



Information Release

Release date 14th June 2006

Implementing Machine Upgrades

This document must be used as a guide to implement new machine installations where we are performing a 'lift and shift' scenario.

This document will explain what steps must be taken in order to migrate the data and programs from the customers existing platform to their new platform.

Firstly the CSS must establish if the upgrade is a 'lift and shift' upgrade

To qualify as a 'lift and shift' upgrade we must be able to move the data and programs from one machine onto the other.

This means that the program versions installed on the 2 machines have to be the same. In order to clarify this, contact the relevant applications support department for guidance. Ensure that the programs and if applicable Cobol are to remain unchanged.

If the program versions are changing then a member of Professional Services should be involved in the implementation, please contact Professional Services and arrange a schedule.

Please follow the relevant section to implement the application.

1. Charisma sites

It is important to remember that when logging into Charisma when the programs are a different version from that of the data it will automatically update the data to that release. Ensure that the correct versions of the programs are installed before logging into Charisma.

1.1 On the old server

Save data using relevant save command

1.2 On the new server

Install Loader cd

Login to root and mount the CD as /cdrom:

Refer to the relevant Operating System FECO for instructions on how to do this.

Copy the following files to the system: -

```
#cp ▼ /cdrom/loader ▼ . <cr>          (Note the dot)
```

```
#cp ▼ /cdrom/loader.inf ▼ . <cr>
```

***NB** For Linux system only perform the following:*

```
#cp ▼ /cdrom/qterm ▼ /usr/local/bin <cr>
```

Run the loader script: -

```
#!/loader <cr>
```

Enter 'c' to continue at the copyright screen and then follow the on screen prompts.

When prompted enter and confirm the Cobol password; this should be the same as the **root password** as set when the Operating System was installed

The following menu will then be displayed: -

Application Server License Administration System - AppTrack

1. *License List*
2. *License Summary*
3. *License Install*
4. *License Uninstall*

5. *Change/Set Password*
 6. *Reinitialize Licensing*
 7. *Current Users*
 9. *Quit*
- Enter the Menu Selection*

Select option '3' to install a license and enter the license code from the Cobol license information, this is usually on the CD sleeve. Make sure when entering the license number you leave spaces (if appropriate) e.g. **03040 ▼ 10000 ▼ AA8AD ▼ 47B0E ▼ 751B**

Once you have entered the license, you can check it is installed properly by selecting option 1 to list the licenses. If the license is OK select option 9 to quit

After the installation, unmount and remove the CD: -

```
#umount ▼ /cdrom <cr>
```

To enter Charisma login as **bml**, to exit enter **exit** at the tty prompt

1.3 ON OLD MACHINE

Firstly set up the trusted links between the old and new machines

Log on to the old machine then go Super user

```
(bml)-tty72:su <cr>
Password
```

```
# vi ▼ /etc/hosts <cr>
```

Enter the ip addresses of old and new machines and amend the file so it has "oldmachine" and "newmachine" at the end of each relevant entry in the /etc/hosts file as displayed below

```
# @(#) $Id: hosts,v 1.2 1994/12/04 22:55:10 stevea Exp $
#   SCCS IDENTIFICATION
#
# Internet hosts
#
```

```
127.0.0.1    localhost me
192.168.1.2  oldmachine powertool
#
192.168.1.1  newmachine dell2500
~
~
~
"/etc/hosts" [Read only] 9 lines, 173 characters
```

To save the changes use: - Esc :wq! This will save quit and force the save as the file is Read only.

You will also need to amend the /etc/hosts.equiv this is so the system will automatically login to the new machine

```
# vi ▼ /etc/hosts.equiv <cr>
```

You may have to add localhost as well and the normal login, into this file, as displayed below, again you will have to use Esc :wq! to save the changes

```
localhost
+ bml
~
~
"/etc/hosts.equiv" [Read only] 1 line, 10 characters
```

1.4 ON NEW MACHINE

To complete setting up the trusted links the same now needs to be done on the new machine, the /etc/hosts and /etc/hosts.equiv files however may look slightly different.

