

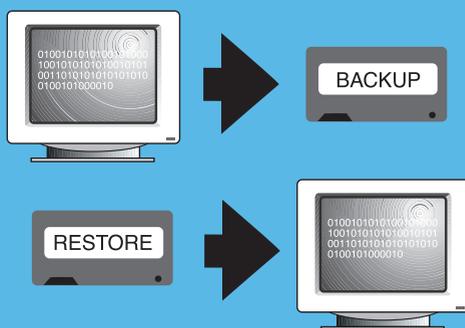
CHARISMA

Delivering Competitive Edge

Customer Service Bulletin

BACKUP PROGRAM

For Saving, Restoring and Updating Charisma



Important Information

Publication No. 65-00005-02B

January 2002

2nd Edition

B|M|L

BML (Office Computers) Ltd

Contents

SECTION 1	3
INTRODUCTION	3
SECTION 2	5
MAIN FEATURES OF BACKUP	5
SECTION 3	7
CONFIGURING THE BACKUP OPTIONS	7
SECTION 4	17
STARTING BACKUP	17
SECTION 5	25
DISPLAY LOG	25
SECTION 6	29
SETTING UP JOBS TO RUN	29
<i>Configuring the available options</i>	29
<i>Deleting & Disabling jobs already set</i>	32
SECTION 7	35
UTILISING 'TIMEDSAVE SCRIPTS'	35
<i>Printing Invoices</i>	36
<i>Printing Credit Notes</i>	38
<i>Printing and Faxing Statements</i>	38
SECTION 8	41
UPDATING INVOICES AND CREDIT NOTES	41
<i>Updating Invoices</i>	41
<i>Updating Credit Notes</i>	42
SECTION 9	43
RESTORING FILES	43

SECTION 1045
 RUNNING 'BEGINNING OF THE DAY' 45

SECTION 1147
 ABORT JOBS 47

SECTION 1249
 THE TAPE CHECK FUNCTION 49

SECTION 1351
 THE NETWORK COPY FUNCTION 51

SECTION 1453
 LOCATION OF BACKUP'S OUTPUT AUDIT FILES 53

SECTION 1555
 TROUBLESHOOTING..... 55

Section 1

Introduction

The **BACKUP** program has been written to replace the current 'savefiles' and 'restorefiles' *UNIX* scripts with one single program.

BACKUP incorporates the following:

- 1) Savefiles
- 2) Timedsave
- 3) Restorefiles
- 4) Updates

Section 2

Main Features of BACKUP

- BACKUP is a comprehensive Backup tool that allows for the saving off of Data, Cobol and Programs as specified by the user.
- BACKUP can be set to run both timed and immediate Backups.
- BACKUP provides the ability to 'Autorun' on a daily basis, necessitating just the replacement of the backup tape.
- BACKUP provides the necessary functionality to restore the saved off Data and Programs.
- BACKUP provides a 'batch processing' facility for executing invoice and credit note printing and statement printing or faxing.
- BACKUP provides the facility to update invoices and credit notes.
- BACKUP can be set to initiate SLBOTD.
- BACKUP can perform printing and updating functions exclusive of Backups.
- When performing a Backup, BACKUP automatically performs a 'Tape Check', ensuring 'in advance' that the tape(s) can be both written to and read back from.
- BACKUP writes audit files and will write files for error reporting in order that BML Support Services can provide help should the need arise.
- BACKUP will automatically archive the PLOGFILE (Program Access Log File).
- BACKUP offers a 'Network Copy' function allowing for a complete copy to an identical machine.

Section 3

Configuring the BACKUP Options

The program **V5BACKUP** resides in the **charis05** directory, and should be set up in **MENUP** as the program **BACKUP**.

The first time the program is run, the parameters will not be set-up. BACKUP will automatically go into the 'Change Options' screen shown (see below), where default options will be suggested. These options may be subsequently amended by entering the 'Change Options' menu item.

```

Device                : /dev/rmt0                Tape size in (MB)  : 004096
Type (Tar/Cpio/Netcopy) : T                Final command      :
Other command options  :                          Default run option : S
Other files to backup  :
Printer               : LP01                    Prevent logon      : Y
Default backup time   : 99:99                    Max PLOG size     : 00000
Kill scheduler method : O                Backup Data       : Y
Restart scheduler     : Y                          Backup Cobol      : Y
                                                              Backup Programs  : Y
                                                              Exceptions only  : Y

Backup serial number   : 00000000                Max running jobs  : 01
                                                              Copy off MSGFILE :

Clear the SF directory : Y

Run TIMEDSAVE scripts : N

Other extract options :

Press <cr> to continue_

```

The aforementioned options of backing up Cobol, Programs and Data may be changed. However, answering 'No' to any of these options will only take effect for the backup that immediately follows this change. Following the completion of a backup, the three options will default back to Y.

Device

This field refers to the tape drive in your machine that contains the tape that will be backed up to. This field requires the drive's actual UNIX device name to be entered here. To identify the device name you currently utilise for your SAVEFILES, type `echo \$SAVETAPE` and press return at a `tty/pts` prompt.

Type

The backup can be written to the tape in one of 3 formats and is dependent upon the system you use.

If you use :

AIX use the *UNIX* tar format - Option T.
SCO box or SVR4 use the *UNIX* cpio format - Option C.

The Option **N** will perform a *NetCopy*. Refer to Section 13 (page 51).

Other Command Options

Any other Unix command line options that might be required for the actual *tar* command or *cpio* command can be entered here. (This option is for more advanced users).

