED" STATE	The spoolfile you have attempted to **KEEP** is currently **OPEN.** You may not **KEEP** any portion of an **OPEN** spool file. ***2**
CANNOT OPEN DISK FILE	See the **FSERR** message for more information.
CANNOT OPEN NETWARE QUEUE	The network is not responding to NBSpool. NBSpool cannot perform the trans-network function requested until the network responds.
CANNOT OPEN SPOOL FILE ! (FSerr !)	NBSpool cannot open the spool file you have requested. ***1**
CANNOT OPEN TTENV FILE	See the **FSERR** message for more information.
CANNOT OPEN TTYPE FILE	See the **FSERR** message for more information.
CANNOT SPECIFY A DATE IN THE FUTURE	The date must be either in the past or today's date. ***2**
CANNOT SPECIFY BOTH "ENV=" AND "NOENVR"	These two parameters are exclusive. You may not apply both to the same command. ***2**
CANNOT SPECIFY BOTH "PURGE" AND "NEWPRI"	You cannot specify a new output priority for files you are purging. ***2**
CANNOT WRITE TO QUEUE	NBSpool cannot write to the network queue. Verify **NBSPOOL** has access to print queue. Check that **NBSPOOL** is a valid user with password **"QUEST"**.
COMMAND IS LONGER THAN 254 CHARACTERS	An NBSpool command may not exceed **254** characters in length. Use **REDO** to edit your command, and replace parameter names with abbreviations where you can. ***2**
COMMAND REQUIRES OP OR SM CAPABILITY TO SPECIFY NETBASE NODE	You must have **OP** or **SM** capability to specify a NetBase node. Ask your system manager for help. ***2**
COMMAND REQUIRES THE NETWORK VERSION OF NBSpool	Without the Network version of NBSpool, you may not execute this command. ***2**
CONTINUATION LINE WAS NOT CONTINUED	You specified a continue, yet a continuation line did not follow. ***2**

Error Message	Explanation/Action
DATE RANGE IS BACKWARDS	The date range you entered has a later date listed as the first element of the range, rather than as the second. Correct, and execute the command. ***2**
DESTINATION PRINTER NOT DEFINED	While moving or copying a spool file to a UNIX destination, the printer specified on **;DEST=** does not exist on the UNIX system.
DFID entered is not in the selected subset	The spool file you have specified is not within the subset you selected. Verify the **DFID**, and re-enter. ***1**
DUPLICATE SPECIFICATION OF "!" PARAMETER	You may not specify the same parameter multiple times within the same command. ***2**
DUPLICATE SPECIFICATION OF LIST OPTION	Delete duplication within the **LIST** command you have entered. ***2**
DUPLICATE SPECIFICATION OF SORT KEY	You may not sort twice be the same sort option. Correct and execute. ***2**
DUPLICATE SPECIFICATION OF STATE	You may not specify state twice within the same command. ***2**
ENVIRONMENT NAME > 50 CHARACTERS	An environment name must not exceed **50** characters. ***2**
ENVIRONMENT NOT SPECIFIED WITH A DSLINE COMMAND	You must execute a **DSLINE *environment*** command prior to attempting to access the remote environment. ***2**
Error parsing file name	The filename is invalid.
EXPECTED "-days" WHERE days IS AN INTEGER BETWEEN 0 AND 364	When entering a number of days offset, it must be between **0** and **364**. ***2**
EXPECTED "="	With the syntax you have selected, the equal sign (**=**) is required. ***2**
EXPECTED "ASCII" OR "BINARY"	NBSpool expected **ASCII** or **BINARY** (spelled completely) in your specification. Please correct. ***2**
EXPECTED "F" OR "V"	NBSpool expected **F**(ixed) or **V**(ariable) in your specification. Please correct. ***2**

