

**Legato NetWorker®
ClientPak for MPE/iX
Release 5.0 Supplement**

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Important Notices



Please read these important release notices before using Legato NetWorker ClientPak for MPE/iX, release 5.0. The information presented in this document was the latest available at the time that the document was printed.

The important notices included in this release note include information in the following areas:

- A comparison of MPE versus POSIX filepath naming conventions. See [“MPE Versus MPE/iX POSIX Filepath Naming Conventions”](#) (on page 6).
- An explanation of the filepath elements in the system variable for creating logs of your NetWorker backups. See [“Creating Logs of Your NetWorker Backups”](#) (on page 6).
- A workaround for a problem found when browsing save sets for files that are available for recovery. See [“Browsing Save Sets for Available Recovery Files”](#) (on page 7).
- A table of new error messages. See [“Error Messages”](#) (on page 11).

MPE Versus MPE/iX POSIX Filepath Naming Conventions

The HP documentation discusses naming conventions for defining filepaths in MPE and MPE/iX POSIX. We have included a comparison here for your convenience.

MPE	MPE/iX POSIX
FILENAME.GROUP.ACCOUNT (Must be uppercase)	/ACCOUNT/GROUP/filename (The filename is case sensitive)

Creating Logs of Your NetWorker Backups

This topic has been copied from the *Legato Networker ClientPak for MPE/iX Installation Guide*. We have added an explanation of the filepath elements in the system variable.

You can set the NSR_MPE_LOGNAME system variable in the MPE/iX Command Interpreter to save information on scheduled backups in a log file.

To create logs of your server-initiated backups, add the following system variable to the JNSRSTRT job stream (file) to set the variable as in the following example:

```
!SETVAR NSR_MPE_LOGNAME "/ACCOUNT/GROUP/log"
```

New information: The name, *log*, is the required name of the log file. Note that the name of the directory and file are in POSIX format. The actual name of the file will have the date and time stamp appended to it. You can name this directory anything you want and put it wherever you want.



Important: In the current release, if multiple saves are running in parallel, the NetWorker backup logs will be corrupt. To eliminate this problem, turn parallelism off.

Browsing Save Sets for Available Recovery Files

This topic is discussed in “Chapter 3, Recovering Files”, of the *Legato NetWorker ClientPak for MPE/iX User’s Guide*.

The Problem

The following problem will be fixed in future releases.

When you browse your save sets that are available for recovery, you should see a complete list of save sets and the files within each save set. Unfortunately, with the NetWorker ClientPak for MPE/iX, you only see the save sets or files for the most recent backup.

For example, after a full backup, you would see all the files in a save set if you browsed the save set from the **NSRSRECOV** program. A *full backup* is a server-initiated backup level in which all files are backed up, regardless of when they were last changed. However, if you browsed the save set after an incremental backup or a client-initiated backup, you would only see those files that had been modified since the full backup. An *incremental backup* is a server-initiated backup level in which only files that have changed since the last backup are backed up.

For example, if you browse the save set, */PROJECTS*, after a full backup, you would see all the files in the save set. For illustration purposes, there are only two files in the */PROJECTS* save set.

```
recover> cd /PROJECTS
recover> ls -la
-rw-rw---- 1 MANAGER.SYS 29 Jan 30 10:15 file1.txt
-rw-rw---- 1 MANAGER.SYS 37 Jan 30 12:52 file2.txt
recover>
```

If you should change one of the files, for example the *file2.txt* file, and then list the files in the */PROJECTS* directory, you would see when *file1.txt* was created, when *file2.txt* was created, and when *file2.txt* was modified.

```
:listfile /PROJECTS/@;format=detail
FILE: /PROJECTS/file1.txt
FILE CODE : 0                                FOPTIONS:
ASCII , BYTESTREAM , NOCCTL , STD
NUM LABELS: 0 CREATED : FRI, JAN 30, 1998, 10:15 AM
DISC DEV #: 1 ACCESSED: FRI, JAN 30, 1998, 10:15 AM
```

```
FILE: /PROJECTS/file2.txt
NUM LABELS: 0 CREATED : FRI, JAN 30, 1998, 12:52 PM
MAX LABELS: 0 MODIFIED: MON, FEB 2, 1998, 4:10 PM
DISC DEV #: 4 ACCESSED: MON, FEB 2, 1998, 4:10 PM
```

However, if you browsed the */PROJECTS* save set to recover files after a server-initiated incremental backup or a client-initiated backup of the */PROJECTS* directory, you would see only the *file2.txt* file that had been changed since the last full backup.

```
recover> cd /PROJECTS
recover> ls -l
-rw-rw---- 1 MANAGER.SYS 58 Feb  2 16:10 file2.txt
recover>
```

The Solution

The solution is to use the **versions**, **changetime**, and **ls -l** (list) commands in the **NSRRECOV** program to view and access all the files that are available for recovery.