Other Files to Backup

In addition to the Cobol, Data and Program paths that BACKUP accesses, the program also provides for the saving of files that reside outside of these paths. To save these additional files, create a file in the home directory (for example a file called `extras`), and detail within this file, the full pathnames of the extra files that you require to be saved. Then simply add the filename (extras) into the Other Files to Backup field. These files will be appended to the list of standard backup files (i.e. Charisma data etc). Files which may be put in this list can include the `.profile` etc. With the filename added here, the F6 provides for the facility to add and delete pathnames from the chosen file.

Printer

A listing of what BACKUP is saving to tape is automatically created, however the output listing can also be sent to a printer and this field will determine which one is used. Entering NONE will prevent output to the printer.

☞ **Note:** The output of the procedure will always be sent to a file called .backup.out.nn , in the /tmp directory (where 'nn' is the current backup sequence number and can be between 01 and 10).

Default Backup Time (24 Hour Clock)

It is possible to set **BACKUP** to start backing up at a certain time. Enter the required default time here (this can be altered when the actual backup is started). If you want to backup as soon as the 'Start Backup' option is selected, enter 9999 as the time (or press f5-Immediate).

Kill Scheduler Method

The BACKUP can kill the advice note/invoice scheduler if required. There are 3 options for this parameter:

- 1) Kill using the **UNIX** kill command (option **K**).
- 2) Kill using the **ORKILL** Charisma program (option **O**).(Recommended)
- 3) Do not kill the scheduler (option **N**).

Restart Scheduler

After everything else has finished, the scheduler will be restarted if this parameter is set to **Y**. If Kill Scheduler Method is set to 'N', then Restart Scheduler will be skipped – and defaulted to N.

Backup Serial Number

This field cannot be changed. Every time a backup is performed, this number is incremented by one.

☞ **Note:** It is advisable to write this serial number onto the tape label following a backup to aid its identification should a restore be required.

Clear the SF Directory

If set to Y, the temporary 'SF' directory is deleted after the backup has run and then recreated empty.

☞ **Note:** *BML recommend that this is set to 'Y'.*

Run TIMEDSAVE Scripts

With the 'Use Timed Procedures' parameter set, some programs (e.g. **ORD90**) can be maintained to run their prints exclusive of a backup being performed or indeed, after the backup has been completed. If this option is set to **Y**, any program with that capability, and that has been set up to run on today's date, will be run. (refer to Section 7). If the parameter is not set, all TIMEDSAVE capabilities will be unusable within BACKUP.

☞ **Note:** *Please contact your Professional Services Group Implementation Consultant should you require this parameter setting.*

Other Extract Options

When restoring from the tape, this field can be used to include any special options in the command line for the *tar* or *cpio*. Examples include, but are not limited to, being able to redirect the output of the tar, or switches for the end of the tar. (This option is for more advanced users).

Tape Size

Enter the number of Megabytes that can be stored on a single tape. For example 004096 for a DAT or Travan tape, 000525 for a 525 Tape. This is used to assess whether the required directories to archive will fit onto the tape.

☞ **Note:** *Contact BML Support Services if you are unsure of your tape capacity or whether or not you utilise data compression.*

Final Command

A UNIX command entered here will be executed once any PLOGFILE archiving has taken place. An example of usage could be the displaying of the Exceptions report, or the displaying of a banner to users to let them know they can log back onto the system. The use of this option assumes a high level of Unix knowledge.

Default Run Option

It is the Default Run Option that determines the tasks that BACKUP undertakes.

- **The Run Option of 'S'** allows BACKUP to perform the **basic** Savefiles of backing up Data, Cobol and Programs as chosen by the user. This run option is not capable of printing or updating invoices and credit notes or of faxing / printing statements.
 - **The Run Option of 'U'** for an Update only and will set the Backup Data, Cobol and Programs to 'N'. This Run Option assumes that the user wishes to initiate just those jobs set within the Maintain Jobs menu that are ALSO enabled. The Run Option of 'U' will ALSO run created Timesave scripts if Run Timesave scripts is set to 'Y'.
 - **The Run Option of 'B'** will perform both a Savefiles of Data, Cobol and Programs as chosen by the user IN ADDITION TO initiating the jobs set within the Maintain Jobs menu that are ALSO enabled. The Run Option of 'B' will ALSO run created Timesave scripts if Run Timesave scripts is set to 'Y'.
 - **The Run Option of 'T'** is available for the running of created Timesave scripts ONLY. This option will set the Backup Data, Cobol and Programs to 'N' and will NOT initiate any jobs that have been set and that are enabled.
- ☞ **Note:** If either of the Update options are specified, details relevant to the update (i.e. the 'Job' to be run) will need to be present within the 'Maintain Jobs' menu, AND for the option to be 'enabled' for the update to run. (Refer to Section 6, Page 29).
- ☞ **Note:** For the printing of Invoices or Credit notes and the faxing of statements, (Run Options U, B and T). (Refer to Section 7, Page 35).

Prevent Logon

If this option is set to *Yes*, anybody attempting to log into *Charisma* whilst a backup is in progress, will have the following displayed, and will then be returned to a tty prompt:

```
** A Charisma update is currently in progress **
```

Max PLOG size

With the 'Backup Data' option chosen, the Program Log file will be backed up. Providing one has not already been archived that day or that month, the option exists here to archive the Program Log file either daily after the backup, or once a month.

☞ **Note:** *BML recommend that this is set to '99998'.*

Backup Data

Say *Yes* to this option if you wish *Charisma* data, IQ data and SPL to be backed up.

Backup Cobol

Say *Yes* to this option if you wish Cobol, Terminfo and Ufax to be backed up.

Backup Programs

Say *Yes* to this option if you wish to backup the *Charisma* programs, IQ programs, Bin, Profile and everything in the Home directory.

Exceptions Only Y/N

The Exceptions Report details only those errors BACKUP generated whilst saving data to the tape. Answering *Yes* to this question will prevent the printing of a full list of what BACKUP saved, and instead just print *ONLY* the errors encountered. Irrespective of answering *Y* to this question, the Exceptions Report is always created as a file and is stored in the home directory with the naming convention of ``.exceptions_out.nn ``.