Error Message	Explanation/Action
EXPECTED "INTRO", "SCHED", "WAIT", "EXEC", OR "SUSP"	You did not specify a valid state. Re-enter. ***2**
EXPECTED "PASS"	NBSpool expected a password specified with the appropriate syntax. ***2**
EXPECTED "PREV" OR ANOTHER PREDEFINED VARIABLE	You must **SET** variables prior to invoking them. Turn to the "Variable Substitution" section in Chapter 2 for more information. ***2**
EXPECTED "READY"," OPENED", "ACTIVE", OR "LOCKED"	The spool file you requested is not at an appropriate state. ***2**
EXPECTED "server/queue" SPECIFICATION	The syntax requires both server and queue specifications. ***2**
EXPECTED "TO node"	You did not enter **;TO=*node*** as part of the command as NBSpool expected. ***2**
EXPECTED "TO wsid"	NBSpool expected a workstation **ID** specified in this format. ***2**
EXPECTED "TODAY"	Specify the **TODAY** parameter if you want it. ***2**
EXPECTED "WIDE" OR "NARROW"	After the **WIDTH** command a parameter of **WIDE** or **NARROW** is required. ***2**
EXPECTED #Jnnn, #Snnn, or #!nnn	Your syntax was incorrect. Specify the job or session with **#J** or **#S** preceding the number. ***2**
EXPECTED A DEVICE CLASS OR LDEV	The command you entered requires a device class or **LDEV**. ***2**
EXPECTED A NUMERIC VALUE BETWEEN ! AND !	Enter a numeric value between the range specified. ***2**
EXPECTED A NUMERIC VALUE BETWEEN ! AND 2147483647	You did not enter a numeric value within the appropriate range. ***2**
EXPECTED A STRING	You entered a qutotation mark indicating the beginning of a string. NBSpool is searching for the ending mark. ***2**
EXPECTED A VALID LASERJET PRINTER TYPE	You have not specified a valid printer type. ***2**

Error Message	Explanation/Action
EXPECTED A VALUE FOR NUMBER OF SECTORS	The value you entered was illogical for number of sectors. Re-enter your value. ***2**
EXPECTED AN INTEGER BETWEEN 1 AND 9999, "@", OR "SPOOK"	You entered a value NBSpool did not anticipate. Re-enter, according to the options listed. ***2**
EXPECTED ONE OR MORE SORT SPECIFICATION	The syntax you entered lacked a sort specification. Verify your syntax, add a sort option, and execute. ***2**
EXPECTED REEL #!, FOUND REEL #!	The reel found does not match the reel necessary for the restore. Please locate and load the correct tape.
FILE IS NOT A VALID NBSpool ARCHIVE FILE	The file you have specified is not an NBSpool **ARCHIVE** file. You may not extract files from this file. Verify the name and re-enter. ***2**
FILE NOT IN PROPER STATE	**ALTER** cannot change the state of the spool file.
FIRST LINE IS BEYOND END OF FILE (Line !)	The spool file is corrupt. ***1**
HP-UX TRANSPORT SOFTWARE NOT INSTALLED	Ask your network administrator to install the **HP_UX** transport software. Once this is accomplished, you may use this command. ***2**
INCOMPATIBLE PARAMETERS HAVE BEEN SPECIFIED	The parameters you have specified do not work in combination. Edit your command, and execute it. ***2**
INPUT LINE IS GREATER THAN 132 CHARACTERS	Your input line exceeds **132** characters. ***2**
INSUFFICIENT CAPABILITY TO SPECIFY THIS USERSET	You do not have sufficient security clearance to specify this userset. ***2**
INTERLEAVE IS INVALID FOR 1 COPY: Use ALTER ...;NEWTIME	The **INTERLEAVE** option is for use with multiple copies of multiple documents. ***2**
INTERLEAVE IS INVALID FOR ONLY 1 FILE	The **INTERLEAVE** option is for use with multiple copies of multiple documents. ***2**
INVALID ARCHIVE FILE CHARACTERISTICS: Must be REC=128,1,F,BINARY	You did not specify a valid archive file.