If you know the name of the file and you want the most recent version, then you only need to mark that file for recovery.

The most efficient workaround would be to print out the most recent version of the save sets after the full backup and after each incremental backup. Then list and print out the available recovery files in each save set.

Recovering the Latest Version of a File if You Know the Name of the File

You can browse and recover the most recent version of a file if you know the name of the file. In this case, you don't need to use the **versions** and **changetime** commands.

To browse and recover a file which does not show up in the initial list of files available for recovery, enter the **ls -l** (list) and the explicit name of the file, then enter the **add** command and the explicit name of the file, as in the following example:

```
recover> ls -l file2.txt
-rw-rw---- 1 MANAGER.SYS 58 Feb  2 16:10 file2.txt
recover> add file2.txt
```

Display the Backup History to View When Backups were Run

If you don't print out the backup history and the list of files after each backup, you can still use the **versions** command to view the list of full and incremental backups.

You should start by displaying the list of all the save sets. To limit the size of the example, we have used one directory, the */PROJECTS* directory, to illustrate the recovery process. In the example used in this release note and in the NetWorker documentation, imagine an ACCOUNT and a GROUP preceding the */PROJECTS* directory.

To get a list of when backups were done for the */PROJECTS* directory, run the **versions** command from the **NSRRECOV** program:

```
recover> versions /PROJECTS
Versions of `'/PROJECTS/'`:
    0 drwxrwx---  2 MANAGER.SYS <unknown 416 Feb  2 12:52
PROJECTS/
    save time:  Mon Feb  2 23:59:59 1998
    location:  disk2vol1 at /dat2/nsr_pdv2.dat
    0 drwxrwx---  2 MANAGER.SYS <unknown 416 Feb  2 12:52
PROJECTS/
    save time:  Sun Feb  1 23:59:59 1998
    location:  disk2vol1 at /dat2/nsr_pdv2.dat
recover>
```

After you display the list of backups, you can browse each save set, starting with the full back up, which is, *Sun Feb 1 23:59:59* in the above example.

Change the Browse Time to the Time of the Full Backup

To access the save set for the full back, change the browse time to the *save time* of the full backup as in the following example:

```
recover> changetime 2/1/98 23:59:59
```

The following formats are valid **changetime** entries:

- hh:mm:ss (24 hour clock) or hh:mm:ss (am or pm)
- mm/dd(/yy) or monthname dd (yy) (yy is optional)
- Last Friday, next Friday, or third Friday
- + or -x seconds, minutes, hours, weeks, months, or years
- Now (the current date and time)

Browsing Save Sets for Available Recovery Files

Then use the `ls -l` command to list the files that are available for recovery as in the following example

```
recover> ls -l
-rw-rw---- 1 MANAGER.SYS 29 Jan 30 10:15 file1.txt
-rw-rw---- 1 MANAGER.SYS 37 Jan 30 14:52 file2.txt
recover>
```

At this point if you want to recover the original version of the *file2.txt*, you mark it for recovery as in the following example:

```
recover> add file2.txt
```

If you want to recover all the files in the /PROJECTS save set from the full backup, then you mark them all as in the following example:

```
recover> add *
```

Change the Browse Time to the Time of the Incremental Backup

If you want to see what other versions of files are available for recovery, then you change the browse time to the `save time` of each consecutive incremental backup one at a time. You start with the first incremental backup after the full backup, which in this example, is the incremental backup done on Monday night.

```
recover> changetime 2/2/98 23:59:59
recover> ls -l
-rw-rw---- 1 MANAGER.SYS 58 Feb  2 16:10 file2.txt
recover>
```

Note that only the file that has been modified, *file2.txt*, since the full backup is listed.

To recover a specific file, you enter the `add` command and the name of the file that you want.

```
recover> add file2.txt
```

You repeat the `changetime`, `ls`, and `add` commands for each incremental backup until you have recovered the specific file or files that you want.

Error Messages

This section contains a list of error messages, their causes, and their solutions, for the **NSRSAVE**, **NSRARCH**, **NSRRECOV**, **NSRRETRV**, and **SAVEFS** programs for the NetWorker ClientPak for MPE/iX. The error messages are listed alphabetically.