If a printer has been set, and Exceptions Only has been set to N, then a full output listing of what BACKUP has saved, will be printed.

Max Running Jobs

This field specifies how many jobs (i.e. updates) can be running at any one time. If this is set to 1, each job will run sequentially. If this is set to greater than 1, then (n) jobs will be started at once. The next batch of (n) jobs will start as soon as ALL of the previous batch of (n) jobs have finished.

☞ **Note:** Use this option with care as there are locking implications. Please consult BML Support Services before changing this figure to a value greater than 1.

Copy off MSGFILE

The copying off of the MSGFILE is dependant upon SAVEFILES being performed and as such will work under the Run Options of S or B.

If set to Yes, this will copy off the schedulers **MSGFILE's** out of the SF directory and, if the option has been chosen, will do so before the SF directory is cleared. The text files will be placed in a directory called **'logs'** in the *Charisma* home directory.

Further directories will be created and then named by month as per the example below and files are copied off. Each file within the specific month, will be named as the date upon which it was copied.

```
(BMLS40-[clean5])-tty09:cd logs
(BMLS40-[clean5])-tty09:ls
  Apr  Dec  Feb  Jan  Jul  Jun  Mar  Oct
(BMLS40-[clean5])-tty09:cd Jun
(BMLS40-[clean5])-tty09:ls -l|more
total 2
-rw-rw----  1 clean5  other          179 Jun 25 11:07 MSGFILE_A.110708.25
-rw-rw----  1 clean5  other          179 Jun  2 11:21 MSGFILE_A.112159.02
(BMLS40-[clean5])-tty09:
```

In addition to the previous options, the following 5 functions perform automatically throughout the process so as to provide elements of control, safety and security.

Check Disk Space

The shell script *dspace* will be run before the backup starts. The output of this command appears as shown in the example below:

```
+-----+
| SAVEFILES Backup of Charisma Datafiles |
+-----+

Disk space report

Disk          Tot MB    Free MB    Used
/             250.00    169.25     32%
/proc         0.00      0.00       0%
/stats        0.00      0.00       0%
/dev/fd       0.00      0.00       0%
/var          150.00    91.24      39%
/usr          155.00    13.25      91%
/unispooler   150.00    141.52     5%
/charspooler 1000.00   646.74     35%
/unistore1    930.20    329.96     64%
/chartest     2500.00   2122.95    15%
/charisma1    2500.00   324.73     87%
/cache        0.00      0.00       0%
```

Verify Backup

The tape is immediately verified after the backup. This function ensures that the tape(s) can be read from beginning to end.

Check if Users are on

A check is made to see if any other Charisma processes are running (this includes background tasks). If there are, BACKUP will display a warning and will not continue until the Users have logged off or have finished.

Perform a Tape Check

Before the backup commences, a file is created, written to the tape and read back from the tape to make sure the same data is read back successfully.

- ☞ **Note:** If this fails, the backup will not continue.
- ☞ **Note:** This will WRITE to your tape – make sure you have no further use for any data that may already be stored there.

Check Users before Restore

BACKUP will complete a simple check before restoring files onto the system by checking to see if anybody is logged on. The restore facility needs complete access to the system otherwise files will not be restored if the originals are being accessed at the time of the restore.

Section 4

Starting BACKUP

BACKUP will create a UNIX shell script, which it then calls at the appropriate time. Depending on the chosen options, this script will do the following at the time of backup:

- Kill the scheduler using the method set up by the parameters.
- Disk space is checked and a disk space report is produced.
- All required directories are backed up to tape.
- The tape is verified for errors.
- If specified, any special **TIMESAVE** tasks are run.
- Any jobs set to run are run at the appropriate time.
- If specified, the **SF** directory is cleared.
- If specified, the scheduler is restarted.
- The Backup listing or exception report is printed and copies are stored to disk.

When exiting the 'Change Options' screen, BACKUP will perform a 'Permissions check' to ensure the chosen files can be accessed and therefore successfully saved. If files are found to have permissions errors, it is recommended that the script *backup_perm* be run to correct the permissions so allowing for a successful backup.

After configuring your Change Options and Maintain Jobs screens, to start a backup, select the 'S' option from the main menu. Viewing your chosen options (V from the menu) will NOT reset the default backup options. A further permissions check is carried out at this stage.

If you have requested **BACKUP** to Savefiles, it will build a list of the files that are required for it to backup, a counter will be displayed on the screen as to its progress. The list is built up in the following way:

- Any directory that has a shell variable called **dd_<dir>** set up in the profile or *Charisma* calling script will be included in the list.
- The SF directory will be excluded from the list.
- Plus any other files which have been selected for backup, as set up in the option **Other files to backup**. (To use this level it is highly recommended that a good level of UNIX is required).
- *BML RECOMMENDS THAT DATA, PROGRAMS AND COBOL ARE BACKED UP EACH TIME A BACKUP IS PERFORMED.*

After answering S, U or B to the Default Run Option and after answering YES to at least one of the Backup options, the following boxes may appear:

If answering 'No' to 'Backup Data', the following dialog box will appear:

```
11:09:32-----
|Backup data is set to 'No'. You |
|will not be able to restore any |
|Charisma data, spool data or IQ |
|data from this backup.         |
|Do you wish to continue? (Y/N) |
|-----
```

If answering 'No' to 'Backup Cobol', the following dialog box will appear :

```
11:11:44-----
|Backup Cobol is set to 'No'.    |
|You will not be able to restore |
|Cobol, Termino or Ufax data.   |
|Do you wish to continue? (Y/N) |
|-----
```

If answering 'No' to 'Backup Programs', the following dialog box will appear:

```
11:17:16-----
|Backup programs is set to 'No'. |
|You will not be able to restore |
|Charisma programs, IQ programs |
|bin, profile or anything stored |
|in the Home directory.         |
|Do you wish to continue? (Y/N) |
|-----
```

The directories will now be scanned for the file sizes, in order to calculate how many tapes will be used and which directories will fit onto each tape. If a directory will be split over the tape, the whole directory will be shifted onto the next tape. If one directory will not fit onto a tape by itself, BACKUP will report an error. This is a very unlikely situation and can be remedied by one of the following:

- Use a larger (capacity) tape, ensuring drive compatibility.
- Clear some space in the offending directory.