Error Message	Explanation/Action
INVALID DATE SPECIFIED	The date you entered was not in **mm/dd/yy** format, or it was not for a valid date. ***2**
INVALID DELIMITER	You have used an invalid delimiter. Correct and execute. ***2**
INVALID DEVICE CLASS or LDEV SPECIFIED	The device class or **LDEV** you specified does not exist. Verify and re-enter. ***2**
INVALID FILE NAME SPECIFIED	The name you specified exceeds **8** characters in length, it does not begin with an alphabetic character, or a file with that name does not exist. ***2**
INVALID FOR PRIVATE FILE	NBSpool cannot change the state of a private spool file.
INVALID FORM ID SPECIFIED	Verify the form **ID**, and re-enter. ***2**
INVALID FORMAT FOR CONTINUATION REEL	The tape you loaded is not properly formatted for use as a continuation reel. Locate and load another tape.
Invalid INPUT MODE Password	The password you specified is invalid for **INPUT** mode. Verify the password, and re-enter. ***1**
INVALID JOB/SESSION NUMBER SPECIFIED	The job/session number you specified does not exist. ***2**
INVALID LINE NUMBER SPECIFIED	The line number you specified does not exist in this file. ***2**
INVALID LINE OFFSET SPECIFIED	The line offset you have specified exceeds the bounds of the file. If you are on line 1 and you request ***-10/*+20**, you are requesting lines **-9** through **10**. Negative lines do not exist. Correct your syntax. ***2**
INVALID LIST OPTION SPECIFIED	The option you specified is inappropriate for a **LIST** command. ***2**
INVALID NBSPOOL CONFIGURATION FILE !	The configuration file NBSpool has found is inconsistent with the version being run. Please restore the proper version from tape, or contact Quest Technical Support for assistance in transferring one to you. ***2**

Error Message	Explanation/Action
INVALID NETBASE TAPE LABEL	The tape you loaded has an invalid NetBase label. Without a valid NetBase label, you may not use NBSpool to access its files.
INVALID NETWARE QUEUE NAME	Ask your network adminstrator to correct the queue name. ***2**
INVALID NETWARE SERVER NAME	NBSpool has detected an invalid NetWare server name. Ask your network administrator to correct the issue. ***2**
INVALID NODE NUMBER SPECIFIED	The node number you specified does not exist. Verify and re-enter. ***2**
Invalid or missing library file	The file **QUESTXL** is missing or corrupt. Restore it from your tape.
INVALID PARAMETER FOR NATIVE MODE SPOOLER	The parameter you specified is not suited for a **NM** spooler. Delete the parameter, and execute the command. ***2**
INVALID PASSWORD	The password you specified is inaccurate. Verify the password, and re-enter (or edit the job).
INVALID POSITION IN DATA	The position you have indicated is inappropriate for the change you are requesting. Reposition the cursor.
INVALID POSITION IN FILE	The position you have indicated in the file is inappropriate for the command you have selected. Reposition the cursor.
INVALID PRINTER TYPE SPECIFIED	The printer type you specified does not exist. Turn to the "PRINT" section in Chapter 3 for more information on printer definitions. ***2**
INVALID RECORD SIZE SPECIFIED	Research the appropriate record size, and re-enter. ***2**
INVALID SPOOK TAPE FORMAT	The tape you loaded has a **SPOOK** format. You may not use NBSpool to access its files.
INVALID SPOOL FILE	The spool file you specified does not exist.
INVALID STATE SPECIFIED	The state you specified does not exist. ***2**

