

File Management - ProHelp Millennium 2.6x

Mattec Service TSE & DJL

Backup, Archive & Purge

The File Manager's job is critical and there should be one person responsible for this function with another trained as a backup. It is important that the company set up a procedure for backup, archive and purging data. This procedure should be strictly followed, and will vary depending on the amount of data you collect and process. The Mattec Customer Service Department can assist you with defining these procedures.

Controlling the size and quantity of the files on the hard disk is important to ensure the efficient use of the ProHelp Millennium system. The purpose of having three different locations for data files is to reduce the amount of time required to access data. By keeping a limited amount of files in the active file (dtadir) the computer can access data quicker. When data is requested, the computer first searches the active file (dtadir). If no data is found, the computer then searches the standby file (stbdir).

Data File Types Defined

Descriptor Files - descriptions of the production data to monitor and how to monitor. Includes the part descriptor, job descriptor and schedule master files. These files grow in size at time goes on.

Production History - Contain running job records for each shift, material use data for each shift, process parameter history data, machine and tool history, machine and tool maintenance history. These files grow in size and number as time goes on.

SPC - New files are created each day to contain SPC data. These files grow in size and number as time goes on.

Operator History - Contain operator tracking and efficiency history data. These files grow in size and number as time goes on.

Log Files - Include process exception log, down log and help log. These files grow in size at time goes on.

Three File Location Types Defined

Active - data files that are used in current ongoing operations which may be edited or modified by the user. These files are heavily accessed by the users. The active data is located in the directory **/usr/prohelp/dtadir**.

Standby - data files that are work files where the need for modification is no longer necessary. These files are retained on the system for the purpose of generating reports or viewing data. It is not possible to edit standby files. The standby data is located in the directory **/usr/prohelp/stbdir**.

Condensed - data files that have been condensed for the purpose of comparing multiple years of production using charts and matrix style reports. This data is maintained per department per day with: run hours; down hours; earned hours; direct labor hours; earned labor hours; material used; material scrapped values. The condensed data is located in the directory **/usr/prohelp/stbdir**.

File Manager Functions Defined

Backup - copy active data (dtadir) to tape. Backup is critical and should be run daily to assure that the collection of data from recent data is protected. The backup tape would be used to rebuild the system in case of hard disk failure. The backup will overwrite the tape, not append to it.

Archive - copy standby data (stbdir) files to tape. The archive function provides a means to copy standby files to a tape for permanent record storage. An archive copies historical work to an external storage device so this data may be deleted but accessed at a later time for reporting purposes. Archive should be performed just after a purge. The archive will overwrite the tape, not append to it.

Purge - deletes standby data (stbdir) from the system after it has been archived, moves active data (dtadir) to standby data (stbdir), converts standby data (stbdir) to condensed data (stbdir). The purge should be run prior to archive.

Restore - in the event of a hard disk failure, the backup that you have created will be used to restore your ProHelp Millennium system. Before beginning the restore process, you must contact the Mattec Customer Service Department for assistance.

Retrieve - when trying to use data that has already been archived and purged off the system, the system will display an error message. The retrieve function is used to retrieve the archive data so that it may be displayed.

Backup

When executing a backup, the data from the active data (dtadir) is copied into the **/usr/prohelp/mat_backup** directory. The data is then copied to the tape and the data is deleted from the **/usr/prohelp/mat_backup** directory. The **/usr/prohelp/mat_backup** directory is a temporary holding place for the backup files prior to being copied to tape.

Archive

When executing an archive, the data within the date range specified, is copied from the standby directory (stbdir) to the **/usr/prohelp/mat_archive** directory. The data is then copied from the **/usr/prohelp/mat_archive** directory to the tape and the data is deleted from the **/usr/prohelp/mat_archive** directory. The **/usr/prohelp/mat_archive** directory is a temporary holding place for the backup files prior to being copied to tape.

Purge

After an archive has been performed from the last execution of a purge, history data exists in two places, on the archive tape and on the hard drive in the standby (stbdir) directory. The duplicate data can now be removed from the hard disk.