When the scan has been completed, a message will appear informing you of the number of tapes that will be required to successfully backup what has been selected:

```
11:27:00-----
|   You will need 001 Tape(s) for the backup   |
-----
```

If more than one tape is required for the backup, a message will tell you. The following screen shows that 2 are required in this example:

```
11:32:00-----
|   You will need 002 Tape(s) for the backup   |
-----
```

If your backup necessitates the use of more than one tape, the following dialogue box will appear:

```
10:13:15-----
|WARNING: As you are using more than|
|one tape, you should increase the |
|size of you storage media. Please |
|call BML for more information.    |
-----
```

Upon pressing **RETURN**, the following will appear:

```
10:14:31-----
|The backup may be set to run at a |
|future time.                      |
|However, a check will be performed|
|to test if any users are logged on.|
|If no users are found to be logged|
|ensure nobody logs on whilst the  |
|backup is in progress.            |
-----
```

If there are users currently logged onto the system, the following will appear:

```
10:22:50-----  
|There appears to be other|  
|users currently logged  |  
|on. Although this doesn't|  
|matter at the moment,   |  
|ensure they are logged  |  
|off before the backup is|  
|due to start.           |  
-----
```

A message will now be displayed asking you to insert the required tape:

```
10:24:26-----  
|Please ensure your tape is|  
|in the required drive and|  
|type OK to continue...   |  
-----
```

Press **RETURN** to continue to the next stage. The following warning will appear:

```
10:25:18-----  
|A Check will now be made to|  
|ensure the tape can be     |  
|written to and read back  |  
|from. Type OK to continue |  
-----
```

- ☞ **Note:** If two tapes are needed for the backup, the 'tape check' procedure will assess the integrity and 'non write-protect' status of both tapes before the backup process continues. This is primarily to ensure that, should the 'tape check' highlight a tape that is not capable of operating effectively, a replacement tape may be made available well in advance of a backup set to start at a future time.

This check has a number of phases:

- A test file, consisting of all *ASCII* characters, is created in the home directory.
- This test file is written to tape.
- The test file is deleted from the home directory.
- The file is read back from the tape.
- A check is made to ensure the file exists in the same place and contains the same data as it did before it was written to tape.

If any of the stages fail, a message will be displayed showing possible causes of the problem and the backup will not be allowed to proceed until the problem is rectified.

```

-----
|Time to start           2200 |
-----

```

If a valid time is set, the 'time to start' will display the time that has been set within the Change Options screen. Again the backup start time may still be altered even at this late stage. Changing the backup start time here to another valid time will assume that a new default start is required and will therefore write this back to the Change Options screen. Rejecting or aborting at this stage will abort the current backup and any alteration made in default backup time.

If the **Default backup time**, in the Change Options menu, is set to 99:99 (immediate backup), **BACKUP** will, upon accepting these characters, commence the backup straight away. At this prompt, if an immediate backup option had not been set in the Change Options menu, you may press the **F5** key, or type **9999**, press enter and Accept to commence.

Pressing **F8** at this stage will abort the whole BACKUP process.

After accepting the time displayed or input, an Accept, Reject or Change option will appear. Rejecting will abort the whole BACKUP procedure. Accepting will allow the countdown to begin (unless **9999** was entered, in which case the backup will start immediately):

```

-----
|Time now       : 10:53.07 |
|Time to start  : 22:00.00 |
|Time to go    : 11:06.54 |
|              :          |
|--- Press f8 to abort ---|

```

At any time, the countdown may be aborted by pressing f8 – you will be met with a message “ Are you sure? ” to which you will have a final opportunity to answer ‘NO’ should you wish to continue with the BACKUP process.

When the ‘time to go’ countdown reaches **00:00:00** the backup will start.

The ‘Auto-Run’ Function

When all the necessary settings have been configured, and the BACKUP start time has been ‘A’ccepted, BACKUP now has the ability to provide the user with the opportunity to retain all of the previously configured settings (set from within the Maintain Jobs menu and Change Options menu) and to utilise these settings to AUTOMATICALLY perform the backup at the same time every day.

The message “Automatically run daily at this time?” will appear.

Answering Y to this question if you wish to utilise the feature. BACKUP will then commence the current backup, and upon finishing will display the following:

```

18:34:51-----
|Backup complete - Change Tape |
-----

```

☞ **Note:** When using this feature, it is vital to remember to ensure the tapes are changed on a daily basis, and that tapes are labeled appropriately. BACKUP will not recognise the fact that a tape has not been changed and will overwrite a tape’s contents if it is not changed in preparation for the following day.

On displaying of the ‘Change Tape’ message, remove the current tape and place in a new tape in preparation for the following day’s backup – and press <CR> (the Return key) to continue. BACKUP will then check file permissions, build a file list, check directory sizes and will also make sure the tape can be written to successfully.

When this process has completed, the countdown clock will re-appear in preparation for the following day’s backup to commence.

You may cancel the ‘Auto-Run’ feature and return to a daily set-up routine at anytime, by pressing F8 when the countdown clock is displayed and confirming that you want to ‘Abort’.