Error Message	Explanation/Action
INVALID SUBSET KEYWORD SPECIFIED	The keyword you specified for a subset does not exist. ***2**
INVALID USE OF "NOT" DESIGNATOR	The **NOT** designator (~) should be applied to further limit a subset. For example, **file=A*,~AR**. Specifying **file=A*,~R*** would be invalid. Correct your syntax and re-execute. ***2**
INVALID USE OF LINE RANGE DESIGNATOR	You may not specify a line range at this point in the command, or possibly with this command. Verify the syntax and re-enter. ***2**
INVALID USER NAME SPECIFIED	The name you specified exceeds **8** characters in length, it does not begin with an alphabetic character, or a user with that name does not exist. ***2**
INVALID WAIT VALUE SPECIFIED	The value you entered for **WAIT** is invalid. Wait values must be between **1** and **600** seconds. Check your typing and re-enter. ***2**
INVALID WORKSTATION ID	Verify the workstation **ID**, edit the command, and execute it. ***2**
LINE RANGE IS BACKWARDS	The first line listed in the range is larger than the second. Verify the range and re-enter. ***2**
LOCAL NODE NAME CANNOT BE SPECIFIED AS A DESTINATION	You cannot move or copy from the local node to the same local node. ***2**
LOCKWORD IS INVALID WITH WILDCARDS	You must be more specific (do not use wild cards) when you are specifying lockwords. ***2**
LOGICAL DEVICE NUMBER IS INVALID	The **LDEV** number you specified does not exist. ***2**
Login name NBSPOOL is not valid for this file server	Check if **NBSPOOL** is a valid user for Novell, using **SYSCON**.
LOGO COMMAND IS NOT SUPPORTED ON THIS DEVICE	You specified the logo command for a device which has not been configured for **BANNER**. Verify the device, and ask your system operator to enable this device to run **BANNER**.
MISSING "FILE=" PARAMETER	This command requires the **;FILE=** parameter. ***2**

Error Message	Explanation/Action
MISSING "TO node" SPECIFICATION	You must specify the node to which you want this spool file to go. ***2**
MISSING FILE NAME	You must specify a filename with this command. ***2**
MISSING NBSPOOL CONFIGURATION FILE !	NBSpool cannot locate the configuration file. Restore it from tape, or contact Quest Technical Support to transfer one to you. ***2**
MISSING NETBASE TAPE LABEL	The tape you loaded does not have a NetBase label. You may not use NBSpool to restore from a tape lacking a NetBase label.
MISSING NETWARE QUEUE NAME	NBSpool needs to know the NetWare queue name. ***2**
MORE THAN ONE SHOW FORMAT SPECIFIED	You may specify only one **SHOW** format per **SHOW** command. ***2**
MUST BE A VALID NETWARE NAME NO LONGER THAN ! CHARACTERS	The NetWare name you specified is too long. ***2**
NBSPOOL NETWARE MODULE IS NOT INSTALLED	You have not installed the NBSpool NetWare module. Call your Quest Sales Representative for more information. ***2**
NBSPOOL RECEIVING PROCESS NOT RUNNING ON REMOTE NODE	Ask your network administrator to stream the NBSpool receiving job on the remote node. ***2**
NESTED XEQ COMMANDS NOT ALLOWED	You may not **XEQ** a file from within an **XEQ** file. ***2**
NETWARE/XL IS NOT INSTALLED ON THIS SYSTEM	Without NetWare/XL, this command may not be performed. ***2**
NETWORK ERROR ON RPMCREATE: IS NS STARTED ON REMOTE NODE?	Ask the network administrator to verify that **NS** is running on the remote node. ***2**
NETWORK READ FAILED	See error message for more information.
NETWORK SEND FAILED	See error message for more information.
NETWORK SERVICES (NS) ARE NOT INSTALLED ON THIS SYSTEM	Without Network Services installed, you may not issue this command successfully. ***2**

Error Message	Explanation/Action
NFS/iX IS NOT INSTALLED ON THIS SYSTEM	Without NFS/iX on your system, this command will not work. Contact your Quest Sales Representative for more information. ***2**
NO CLOSING QUOTE FOUND FOR STRING	You began a string specification with a quotation mark, but you omitted the closing one. Correct, and execute. ***2**
NO FILES FOUND IN SPECIFIED FILE SET	The fileset you specified does not contain any files. ***2**
NO PREVIOUS SUBSET EXISTS	You must specify a subset. ***2**
NO SPOOL FILE HAS BEEN OPENED WITH THE TEXT COMMAND	You must **TEXT** the file before performing this command. ***2**
No spool file headers found before end of tape.	This tape does not contain spool files.
No tape errors detected. Unable to continue processing.	Although the tape does not contain typical errors, NBSpool cannot process your request concerning this tape. Perhaps the tape is formatted, but empty.
NO to-node SPECIFIED	You did not enter **;TO=*node*** as part of the command as NBSpool expected. ***2**
NODE IS NOT CONFIGURED	The node you specified has not been configured. NBSpool cannot access it. ***2**
NODE NAME > 8 CHARACTERS	The node you specified exceeded **8** characters in length. Verify and re-enter. ***2**
NOT A FIXED ASCII FILE	You may not perform this command on a variable length file.
NOT ENOUGH ROOM IN THE ARCHIVE FILE	You must expand the archive file in order to add these files to it. ***2**
NOT ENOUGH ROOM IN THE ARCHIVE FILE DIRECTORY	You must expand the archive file directory in order to add these files to it. ***2**. Turn to the "ARCHIVE" section in Chapter 3 for more information.