Earliest Condensed Data to Retain = all data prior to this date will be permanently deleted

Earliest Standby Data to Retain = all data prior to this date will be condensed

Earliest Active Data to Retain = all data prior to this date will be moved to standby

Data collected prior to the date entered for **Earliest Condensed Data to Retain** will be permanently deleted from the system. BE SURE THIS DATA HAS BEEN ARCHIVED TO TAPE PRIOR TO EXECUTING THE PURGE!

Data between the dates entered for **Earliest Condensed Data to Retain** and **Earliest Standby Data to Retain** is condensed.

Data between the dates entered for **Earliest Standby Data to Retain** and **Earliest Active Date to Retain** is moved to standby (stbdir).

Data collected after the date entered for **Earliest Active Data to Retain** will remain in the active data (dtadir) directory.

Purge Examples

Prior to performing the purge function, it is imperative that you understand how your data is broken down into the various data types. Keep accurate records and label tapes to help keep track of your data. Below are hypothetical examples of how to use the purge function to manage your data. Keep in mind that the dates entered under the purge function depend on a number of different factors. How much hard disk space is available? Is SPC/SQC data being collected? How much active data is needed on the system for editing purposes? At what point is system performance jeopardized due to the active data (dtadir) being too large? Should data be permanently deleted off the system? The answers to these questions will be different from

one user site to another. Determine your specific data management requirements and use the File Manager in Millennium to help implement them.

Example I

Assumptions - current date is 12/31/98; have been collecting data since 01/01/98; archive and purge have never been executed; want to keep 6 months of data in active, and 6 months of data in standby.

Earliest Condensed Data to Retain = --/--/--
Earliest Standby Data to Retain = 01/01/98
Earliest Active Date to Retain = 07/01/98

Based on the above date ranges, all data collected prior to 07/01/98 will be moved from active to standby. All data collected after 07/01/98 will stay in active. Next, you must perform archive with the date range 01/01/98 to 06/30/98 to copy this standby data to tape. Be sure to mark on the tape that it is an archive and note the date range. You now have data from 01/01/98 to 06/30/98 on disk as well as archived to tape.

Example II

Assumptions - current date is 06/30/99; have been collecting data since 01/01/98; Standby contains data from 01/01/98 to 06/30/98 and you also have this data archived to tape. Active contains all data collected after 07/01/98 and no data has been condensed. Want to keep 6 months of data in active, 6 months of data in standby, and data older than 1 year condensed.

Earliest Condensed Data to Retain = --/--/--
Earliest Standby Data to Retain = 07/01/98
Earliest Active Date to Retain = 01/01/99

Based on the above date ranges, all data collected prior to 07/01/98 will be condensed for annual comparative purposes. Data collected prior to 01/01/99 will be moved from active to standby. All data collected after 01/01/99 will stay in active. Next, you must perform archive with the date range 07/01/98 to 12/31/98 to copy this standby data to tape. Be sure to mark on the tape that it is an archive and note the date range. You now have data from 07/01/98 to 12/31/98 in standby on disk as well as archived to tape.

Example III

Assumptions - current date is 12/31/01; have been collecting data since 01/01/98; Standby contains data from 07/01/00 to 12/31/00 and you also have this data archived to tape. Active contains all data collected after 01/01/01 and all data collected prior to 07/01/00 has been condensed. Want to keep 6 months of data in active, 6 months of data in standby, and no more than 2 years data condensed. **Please note, be sure you have archived data to tape prior to executing a purge with a date entered in the Earliest Condensed Data to Retain field. All data prior to this date will be deleted permanently off the system. The only way to access this data again would be to retrieve from an archive tape!**

Earliest Condensed Data to Retain = 01/01/99
Earliest Standby Data to Retain = 01/01/01
Earliest Active Date to Retain = 07/01/01

Based on the above date ranges, all data collected prior to 01/01/99 will be deleted off the system. All data collected prior to 01/01/01 will be condensed for annual comparative purposes. Data collected prior to 07/01/01 will be moved from active to standby. All data collected after 07/01/01 will stay in active. Next, you must perform archive with the date range 01/01/01 to 06/30/01 to copy this standby data to tape. Be sure to mark on the tape that it is an archive and note the date range. You now have data from 01/01/01 to 06/30/01 in standby on disk as well as archived to tape.