Note that when we refer to *directory information file* in the table of Error Messages, we mean *directory accounting information file*. We stayed with the same terminology that we used in the *Legato NetWorker ClientPak for MPE/iX User's Guide* so we wouldn't confuse you.

Table 1. Error Messages

<p>Error Message: Annotation must contain only alphanumeric characters on MPE/iX systems.</p> <p>Displayed in the following NetWorker program: NSRARCH</p> <p>Cause: You entered one or more non-alphanumeric characters, such as ! # * ? & ~, in your -T annotation text or in response to the annotation prompt.</p> <p>Solution: Reenter your annotation text using only alphanumeric characters from a-z, A-Z, and 0-9</p>

Table 1. Error Messages (Continued)

Error Message:

Cannot build recover list - volume set violation

Displayed in the following NetWorker programs:

NSRRECOV, NSRRETRV

Cause:

You tried to recover a directory information file for a volume set along with a version of some other file or directory from another save set or save time. NetWorker does not allow you to mix save times to ensure data integrity.

For a related issue see the error message, **Conflict:** at most one dir info file can be marked/recovered at a time.

Solution:

- For interactive recovery, use the **ls -l** (list), **delete**, and **versions** commands, and unmark the files or directories so all remaining marked objects have the same save time.
- Or better, recover the directory information file by itself, for example: `"-s ssid /XXX_VOLUME_SET" or "-s ssid"`.

Refer to “Interactive Browse Recovery of a Directory Information File” and to “Restoring an Entire MPE Volume Set: Disaster Recovery” in Chapter 3 of the *Legato NetWorker clientPak for MPE/iX Installation Guide*.

Note that the name of the directory information file is currently the same as that of its parent volume set; this feature will be changed to a more appropriate name, `/XXX_VOLUME_SET_DAF`, in future releases.

Table 1. Error Messages (Continued)

<p>Error Message: Conflict: at most one dir info file can be marked/recovered at a time</p> <p>Displayed in the following NetWorker programs: NSRRECOV, NSRRETRV</p> <p>Cause: You marked more than one directory information file for volume sets for recovery in a single recovery session.</p> <p>Solution:</p> <ul style="list-style-type: none">• For an interactive recovery, mark and recover the directory information file one at a time. Refer to “Interactive Browse Recovery of a Directory Information File” in Chapter 3 of the <i>Legato NetWorker clientPak for MPE/iX Installation Guide</i>.• For save-set-based recovery of part or all of a volume set, or only the directory information file itself, use exactly one <code>-s ssid_for_volume set</code> option or argument at a time. Refer to “Restoring an Entire MPE Volume Set: Disaster Recovery” in Chapter 3 of the <i>Legato NetWorker clientPak for MPE/iX Installation Guide</i>.
<p>Error Message: filter_mpe_volsets failed</p> <p>Displayed in the following NetWorker programs: NSRSAVE, NSRARCH</p> <p>Cause: NetWorker found a temporary memory problem.</p> <p>Solution: Try one of the following solutions:</p> <ul style="list-style-type: none">• Retry the command.• Reboot the host system.

Table 1. Error Messages (Continued)

<p>Error Message: /<invalid_mpe_volset_id>_VOLUME_SET: invalid NetWorker volume set identifier or /<invalid_system_volume_set_id></p> <p>Displayed in the following NetWorker programs: NSRSAVE, NSRARCH</p> <p>Cause: You specified an invalid MPE/iX volume set name after the required leading slash "/" and, in the case of nonsystem volume sets, before the required suffix tag "_VOLUME_SET"</p> <p>Solution: Insert the valid MPE/iX volume set name in the expected NetWorker format: /MPEXL_SYSTEM_VOLUME_SET or /<valid_mpe_volset_id>_VOLUME_SET for example, /PROD_VOLUME_SET for an MPE/ix volume set named "PROD"</p>
<p>Error Message: mpevs_init failed</p> <p>Displayed in following NetWorker programs: NSRSAVE, NSRARCH, NSRRECOV, NSRRETRV, SAVEFS</p> <p>Cause: NetWorker found a memory or volume set management problem.</p> <p>Solution: Try the following in descending order of preference:</p> <ul style="list-style-type: none">• Retry the command• Remount the non-system volume sets and ensure they are usable; and reboot the host system• If all volume sets seem to be usable using test MPE/iX commands and the problem persists, contact Legato