Login to the new machine and go super user

```
(bml)-tty72:su <cr>
Password
```

```
# vi ▼ /etc/hosts.equiv <cr>
```

```
localhost
+ bml
~
~
~
~
~
~
~
~
~
~
"/etc/hosts.equiv" [New file] 2 lines, 16 characters

# vi /etc/hosts <cr>

# Internet host table
#
127.0.0.1    localhost
#
192.168.1.2  oldmachine powertool
#
192.168.1.253 jscardiff1
192.168.1.254 rlocalbridge
#
192.168.2.254 rbridge
192.168.2.253 jsbridgend1
192.168.1.1  newmachine dell2500
~
~
~
~
"/etc/hosts" [Read only] 15 lines, 395 characters
```

To check the trusted link between the old and new machines on the new machine at a tty prompt enter the following:

```
(bml)-tty72:rlogin ▼ oldmachine ▼-l ▼bml <cr>
```

If the connection can be trusted this will log you straight into the oldmachine, if it doesn't you need to amend the following in the bml home directory on the **OLD machine**: -

```
(bml)-tty72:vi ▼ .rhosts <cr>
```

Insert the following: -

```
newmachine bml
```

```
~  
~  
~  
~
```

```
".rhosts" [New file]
```

Save the file then run the following:-

```
(bml)-tty72:chmod ▼ 600 ▼ .rhosts <cr>
```

Back on the **NEW machine** re run the following to check the trusted link

```
(bml)-tty72:rlogin ▼ oldmachine ▼ -l ▼ bml <cr>
```

1.5 Transferring customer data

Before initiating a transfer of the customers data both servers must be in a quiescent state. Ensure this is the case before continuing.

Firstly ensure that you are on the new machine.

To start the copy of data from the old machine to the new machine, enter the following command:- (the 'no' at the end tells remoteCopy to copy the data only; you should always use an installchar tape to license the software and to copy the correct version of charisma onto the new machine).

```
(bml)-tty72:remoteCopy ▼ oldmachine ▼ no <cr>
```

The screen will display the following information:-

```
Using 'remsh' to copy files.
```

```
Tue Feb 11 16:22:18 EST 2003:Getting directory structure from oldmachine
```

```
0
```

```
?
```

```
Tue Feb 11 16:22:19 EST 2003:Removing ALL local charisma data directories &
```

```

recg
+ rm -r /charisma1/data/bml/SL
+ mkdir -p /charisma1/data/bml/SL
+ rm -r /charisma1/data/bml/SK
+ mkdir -p /charisma1/data/bml/SK
+ rm -r /charisma1/data/bml/NL
+ mkdir -p /charisma1/data/bml/NL
+ rm -r /charisma1/data/bml/PL
+ mkdir -p /charisma1/data/bml/PL
+ rm -r /charisma1/data/bml/PR
+ mkdir -p /charisma1/data/bml/PR
+ rm -r /charisma1/data/bml/LF
+ mkdir -p /charisma1/data/bml/LF
+ rm -r /charisma1/data/bml/char_ff5
rm: /charisma1/data/bml/char_ff5/.stdnew/SUPPQUOT: 440 mode. Remove (y/n)?
+ mkdir -p /charisma1/data/bml/char_ff5
+ rm -r /charspooler/bml/SPL
+ mkdir -p /charspooler/bml/SPL
+ rm -r /charisma1/data/bml/MENUS
+ mkdir -p /charisma1/data/bml/MENUS
+ rm -r /charisma1/data/bml/ZX
/charisma1/data/bml/ZX: No such file or directory
+ mkdir -p /charisma1/data/bml/ZX
+ rm -r /charisma1/users/bml/iq3
+ mkdir -p /charisma1/users/bml/iq3

Tue Feb 11 16:23:24 EST 2003:Copying charisma data directories from oldmachine
Tue Feb 11 16:23:24 EST 2003:Copying remote directory SL ->
/charisma1/data/bmlL
oldmachine:
Tue Feb 11 16:23:24 EST 2003:Copying remote directory SK ->
/charisma1/data/bmlK
oldmachine:
Tue Feb 11 16:23:24 EST 2003:Copying remote directory NL ->
/charisma1/data/bmlL
oldmachine:
Tue Feb 11 16:23:24 EST 2003:Copying remote directory PL ->
/charisma1/data/bmlL
oldmachine:
Tue Feb 11 16:23:24 EST 2003:Copying remote directory PR ->
/charisma1/data/bmlR
oldmachine:
Tue Feb 11 16:23:24 EST 2003:Copying remote directory LF ->
/charisma1/data/bmlF
oldmachine:
Tue Feb 11 16:23:24 EST 2003:Copying remote directory SPL ->
/charspooler/bml/SL
oldmachine:
Tue Feb 11 16:23:24 EST 2003:Copying remote directory MENUS ->
/charisma1/data/S
oldmachine:
Tue Feb 11 16:23:24 EST 2003:Copying remote directory ZX ->
/charisma1/data/bmlX
oldmachine:
Tue Feb 11 16:23:24 EST 2003:Copying remote directory char_ff5 ->