- ☞ **Note:** Timesave scripts are specific to having been created upon a particular day, for a particular programme and for a particular Company. New scripts will need to be created daily for BACKUP to run them and be created PRIOR to the backup commencing.
- ☞ **Note:** BACKUP will not 'Auto-Run' when two tapes are needed.
- ☞ **Note:** BACKUP will only ask the 'Auto-run' question if a valid 24 hour clock time is entered and the question will not appear if the immediate commencement time of '99:99' is entered.

Section 5

Display Log

Every time a backup is performed, a record is written to a log. This information is accessed from the main menu by selecting the **Display log** option. Upon selecting this option the following screen will appear:

Serial	Date	Type	Update	Status	Time	Took	Files	Err.Codes
00496	21/07/01	S	21/07/01	Ok	19:00	00:46	08024	0000
00495	20/07/01	S	20/07/01	Ok	19:00	00:42	08031	0000
00494	19/07/01	S	19/07/01	Ok	19:00	00:40	08552	0000
00493	18/07/01	S	18/07/01	Ok	19:00	00:41	08588	0000
00492	17/07/01	S	17/07/01	Ok	19:00	00:40	08524	0000
00491	16/07/01	S	16/07/01	Ok	19:00	00:40	08524	0000

Serial

This is an index number generated by Charisma and its sole purpose is to ensure that, by assigning a number to the function performed, the sorting of the assigned serial numbers then ensures the most recent function remains uppermost in the display log once viewed.

Date

The date upon which the chosen function (a backup, update etc) was performed.

Type

The initial letter in this column signifies which action has been performed on a particular date.

R - This denotes that a RESTORE of files was performed.

S - This denotes a SAVEFILES ONLY was performed.

B - This implies that BOTH a SAVEFILES and a JOB was performed.

T - This denotes that ONLY the TIMEDSAVE facilities were utilised.

U - This denotes that ONLY JOBS (and TIMEDSAVE scripts) were performed.

NIL- The lack of an initial here denotes that the User chose to 'Abort' before one of the functions commenced. The **status** will show 'Abort' if this occurred.

Update

Update is the date upon which any invoice updates were set to run. If an update is not run, this will default to the system date.

Status

The status denotes the success or otherwise of the chosen operation.

OK - A successful and 'error free' R, S, T, U or B will result in an OK.

Abort- Will appear if intervention occurred in a bid to interrupt the chosen function.

Failed- Will appear in the log if a circumstance prevented a function from performing. (e.g. a tape drive door failure, 'write protect' status on the tape).

Time

This is the time at which the function started.

Took

The duration of the task performed (in hours and minutes).

☞ **Note:** '00:00' here denotes the duration of the task took less than 1 minute.

Files

The number of files that were backed up or restored.

☞ **Note:** The file count in the display log will show a count of one extra file than can actually be restored. This is attributable to the fact that when files are backed up, a 'backup information file' will also be backed up adding one extra file to the file count shown here.

Err.Code

Any error code returned by the BACKUP program will signify a particular reason for the failure of the backup.

1000 Tape status error.

The backup script has returned an error code because it was unable to either write to or read from the tape.

0100 Printer error.

The backup, although complete, has failed because the backup output could not be printed. Check that the printer, entered in the 'Change Options' screen, exists.

0010 User locking error.

BACKUP was unable to unlock user logins because an 'unlock key' already exists. An example of this may be when a backup had been incorrectly aborted or backup is already running.

 **Note:** Contact BML Support Services if problems are still encountered.

Section 6

Setting up Jobs to Run

Configuring the available options

BACKUP can be set up to run various jobs, such as the updating of Invoices and Credit Notes and Beginning of the Day routine (BOTD). These can all perform exclusive of, or indeed be performed after a backup (immediate or timed) has completed.

To set up any jobs you wish to run after the backup, select the Maintain Jobs menu item from the main menu. Upon selecting this option the following screen will appear:

```

Job Number :
Company      :                               Description:
Program     :
User        :
Run option  : 0
Printer     :
Location    : 00
Enabled     :

          -----Run type-----Run time-----Run day-----
Monday                00:00
Tuesday               00:00
Wednesday             00:00
Thursday              00:00
Friday               00:00
Saturday              00:00
Sunday               00:00
          -----

f1                               f8
Search                           Exit

```

Job Number

Every job that needs to be run must have a unique job number and, if enabled, jobs will run in Job Number order. A search is provided on the **f1** function key for this field. If a job number that does not exist is entered by a User, it is assumed to be a new job, and the following fields will be initialised. If an existing job number is entered, this is assumed to be for amendment.

The field descriptions are as follows:

Company

The company code (**A-Z**) that the job will run under.

Program

The actual *Charisma* program that will be called.

- ☞ **Note:** this is the MENUP name, not the real name. Currently only ORD2, ORD90, ORD90C and BOTD may be selected. Please contact your Implementation Consultant if you are unsure of the actual program to use, as you may know these by a different name.
- ☞ **Note:** For 'Beginning Of The Day', see Section 10 (Page 45).

User

The Charisma user name to run under. (This would normally be ROB005).

Although ANY user may initiate BACKUP, and any jobs that are set, the running of those jobs set is dependant upon the access criteria set for the particular user that has been named within each job maintained within BACKUP.

BACKUP performs a check at the job creation stage in order to assess what access a particular user has and will prevent the creation of new jobs where the chosen user id does not have access to the particular company.

```

Job Number : 00006                ** This is a new job **

Company      : F                    Description:
Program     : ORD90
User        : DAVE01                Other CLI  :
Run option  : 0
Printer     :
Location    : 00    09:59:43-----
Enabled     : Y    |User does not have access to this company|
                -----

```

Run Option

If ORD2 or ORD90 are set as within '*Program*', then Run Option **5** (signifying '*Update*') should be entered here. If calling ORD90FFC, choose Run Option 3 for '*Update*'. Please contact your Implementation Consultant if you are unsure of what actual program to use.