File Manager Technical Notes

Checking Disk Space

The following commands can be used to check disk space:

df -k {Shows total disk space available and used}
du -ks /usr/prohelp/dtadir {Shows disk space used by active data}
du -ks /usr/prohelp/stbdir {Shows disk space used by standby data.}

Finding Date Ranges

The following commands can be used to determine what range of dates are contained in the active and standby areas:

```
find /usr/prohelp/dtadir -name shift_hist -print | sort | more {for active}
find /usr/prohelp/stbdir -name shift_hist -print | sort | more {for standby}
```

Backup

Backing up is a three phase process:

Phase I - Data is collected from the active area and copied into **/usr/prohelp/mat_backup**.

Phase II - Data is copied from **/usr/prohelp/mat_backup** to tape.

Phase III - Data is removed from **/usr/prohelp/mat_backup**.

All three phases can be performed in a single step using the following script:

```
mattec_fullbkup {located in /usr/prohelp/tools}
```

To create an icon on the desktop for this script:

```
cd
ln -s /usr/prohelp/tools/mattec_fullbkup BACKUP
```

Doing each phase separately:

Phase I can be performed by entering ProHelp and doing the following:

F5) FilMan, F3) Backup, F1) Manual, enter /usr/prohelp/mat_backup as the directory,
F1) Done.

or from the terminal window enter:

```
mbackup -B -d/usr/prohelp/mat_backup -f
```

Phase II can be performed by entering the following from the terminal window:

```
find /usr/prohelp/mat_backup -print | cpio -ocBv -O/dev/rmt/c0s0r
```

Phase III can be performed by entering the following from the terminal window:

```
cd /usr/prohelp
rm -r mat_backup
mkdir mat_backup
chmod 777 mat_backup
```

Phases II and III can be combined in one step by the following script:

```
cd /usr/prohelp
mat_tape
```

Choose "1) Write to Tape", "1) Backup", "4) Erase Backup from Drive".

Archiving

Archiving is a four phase process:

Phase I - Insure that the date range that you wish to archive is in the standby area.

Phase II - Data within the specified date range is collected from the standby area and copied into the **'/usr/prohelp/mat_archive'** directory.

Phase III - Data is copied from the **'/usr/prohelp/mat_archive'** drencher to tape.

Phase IV - Data is removed from the **'/usr/prohelp/mat_archive'** directory.

Performing Phase I:

Phase I can be performed by entering ProHelp and doing the following:

F5) FilMan, F2) Purge, Enter the date ranges for the standby and active areas,
F1) Done.

All three phases can be performed in a single step using the following script:

These three phases are performed by the following script:

mattec_archive {located in **/usr/prohelp/tools**. This script assumes that you wish to archive one week of data, between 60 and 67 days ago. The data for this date range must reside in the standby area prior to performing the archive. (Use the purge command to move data from active to standby.) To modify these assumptions you must manually edit the script }

To create an icon on the desktop for this script:

```
cd
ln -s /usr/prohelp/tools/mattec_archive ARCHIVE
```

Doing each phase separately:

Phase II can be performed by entering ProHelp and doing the following:

F5) FilMan, F1) Archive, enter **/usr/prohelp/mat_archive** as the directory,
Choose the appropriate date range, F1) Done.

or from the terminal window enter:

mbackup -A -d/usr/prohelp/mat_archive -E67 -L60 {Note: The numbers 67 and 60 refer to how many days ago the first and last days to archive were. You must replace these numbers with whatever is appropriate for you }

Phase III can be performed by entering the following from the terminal window:

```
find /usr/prohelp/mat_archive -print | cpio -ocBv -O/dev/rmt/c0s0r
```

Phase IV can be performed by entering the following from the terminal window:

```
cd /usr/prohelp
rm -r mat_archive
mkdir mat_archive
chmod 777 mat_archive
```

Phases III and IV can be combined in one step by the following script:

```
cd /usr/prohelp  
mat_tape
```

Choose "1) Write to Tape", "2) Archive", "4) Erase Archive from Drive".

Setup Unattended Backup In Task Scheduler

Via the UnixWare desktop setup following for the task:

```
/usr/prohelp/tools/mattec_fullbkup >/dev/null
```