```

```
/charisma1/da5
oldmachine:
Tue Feb 11 16:23:24 EST 2003:Copying remote directory iq3 ->
/charisma1/users/b3
oldmachine:
Tue Feb 11 16:23:24 EST 2003:Copying conversion files
```

This should copy all the contents in the relevant data paths from the old server to the new server.

Check the data path variables in the .profile and ensure that all directories/data have been copied across, compare the old machine to the new machine to ensure that the same directories have been copied, if they haven't then copy them across manually using rcp.

i.e

```
(bml)-tty72: rcp -r oldmachine:/charisma1/data/bml/ZX
/charisma1/data/bml/ZX
```

Typical data path variables will be as follows (however each customer could have different data paths so this is only an example):

```
dd_PATH=/charisma1/data/bml ; export dd_PATH
dd_SPOOLER=/charspooler ; export dd_SPOOLER
dd_SL=/charisma1/data/bml/SL ; export dd_SL
dd_SK=/charisma1/data/bml/SK ; export dd_SK
dd_PL=/charisma1/data/bml/PL ; export dd_PL
dd_NL=/charisma1/data/bml/NL ; export dd_NL
dd_LF=/charisma1/data/bml/LF ; export dd_LF
dd_PR=/charisma1/data/bml/PR ; export dd_PR
dd_OH=/charisma1/data/bml/OH ; export dd_OH
dd_TS=/charisma1/data/bml/TS ; export dd_TS
dd EDI=/charisma1/data/bml/EDI ; export dd EDI
dd_FF=/charisma1/data/bml/char_ff5 ; export dd_FF
dd_char_ff5=/charisma1/data/bml/char_ff5 ; export dd_char_ff5
dd_FAX=/charisma1/data/bml/FAX ; export dd_FAX
dd_BA=/charisma1/data/bml/BA ; export dd_BA
dd_BC=/charisma1/data/bml/BC ; export dd_BC
dd_BACKUP=/charisma1/data/bml/BACKUP ; export dd_BACKUP
dd_MAUDIT=/charisma1/data/bml/MAUDIT ; export dd_MAUDIT
dd_MENU=/charisma1/data/bml/MENUS ; export dd_MENU
dd_ERRLOG=/charisma1/data/bml/ERRLOG ; export dd_ERRLOG
dd_SF=/charspooler/bml/SF ; export dd_SF
dd_SPL=/charspooler/bml/SPL ; export dd_SPL
dd_TTY="<bmltty" ; export dd_TTY
```

```
dd_QDG=/charisma1/data/bml/QDG ; export dd_QDG
dd_ZX=/charisma1/data/bml/ZX ; export dd_ZX
```