Printer

Is the output device for the Job.

Location

Is the stock location specific to the job being run.

Enabled

Entering an N here will allow for the chosen job to be **ignored** for a particular Company, rather than having to delete it and will remain permanently Disabled until it is re-enabled.

Description

Non-mandatory description field for the job.

The 'When to run' Box

Each job can be set up to run only on particular days. To run a job on a day, enter a **B** in the appropriate days 'Run type' field. To prevent the job from running, enter a **O** in this field. There is a third option, which is used for running the job at a later time. To use this option, enter an **L**, followed by the Time and Day that this task needs to be run.

☞ **Note:** The final screen display of the job selected/run may be viewed in ERRLOG using the 'cat' command.

Deleting & Disabling jobs already set

Pressing the F1 key will display all the jobs entered so far. It will also display to the user, the job number that particular job was created under, the program involved, the description attached to the job and lastly, a status column to denote to the user which jobs are enabled.

```

Co:A Prog: BACKUP- Backup datafiles
Date:25/07/01

JobNo  Program  Description                               Status
00001  ORD90    INVOICE UPDATES CO A                     Enabled
00002  ORD2     CREDIT UPDATES CO A                       Disabled
00003  SLBOTD   Beginning of the Day                       Disabled

B      S      R      N      D      Eof      f8
Back   Select Remove eNable Disable


```

1) To delete a job

Press the carriage return until the cursor highlights the job number needing deleting and then press R for remove. The question "Are you sure you want to delete this Job Y / N?" will appear. Enter 'Y' and return to delete the job. The job number may then be re-used to assign another job should one need to be created.

2) To disable a job

The 'D' key provides the user here with the facility to 'toggle' enabled jobs to disabled,

The 'N' key provides the user with the ability to 'toggle' disabled jobs to become enabled again.

Section 7

Utilising 'Timedsave Scripts'

```

Device                : /dev/rmt0                Tape size in (MB) : 004096
Type (Tar/Cpio/Netcopy) : T                    Final command      :
Other command options  :                        Default run option: T
Other files to backup  :
Printer               : LP01                    Prevent logon      : Y
Default backup time   : 99:99                    Max PLOG size     : 00000
Kill scheduler method : 0                      Backup Data       : N
Restart scheduler     : Y                      Backup Cobol      : N
                                                           Backup Programs   : N
                                                           Exceptions only   : Y

Backup serial number  : 00000000                Max running jobs  : 01
                                                           Copy off MSGFILE  :

Clear the SF directory : Y
Run TIMEDSAVE scripts : Y
Other extract options  :
Press <cr> to continue_

```

With the 'Use Timed Procedures' parameter set, Charisma allows for Timedsave scripts to be created so that Invoices, Duplicate Invoices and Credit Notes can be printed utilising BACKUP. This functionality also provides for the printing and faxing of statements from BACKUP following the creation of the Timedsave script from SLR1.

These can all be performed exclusive of, or indeed be performed after an immediate or timed backup has completed.

For which Run Options to use – refer to Section 3. – Use Caution : When utilising the Run Option 'B' (for BOTH Savefiles and Updates), BACKUP will activate any jobs set up in the Maintain Jobs menu if they are ENABLED for that day.

NB: The examples that follow assume that the user wishes NOT to run Updates and therefore suggests checking 'Ensure any Jobs set have been disabled' otherwise they too will commence if Run Option U or B is used.

Printing Invoices

1) Printing Invoices using Standard ORD90

- Main Parm's Timed Procedures set to Y for each Co.
- In ORD90FF
 - Output to a valid printer – NEVER USE DISK.
 - **Manual** or **Automatic** set to A
 - Print Only set to Y
 - Processs within Timesave set to Y
- BACKUP
 - Run Timesave Scripts set to Y
 - Default Run Option set to U or B or T
 - Backup of Data /Cobol / Progs set to N or Y
 - Ensure any jobs set are Disabled.Refer to Section 6.

When using ORD90FF, check **OR90** has also been set up in MENU, which will call ORD90FF. This need only be set up in one company. Invoices will print to the printer chosen within ORD90 and not the printer selected within the BACKUP program

2) Printing invoices using ORD90C

- Main Parm's Timed Procedures set to Y for each Co.
- In ORD90FFC
 - Output to a valid printer – NEVER USE DISK.
 - **Manual** or **Automatic** set to A
 - Print Only set to Y
 - Processs within Timesave set to Y
- BACKUP
 - Run Timesave Scripts set to Y
 - Default Run Option set to U or B or T
 - Backup of Data /Cobol / Progs set to N or Y
 - Ensure any jobs set are Disabled.Refer to Section 6.

If using ORD90FFC, check **OR90C** has also been set up in MENU, which will call ORD90FFC. This only need be set up in one company. Invoices will print to the printer chosen within ORD90 and not the printer selected within the BACKUP program.

3) *Printing invoices when using ORD2*

- Main Parm's Timed Procedures set to Y for each Co.
- In ORD2 (ORD2 calling ORD2FF).
 - Output to a valid printer – NEVER USE DISK.
 - **M**anual or **A**utomatic set to A
 - Print Only set to Y
 - Process within Timedsave set to Y
- BACKUP
 - Run Timedsave Scripts set to Y
 - Default Run Option set to U or B or T
 - Backup of Data /Cobol / Progs set to N or Y
 - Ensure any jobs set are Disabled. Refer to Section 6.

Invoices will print to the printer chosen within ORD2 and not the printer selected within the BACKUP program.