Error Message	Explanation/Action
NOT LOGGED ON AND NO LOGON SPECIFIED WITH DSLINE COMMAND	You may not access a remote environment without first establishing communication and logging on, or specifying a valid **;LOGON=** on the **DSLINE** command. ***2**
NOT VALID FOR INPUT FILES	The command you specified is not valid for **INPUT** files. You may have reviewed the **OUTPUT** version of the command rather than the **INPUT** one. Use **HELP I*command*** to view the **INPUT** version of the help for this command.
NOTE: Invalid Timestamp	The time you specified was not in the proper format, or the time was not logical.
NOTE: SPECIFIED SPOOL PACKET IS INVALID - USING DEFAULT	The **SPOOLPACKET** JCW must be a multiple of **1024**, between **1024** and **8192**.
Nothing to alter	The files within the subset you specified were already the values you desired, or the subset you specified precluded any files from qualifying to be altered.
NRJE IS NOT INSTALLED ON THIS SYSTEM	NBSpool cannot locate **NRJE** on this system, so this command cannot be performed. ***2**
NWSPOOL process refuses to execute	Verify that NetWare is running.
Obsolete native mode library file ! SPOOLXL version is !, Update !	NBSpool version and **SPOOLXL** do not match. Contact Quest Technical Support.
OBSOLETE NETBASE SPOOL TAPE FORMAT	This tape is formatted in an old NBSpool format. The current version of NBSpool cannot access its files.
Password is not valid for the NBSPOOL user	Check to make sure **NBSPOOL** user has a password of **QUEST** on the Novell network.
PREMATURE EOF ON DIRECTORY	Invalid tape or archive file.
PRINTER IS NOT ON-LINE	NBSpool does not think the JetDirect printer is online. Verify the JetDirect connection. ***2**
PROGRAM "!" NOT FOUND ON REMOTE NODE	The program you specified does not exist on the remote computer. ***2**

Error Message	Explanation/Action
RANGE NOT SPECIFIED	You did not specify a range. ***2**
RECORD SIZE MUST NOT BE GREATER THAN 1024 BYTES	You specified a record size that exceeds 1024 bytes. Please modify. ***2**
REEL IS NOT A MEMBER OF THE CURRENT SET	The tape you loaded does not belong to the store set. Locate and load the proper tape.
REMOTE SESSION IS RUNNING A PROGRAM	The remote session you have attempted to access is busy running a program. ***2**
RESULTING BLOCK SIZE IS GREATER THAN 16384 BYTES	With the block factor specified, the resulting size exceeds the maximum 16384 bytes. Modify the block factor. ***2**
RPM NETWORK SERVICE NOT STARTED	The RPM network service is down. Ask the network administrator to start it with the **NSCONTROL** command. ***2**
Server is not responding	The server crashed, or this indicates a protocol error.
SPOOK TAPES CANNOT BE LABELED TAPES	You may not attach an NBSpool label to a **SPOOK** tape. ***2**
SPOOL BLKSZ ! INVALID	The block size specified for the spool file is invalid. Re-enter your block size. ***2**
SPOOL FILE ! DOES NOT EXIST	The spool file you have specified does not exist. ***1**
SPOOL FILE ! IS NOT OPEN OR READY	The spool file you requested is not in a valid state for the command you have specified. ***1**
SPOOL FILE ! IS NOT READY	The spool file you requested is not in a valid state for the command you have specified. ***1**
SPOOL FILE ! IS UNAVAILABLE FOR VIEWING	The spool file cannot be accessed. Try again later. ***1**
SPOOL FILE CLOSE FAILED	See the **FSERR** message for more information.
SPOOL FILE HAS BEEN PURGED	The spool file you specified has been purged during the command's execution. Informational message only.