NB If the device name for the tape drive and/or printer have changed from the original device name, then the variable for \$SAVETAPE and/or \$SAVEPRT need to be amended in the .profile. \$SAVETAPESIZE should be set to the size of the compressed backup device on the new machine in 1k blocks.

i.e 8GB tape drive should be set to 8192000

1.6 Transfer files from old server

Transfer .Configs from the old machine

```
(bml)-tty72:cd
```

```
(bml)-tty72:mv ▼.Configs▼ .Configs.orig
```

```
(bml)-tty72:rcp ▼oldmachine:.Configs ▼.      (Note the dot)
```

1.7 Check file permissions

Once the copying has completed check the file permissions, if necessary amend them. To do this list each directory e.g. `ls -l ▼ $dd_SL ▼ |pg`, file permissions must = `rwX-rw-r`
To modify file permissions use the `chmod` command as follows:-

```
#chmod ▼-R ▼764▼$dd_SL (for the SL directory)
```

This is to be done for the SL SK NL PL MENUS LF SPL directories.

1.8 Removing Charisma Lock

When `remoteCopy` is run, it will prevent users from logging into Charisma, on the old machine. So once the procedure has completed, you will need to run the following command, on the old machine in order to clear the lock

```
(bml)-tty72: touch ▼ $dd_NL/.key <cr>
```

1.9 Cobol Change

If a new version of Cobol has been installed as part of the Loader then the following process must be followed.

```
(bml)-tty72:cd $COBDIR
```

Go super user

```
(bml)-tty72:su <cr>
```

Password:

At the hash prompt change to the bin directory as below

```
# cd ▼bin
```

Enter the command as displayed below to ensure the correct path is being used for the COBOL

```
# LD_LIBRARY_PATH=$COBDIR/lib;export LD_LIBRARY_PATH <cr>
```

Once the above command has been run you are now ready to amend the COBOL setting, double check that you are still running as super user. Enter at the hash prompt enter : -

```
./adiscf
```

```
# ./adiscf <cr>
```

Hit F2 to alter.

```
ADISCF----Default-Configuration-----Ins-Caps-Num-Scroll  
F1=Help F2=Alter F3=Load F4=Save F5=Delete F6=Choose Escape
```

Hit F3 for Accept/Display Options

```
ADISCF----Alter-Configuration-----Ins-Caps-Num-Scroll  
F1=Help F2=Crt-Under Highlighting F3=Accept/Display Options F4=Tab Stops  
F5=Indicators F6=Messages F7=Positions F8=Key Control Escape
```

Hi F3 for Individual Options

```
ADISCF----Alter-Accept/Display-Options-----Ins-Caps-Num-Scroll  
F1=Help F2=All Options F3=Individual Options Escape
```

Enter 14 and <CR> for Accepts into non-edited numeric fields (may possible be option 13 check the descriptions)

Number Name

-
- 1 User function keys enable/disable
 - 2 Range of data keys accepted
 - 3 Prompt character
 - 4 Prompt character used in PIC N and PIC G fields
 - 5 Pre-display of fields before an accept
 - 6 Accept in a SECURE field
 - 7 Auto-skip between fields
 - 8 Termination of an accept
 - 9 Validation control if accept is terminated by a function key
 - 10 End of field effects
 - 11 Field overflow buffers enable/disable
 - 12 Auto-restore during backspace in replacement editing mode
 - 13 Accepts into numeric edited fields
 - 14 Accepts into non-edited numeric fields
 - 15 Enable/Disable auto-clear or pre-clear
 - 16 Force field to be updated if it is not altered
 - 17 Remembering where the end of the field is
-

ADISCF----Alter-Individual-Options-----Ins-Caps-Num-Scroll
 F1=Help F2=Next Page Up=Up List Down=Down List Enter=Select Escape
 Select option using cursor keys or enter number [14]

Enter 3 <CR> for Process free format
 Control of non-edited numeric [PIC S9(m)V9(n)] fields.