4) *Printing a duplicate (historical) Invoice*

- In ORD13
 - Output to a valid printer – NEVER USE DISK.
 - Process within Timedsave set to Y
- BACKUP
 - Run Timedsave Scripts set to Y
 - Default Run Option set to U or B or T
 - Backup of Data /Cobol / Progs set to N or Y

Backup, utilising the Timedsave script, can only print duplicate invoices AFTER they have been updated – Otherwise ORD2 must be used outside of BACKUP's functionality.

Printing Credit Notes

1) Printing Credit Notes

- Main Parm's Timed Procedures set to Y for each Co.
- In ORD2 (ORD2 calling ORD2FF).
 - Output to a valid printer – NEVER USE DISK.
 - **M**anual or **A**utomatic set to A
 - Print Only set to Y
 - Process within Timesave set to Y
- BACKUP
 - Run Timesave Scripts set to Y
 - Default Run Option set to U or B or T
 - Backup of Data /Cobol / Progs set to N or Y
 - Ensure any jobs set are Disabled. Refer to Section 6.

Credit notes will print to the printer chosen within ORD2 and not the printer selected within the BACKUP program.

2) Printing a duplicate (historical) Credit Note

- In ORD13
 - Output to a valid printer – NEVER USE DISK.
 - Process within Timesave set to Y
- BACKUP
 - Run Timesave Scripts set to Y
 - Default Run Option set to U or B or T
 - Backup of Data /Cobol / Progs set to N or Y

BACKUP, utilising the Timesave script , can only print duplicate credit notes AFTER they have been updated – Otherwise ORD2 must be used outside of BACKUP's functionality.

Printing and Faxing Statements

Accounts that, within SLM1, have been maintained with the 'Fax Statements' indicator set to Y will be able to have their statements faxed (and will NOT be printed). Any accounts with this statement indicator set to 'N' will enable their statements to be ONLY printed and not faxed in 'SLR1'.

1) Printing Statements

- In SLR1
 - Output to a valid printer – NEVER USE DISK.
 - Fax Statement set to N or B
 - Process within Timesave set to Y
- BACKUP
 - Run Timesave Scripts set to Y
 - Default Run Option set to U or B or T
 - Backup of Data /Cobol / Progs set to N or Y

2) Faxing Statements

- In SLR1
 - Output to a valid printer – NEVER USE DISK.
 - Fax Statement set to Y
 - Process within Timesave set to Y
- BACKUP
 - Run Timesave Scripts set to Y
 - Default Run Option set to U or B or T
 - Backup of Data /Cobol / Progs set to N or Y

Section 8

Updating Invoices and Credit Notes

Updating Invoices

1) Updating invoices when using ORD90

- In BACKUP
 - For ORD90FF enter a Run Option of 5 for 'Update'.
 - Enter ORD90 as the 'program' in the Jobs Menu.
 - Enter a location (99 will update all locations).
 - Ensure the 'When to Run' options are set for your chosen days.
 - Ensure the job is 'Enabled' for it to run on your chosen days.

2) Updating invoices when using ORD90C

- In BACKUP
 - For ORD90FFC choose Run Option 3 for 'Update'.
 - Enter ORD90C as the 'program' in the Jobs Menu.
 - Enter a location (99 will update all locations).
 - Ensure the 'When to Run' options are set for your chosen days.
 - Ensure the job is 'Enabled' for it to run on your chosen days.

3) Updating invoices when using ORD2

- In BACKUP
 - For ORD2FF choose Run Option 5 for 'Update'.
 - Enter ORD2 as the 'program' in the Jobs Menu.
 - Enter a location (99 will update all locations).
 - Ensure the 'When to Run' options are set for your chosen days.
 - Ensure the job is 'Enabled' for it to run on your chosen days.

Updating Credit Notes

1) Updating credit notes using ORD2

- In BACKUP
 - For ORD2FF choose Run Option 5 for 'Update'.
 - Enter ORD2 as the 'program' in the Jobs Menu.
 - Enter a location (99 will update all locations).
 - Ensure the 'When to Run' options are set for your chosen days.
 - Ensure the job is 'Enabled' for it to run on your chosen days.

Note: When commencing BACKUP to perform updates (Run Option U or B), you will be asked to confirm the 'Date for updates to run under'. Pressing 'C' here will allow the user to amend both the run option and the 'update date' without needing to re-enter the Change Options screen.

```
-----  
| Savefiles only, Updates only or Both (S/U/B): U |  
| Date for updates to run under           : 15/July |  
-----  
  
A           R           C  
Accept     Reject     Change
```

Example:

- Invoices are printed in a batch dated 10th of the month.
- A further batch of invoices are printed in a batch dated 20th.
- A date of the 15th is entered as the 'Date for updates to run under'.

Only the batch dated the 10th will be updated because entering the date of the 15th will look for invoice up to and including the 15th as the 'batch date'.

Section 9

Restoring Files

```
*** RESTORE FROM CHARISMA BACKUP TAPE ***

Restore data      (Y/N)? : N
Restore programs  (Y/N)? : N
Restore other     (Y/N)? : N
Restore individual (Y/N)? : N

This backup tape was created on: 19/07/2001
```

With the chosen Backup tape in the drive (and with the 'Write Protect' tab engaged), selecting Restore Files from the menu will display the screen shown above. Displaying this menu is dependant upon a valid Backup tape being placed in the drive. The tape creation date is read from the tape and is displayed to the user.

Subsequent to the User selecting their chosen restore option, should the User then try and restore (for example) Data from a tape that only has Programs on it, or indeed from a 'non- backup' tape, the User will be met with a warning message letting them know that the tape does not contain the information they require.

After accepting the option to restore the selected information, BACKUP will firstly check to ensure there are no users still on the system.

A second message will request confirmation from the user that they are certain they want to restore their selected option(s).

After an additional 'OK to Start Restore' and with the correct tape in the drive, the restore will commence. The chosen files will display to the screen as the restore is underway.