Error Message	Explanation/Action
SPOOL FILE HAS BEEN PURGED	The spool file you have specified has been purged. Please verify, and re-enter. ***2**
SPOOL FILE IS EMPTY	You may not view an empty spool file.
SPOOL FILE NOT ALTERED	The spool file you specified was not altered. The values which were to be changed may have been equal to the new values, so no modification was necessary.
SPOOL FILE NOT PURGED	The spool file you specified was not purged, due to an error. Additional information was provided.
SPOOL FILE NOT READY	This command requires that the spool file be in a **READY** state.
SPOOL FILE OPEN FAILED	See the **FSERR** message for more information.
SPOOL FILE SAVE FAILED	See the **FSERR** message for more information.
SPOOL FILE WRITE FAILED	See the **FSERR** message for more information.
Tape error ! encountered. Scanning for first valid file...	The tape you loaded has errors. NBSpool is searching for a valid file stored on the tape.
Tape mount failed.	The tape drive failed to load the tape. Attempt again. If tape fails, use another tape.
THE "PREVIOUS SUBSET" DESIGNATOR MUST BE USED BY ITSELF	You may not further define a subset when using the previous subset option. ***2**
THE DESTINATION MUST BE AN HP 3000 NODE	With this command syntax, the destination must be an HP 3000 node. ***2**
THE REMOTE lpr SERVER IS NOT RESPONDING	The remote printer server is not responding. Verify the JetDirect connection. ***2**
THE SPECIFIED PROCESS IS NOT RUNNING	The process you specified is not currently running. Ask your system operator to start it.
THE SPECIFIED PROCESS NUMBER APPEARS TO BE IN USE	Use a different number in your **XEQ** command or stop the one currently using this **PROCNUM**.
The user NBSPOOL does not have rights to access this queue	Check if **NBSPOOL** has the correct access to the print queue, using **PCONSOLE**.

Error Message	Explanation/Action
THIS COMMAND DOES NOT SUPPORT STRING SUBSETS	You attempted to specify a string subset for a command which does not operate with them. ***2**
THIS COMMAND IS NOT ALLOWED IN AN XEQ FILE	The command you have specified in an **XEQ** file cannot be performed (in an **XEQ** file). ***2**
THIS COMMAND IS NOT AVAILABLE IN INPUT MODE	You may not use this command during **INPUT** mode. ***2**
THIS COMMAND IS NOT AVAILABLE IN OUTPUT MODE	You may not use this command during **OUTPUT** mode. ***2**
THIS COMMAND IS ONLY ALLOWED IN INTERACTIVE MODE	The command you have specified in a job can be used only when NBSpool is running interactively. ***2**
THIS COMMAND IS ONLY VALID IN AN XEQ OR WHILE LOOP	This command is limited to use within **XEQ** files and **WHILE** loops. ***2**
THIS COMMAND MUST BE EXECUTED ON AN HP-COMPATIBLE TERMINAL	You entered a command that requires an HP-like terminal, and your terminal does not qualify. ***2**
THIS COMMAND REQUIRES AT LEAST A FILE NAME	You must specify a filename with this command. ***2**
THIS COMMAND REQUIRES AT LEAST A SPOOL FILE SUBSET	You must specify a subset with this command. ***2**
THIS COMMAND REQUIRES AT LEAST TWO PARAMETERS	The command you have selected performs only when a minimum of two parameters are specified. ***2**
THIS COMMAND REQUIRES OP OR SM CAPABILITY	You must have **OP** or **SM** capability to perform this command. Ask your system manager for help. ***2**
THIS ENVIRONMENT IS CURRENTLY USING AN NS SERVICE	Some other **NS** service is in use on the remote system. Close the **DSLINE** or use another **DSLINE**.
This is a YES or NO question.	You did not respond properly to the question. Enter **YES** or **NO**.
THIS KEYWORD HAS NO PARAMETERS	You may not specify parameters with this keyword. ***2**
THIS KEYWORD IS VALID ONLY FOR THE COPY COMMAND	The keyword you have specified applies to the **COPY** command only. ***2**