Table 1. Error Messages (Continued)

<p>Error Message Nothing marked for backup</p> <p>Displayed in following NetWorker programs: NSRSAVE, NSRARCH</p> <p>Cause You started a backup or archive without marking files.</p> <p>Solution Start the backup or archive again; mark at least one file.</p>
<p>Error Message NSRSAVE: invalid time specification: '20d1978'</p> <p>Displayed in following NetWorker program: NSRSAVE</p> <p>Cause You entered the time with an invalid time format.</p> <p>Solution Enter the time using one of the following valid time formats:</p> <ul style="list-style-type: none">• hh:mm:ss (24 hour clock) or hh:mm:ss am/pm• mm/dd(/yy) or monthname dd (yy) (/yy is optional)• Last Friday, next Friday, <i>or</i> third Friday• + or -x seconds, minutes, hours, weeks, months, <i>or</i> years• Now (the current date and time)

Table 1. Error Messages (Continued)

<p>Error Message: TurboSTORE fails with error code n</p> <p>Displayed in following NetWorker programs: NSRSAVE, NSRARCH, NSRRECOV, NSRRETRV</p> <p>Cause: A request from NetWorker to start TurboSTORE failed for a backup or recovery session.</p> <p>Solution: Ensure that your TurboSTORE product is operational. Test it by saving a small test file to disk or to tape at the MPE prompt outside of NetWorker.</p>
<p>Error Message Unable to relocate to /directory</p> <p>Displayed in following NetWorker program: NSRRECOV</p> <p>Cause NetWorker was unable to relocate the recovered file to the path you specified.</p> <p>Solution Start the recovery again and enter a valid <i>pathname</i>. Note that you must have write permissions for the directory you specify.</p>

Table 1. Error Messages (Continued)

<p>Error Message Unable to start backup</p> <p>Displayed in following NetWorker program: NSRSAVE</p> <p>Cause NetWorker was unable to execute the NSRSAVE program.</p> <p>Solution Contact the system administrator. There could be a problem with the NetWorker software or with your MPE client configuration.</p>
<p>Error Message: usage: NSRARCH [<options>] [path ...] options: [-BiLqvXVy] [-b pool] [-f directive file] [-N name] [-s server] [-W width] [-T annotation] [-C clone pool] [-I input file] [-G remove] [-R name]</p> <p>Displayed in following NetWorker program: NSRARCH</p> <p>Cause: An invalid option was entered. Note that the -E and -n NSRSAVE options have been temporarily disabled for the NSRARCH program in the NetWorker ClientPak for MPE/IX</p> <p>Solution: Reenter the option using only the valid options as shown in the error message.</p>

Table 1. Error Messages (Continued)

<p>Error Message: Volume set save path argument must be by itself</p> <p>Displayed in following NetWorker programs: NSRSAVE & NSRARCH</p> <p>Cause: An extra save path argument was used with a volume set save path, as in the following example: : RUN NSRSAVE;INFO="-s nwrksrvr /PROD_VOLUME_SET /SYS/PUB"</p> <p>Solution: Specify the volume set path name by itself in a separate NSRSAVE or NSRARCH command, as in the following example: : RUN NSRSAVE;INFO="-s nwrksrvr /PROD_VOLUME_SET"</p>
<p>Error Message Your system is not a registered client.</p> <p>Displayed in following NetWorker program: NSRSAVE</p> <p>Cause The server you selected does not have your system listed as a NetWorker client.</p> <p>Solution Contact the system administrator. Your MPE client needs to be added to the list of recognized clients for the selected server.</p>

Table 1. Error Messages (Continued)

<p>Error Message '09/30/12:00' not valid, time not changed</p> <p>Displayed in following NetWorker program: NSRRECOV</p> <p>Cause You asked NetWorker to change the browse time to a browse time that was earlier than the save time for the file.</p> <p>Solution Enter the time using one of the following valid time formats:</p> <ul style="list-style-type: none">• hh:mm:ss (24 hour clock) or hh:mm:ss am/pm• mm/dd(/yy) or monthname dd (yy) (/yy is optional)• Last Friday, next Friday, <i>or</i> third Friday• + or -x seconds, minutes, hours, weeks, months, <i>or</i> years• Now (the current date and time)
<p>Error Message '12:20:14:00' not valid, time not changed</p> <p>Displayed in following NetWorker program: NSRRECOV</p> <p>Cause The change time you entered while trying to recover was an invalid time format.</p> <p>Solution Enter the time using a valid time format.</p>