The following screen will then display confirmation of a successful restore.

```
15:47:40-----  
|the file(s) have successfully restored|  
|Type OK to continue...           |  
-----
```

The program provides for the ability to restore files on an individual basis. However, due to the complex inter-relationship of files within Charisma, this option requires a password. Should you need this facility, please contact BML Support Services for assistance.

- ☞ **Note:** It will not be possible to restore COBOL from your backup tape using the procedure mentioned here. Please call BML Support Services for assistance in retrieving the files from your tape.
- ☞ **Note:** Be aware that complications may occur when restoring Programs at a time subsequent to data file conversions having taken place. Please contact BML Support Services for assistance before any Programs restore.

Section 10

Running 'Beginning of the Day'

```

Job Number : 00005

Company      : A                Description: Beginning of the Day
Program     : BOTD
User        : ROB005           Other CLI   :
Run option  : 2
Printer     : LP02
Location   : 00
Enabled    : Yes

-----Run type-----Run time-----Run day-----
|Monday      B           00:00
|Tuesday     B           00:00
|Wednesday  B           00:00
|Thursday   B           00:00
|Friday     B           00:00
|Saturday   O           00:00
|Sunday     O           00:00
-----

f8
Exit
    
```

SLBOTD can be set to run in a number of ways depending on the output required.

With the User and Mast printers set and the scheduler running, the output configuration is dependant upon the Run Option setting (as shown in the screen layout above):

- **Entering a Run Option of 0**, will have the effect of not printing advice notes, but will print an audit report of BOTD actions on the printer specified within the job menu in BACKUP.
- **Entering a Run Option of 1** will have the effect of printing all outstanding unprinted advice notes for forward orders, to the user default printer. This printer must also be specified within the Job menu set up for BOTD. An audit report will again print to the printer specified within the job menu in BACKUP.

- **Entering a Run Option of 2** will have the effect of printing all outstanding unprinted advice notes for the CALL LIST DATE ONLY. Again, the audit report will be printed to the printer specified within the job menu in BACKUP.

Section 11

Abort Jobs

The 'Abort Jobs' function allows for jobs, set up in the 'Maintain Jobs' menu, to be cancelled.

```
16:07:24-----  
|If there are no jobs now |  
|running, none will run  |  
|until after completion  |  
|of the next backup. If  |  
|there are jobs running  |  
|at the moment, they will|  
|cease after completion  |  
|of the current job.     |  
|Are you sure you want to|  
|stop any subsequent jobs?|  
-----
```

Answering Y to the aforementioned question will prevent any jobs from running if none have commenced already, or if a job has started. This will also prevent any subsequent jobs from running.

Following an 'Abort', jobs will only run again once a backup has been completed.

Section 13

The Network Copy Function

If, within the 'Change Options' screen the 'Type' is set to 'N', a network copy will be performed. This option is to be used if there is an *IDENTICAL* machine on a network that is to be used if the main machine fails. The data structure must be exactly the same as the main machine. This option should only be used after consultation with BML, as it is considerably more complicated than an ordinary backup. If the option is set, the following configurations will appear in the Change Options screen:

- ☞ **Note:** The remote command will probably need to be tailor made according to your need.

```
Destination machine :  
Destination user   :  
Destination command : /usr/bin/dragmirror  
                  :  
Remote initiator   : remsh
```

Destination Machine

This is the machine the remote command will be run on.

Destination User

This is the user id under which the remote command will be run.

Destination Command

Is the actual command that will be run. (arguments may be supplied).

☞ **Note:** Some shell variables are supplied that will be of use:

N_MACHINE	The IP name of the calling machine.
N_USER	The <i>UNIX</i> user name of the calling command.
N_KEY	The location of the 'prevent login' key file.

Remote Initiator

Initiates a remote command. This will usually be 'remsh', but on some systems (notably Motorola systems) will be 'rcmd'.

Section 14

Location of Backup's Output Audit Files

- **ls -l .backup.in** (more .backup.in).
This will list the most recent directories chosen for the backup.
- **ls -l .backup.size** (more .backup.size)
This shows you the directory sizes that are to be backed up.
- **ls -l .backup.nn**
This is the actual backup script that was generated for a particular backup to be run.
- **ls -l .backup_out.nn** (where 'n' can be 01 through to 10).
This is the actual output from BACKUP and contains a disk space report, displays the options that were selected and any backup errors at run time. Permission errors will be highlighted in here. Useful search criteria /failed, /denied, /Access, /found, /Cannot.
- **tail .backup_out.nn** (where 'n' can be 01 through to 10).
This will take you straight to the end of your chosen .backup_out listing.
- **ls -l Backup_Info**
This will show you the User, company, date, no. of tapes and Charisma version.
- **ls -l BackupTest**
This is a file of all characters used for creating test files.
- **tail -50 .backup_out.nn** (where 'n' can be 01 through to 10).
This will show you the last 50 lines of your chosen backup_out file.
- **exceptions_out.nn** (where 'n' can be 01 through to 10).
A listing of any tape failures and programs that could not be backed up will be stored in a file called .exceptions_out.nn
This is a useful file as it splits the output file and extracts all the errors.

Section 15

Troubleshooting

- **The backup completed successfully but has returned an error code.**
Refer to Section 5 (Page 25).
- **Invoices/Credit Notes were not printed.**
Refer to section 7 (Pages 36 - 38).
- **None of (not all) the Invoices (or Credits Notes) were updated.**
Refer to Sections 6 & 7 (Pages 29 - 38).
- **The backup always needs two tapes.**
Contact BML Support Services.
- **Cannot restore an individual file because a password is needed.**
Contact BML Support Services.

☞ **Note:** If, after rectifying the source of the error, you still encounter problems, please contact BML Support Services.