Error Message	Explanation/Action
THIS PARAMETER IS NOT APPLICABLE IN OUTPUT MODE	You may not specify this parameter during **OUTPUT** mode. Review the **HELP** output command for valid parameters in the **OUTPUT** mode. ***2**
THIS PARAMETER IS NOT VALID FOR GATEWAY DESTINATIONS	You may not specify this parameter when using Gateway destinations. ***2**
THIS PARAMETER IS NOT VALID FOR HP-UX DESTINATION NODES	The parameter you have specified does not apply for this command when you are also specifying **HP_UX** destinations. ***2**
THIS PARAMETER IS NOT VALID FOR HP 3000 DESTINATION NODES	The parameter you have specified does not apply for this command when you are also specifying HP 3000 destinations. ***2**
THIS PARAMETER IS NOT VALID FOR LASER PRINTER DESTINATIONS	You may not specify this parameter when specifying a laser printer destination. ***2**
THIS PARAMETER IS NOT VALID FOR lpr DESTINATION NODES	You may not specify this parameter when specifying the LPR destination. ***2**
THIS PARAMETER IS NOT VALID FOR NETWARE QUEUES	You may not specify this parameter in connection with NetWare queues. ***2**
THIS PARAMETER IS NOT VALID FOR NFS DESTINATIONS	You may not specify this parameter in connection with an NFS destination. ***2**
THIS PARAMETER IS NOT VALID IN INPUT MODE	You may not specify this parameter during **INPUT** mode. Review the **HELP** input command for parameters available during **INPUT** mode. ***2**
THIS PARAMETER IS ONLY VALID FOR THE NATIVE MODE SPOOLER	You may not use this parameter if your system is operating on an MPE/XL version which is less than 2.1.
THIS PARAMETER REQUIRES OP CAPABILITY	You may not execute this command with this parameter without **OP** capability. See your system manager for help. ***2**
THIS PARAMETER REQUIRES SM CAPABILITY	You must have **SM** capability to use this parameter. See your system manager for help. ***2**
THIS TERMINAL DOES NOT SUPPORT AN ATTACHED PRINTER	You may not specify a slave printer as a destination when this terminal does not support one. ***2**

Error Message	Explanation/Action
TOO MANY PARAMETERS SPECIFIED	You specified too many parameters for this command. ***2**
UNABLE TO ACCESS REMOTE NODE	NBSpool cannot access the remote node as necessary for this command. Ask the network co-ordinator to research this problem. ***2**
UNABLE TO ACCESS REMOTE PROGRAM "!"	NBSpool cannot access the remote copy of the program you have specified. ***2**
UNABLE TO COMMUNICATE WITH REMOTE NODE	NBSpool's communication with the remote mode has failed. Ask your network administrator to verify the situation with the remote node. ***2**
UNABLE TO CONTINUE COMMAND DUE TO COMMUNICATION ERROR	The communication between systems required by your command failed. Ask your system operator to verify that communication is still available, and retry your command.
Unable to execute this command on an MPE/XL system	The command you entered is inappropriate for a precision-architecture machine.
Unable to locate a previously created BROWSE folder file	To use the **BROWSE** command without a subset specified requires that a previous **BROWSE** command with a subset specified was executed in this session.
UNABLE TO LOG ON TO REMOTE NODE	NBSpool cannot log on to the remote computer. Ask the network co-ordinator to research this issue. ***2**
UNABLE TO OBTAIN TERMINAL STATUS	NBSpool cannot determine the terminal's status. Ask your system manager to explore the issue. ***2**
UNABLE TO SAVE ON REMOTE	NBSpool cannot save a new file on the remote. This message appears from the remote is response to a data block request, possibly indicating a lack of disk space on the remote. ***2**
UNABLE TO SUBMIT FILE	NBSpool cannot submit a file to **NRJE**. ***2**
UNABLE TO TEXT THIS OPEN SPOOL FILE	The spool file you specified cannot be **TEXT**ed in its **OPEN** state. Wait until it is in a **READY** state, and then **TEXT**.

Error Message	Explanation/Action
UNEXPECTED ADDITIONAL PARAMETERS	You specified unnecessary parameters which cannot be executed. ***2**
UNEXPECTED PARAMETERS AFTER NODE NAME	The parameters you specified after the node name are inappropriate for this command, or they must precede the node name specification. ***2**
UNEXPECTED RESPONSE FROM REMOTE: ! !	The remote computer is not behaving normally. Ask you network operator to investigate. ***2**
UNKNOWN COMMAND ENTERED	NBSpool does not recognize the command you entered. Verify the spelling and syntax. ***2**
UNKNOWN KEYWORD SPECIFIED	The keyword you specified does not exist (for this command). ***2**
UNKNOWN NODE NAME SPECIFIED	NBSpool does not recognize the node name you entered. Verify and re-enter. ***2**
UNKNOWN PRINTER TYPE SPECIFIED	The printer type you specified does not exist. Turn to the "PRINT" section in Chapter 3 for more information on printer definitions. ***2**
UNKNOWN SORT KEY SPECIFIED	The sort option you specified does not exist. ***2**
UNKNOWN SPECIFICATION ENTERED	The parameter you entered is invalid for the command you are using. Re-enter your parameter. ***2**
UNSUPPORTED CARRIAGE CONTROL ! DETECTED	The file you selected contains a carriage control character which NBSpool cannot handle. ***2**
WAIT VALUE MUST BE BETWEEN 1 AND 600 SECONDS	The value you entered was not within the acceptable range for the **WAIT** command. ***2**
WARNING: BAD CHECKSUM ON ARCHIVE HEADER	The archive file is corrupt.
WARNING: Disabling Tape Volume recognition. Put tape online now.	NBSpool will now ignore tape volume labels. Proceed with caution.
WARNING: Help catalog ! not found	You may need to restore it from tape. If you no longer have the tape, write down the exact message, and call Quest Technical Support who will transfer it to you.

Error Message	Explanation/Action
WARNING: HELP command failed with error !	NBSpool had difficulty performing your **HELP** command. Verify your syntax, and re-enter.
WARNING: IGNORING SPECIFIED BLOCKING FACTOR	Block size exceeds 16284 bytes, and it will be reduced.
WARNING: INVALID INTERNAL EOF IN ARCHIVE - SOME DATA MAY BE LOST	The archive file is corrupt. Retrieve as much data as possible. You may need to restore the file from backup to locate an archive file which does not have a premature **EOF**.
WARNING: NO VALID COMMANDS IN THIS XEQ FILE	The **XEQ** file you attempted to execute is not properly written. Turn to the "Background Execution"section in Chapter 5 for information on a valid **XEQ** file.
WARNING: ONLY PROCESSING THE FIRST ! QUALIFIED FILES	The maximum number of spool files NBSpool can process at one time is **1024**.
WARNING: This demonstration copy expires in ! days	Contact Quest to purchase your copy of NBSpool.
WARNING: This demonstration copy expires TOMORROW	Contact Quest to purchase your copy of NBSpool.
WARNING: TRUNCATED ! RECORDS	Some records were truncated due to a smaller than necessary record size.
WARNING: TRUNCATED ! RECORDS (Maximum record found is ! bytes)	Some records were truncated due to a smaller than necessary record size.
WARNING: TRUNCATING ! BYTE RECORD	Some records were truncated due to a smaller than necessary record size.
WARNING: UNABLE TO STREAM JOB	The job you attempted to stream failed. Check the job queue, the job card itself, and try again.
XEQ COMMAND STOPPED BY SYSTEM MANAGEMENT	Your **XEQ** command was aborted by system management. Discuss with your system operator before proceeding.

APPENDIX A

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