Possible options are :

- 1 : Unsigned and embedded signed non-edited numeric fields with a V in their picture are treated as though they were specified by two adjacent, unsigned, simple numeric fields, that is PIC 9(m) followed by PIC 9(n).

For fields with separate signs, the V is ignored and they are treated as if specified as PIC S9(m + n).

- 2 : As for option 1, except that all fields with a V in their pictures are treated as if specified as PIC S9(m + n).

- 3 : All non-edited numeric fields are processed free format, that is, as alphanumeric fields.

Enter option required [3]

ADISCF----Alter-Individual-Options-----Ins-Caps-Num-Scroll
F1=Help

Hit the ESC Key three times

Then Hi F4 to save

ADISCF----Default-Configuration-----Ins-Caps-Num-Scroll
F1=Help F2=Alter F3=Load F4=Save F5=Delete F6=Choose Escape

Hit F3 to over write existing Configuration

ADISCF----Save-----Ins-Caps-Num-Scroll
F1=Help F2=New Configuration F3=Overwrite Existing Configuration Escape

Enter 1 and <CR> for the Default Configuration

Number Name

-
- 1 Default Configuration
 - 2 IBM V1.0 Compatibility
 - 3 RM COBOL 2.0 Compatibility
 - 4 DG ICOBOL Compatibility
 - 5 Microsoft V2 Compatibility

ADISCF----Overwrite-Configuration-----Ins-Caps-Num-Scroll
F1=Help Up=Up List Down=Down List Enter=Select Configuration Escape
Select configuration using cursor keys or enter number [1]

Hit ESC to end

1.10 Install program cd (if applicable to upgrade/downgrade programs from loader revision).

To load the latest version of installchar onto the computer system from the update received, login to bml and enter the following at the command line (-tty prompt):

(bml)-tty72:**cd** <cr>

(bml)-tty72:**mountCD** <cr>

(bml)-tty72:**cp** ▼ /**cdrom/installchar** ▼ . <cr> (after .../installchar there is a space & full stop)

(bml)-tty72:**installchar** <cr>

installchar begins by extracting from the update tape / CD, the latest version of 'Install'.

During the upgrade a log is created of the various phases with information relevant to BML should a problem occur. This log is faxed to BML when the script terminates, either normally or abnormally. To ensure that if a difficulty arises it can be quickly resolved, the upgrade requires the name of the person who is performing this function as a point of reference. The upgrade requests this information by asking:

What is your name:

Enter your name at this prompt.

The upgrade prompts for the entering of the tape/cd device being used. The default device name is displayed for reference.

Please enter the tape/cd archive device, for cd-rom, just enter CD

The default is the one used by your savefiles -

Return for the default - (listed if found)

Entry of 'Q' at this point will exit the upgrade.

An invalid tape device name will stop the upgrade with the message:
not a Tape Drive!

When the tape device is successfully read from, the upgrade continues, displaying the message:

Checking Tape.....

Extracting Install(*)

If the latest version of Install is successfully extracted, the upgrade continues, displaying the message:

Extracted Install(*) successfully

installchar will then automatically run the Install script extracted from the tape / CD.

Phase 1

The Install script will display the terms and conditions related to the update about to take place:

Charisma update installation

WARNING: The BML CHARISMA Software Product is protected by copyright law and international treaties.

You may install BML CHARISMA on a single computer. Additional user rights are detailed in the BML Program Products Licence included with the software product.

Please read the BML Program Products Licence. It contains all of the terms and conditions that pertain to the Charisma software product. By choosing to continue, you indicate that you accept these terms and conditions.

Please type C to continue, or Q to Quit

If you agree with the terms and conditions enter 'C' to continue with the update.

If you disagree with the terms and conditions you can exit from the upgrade by entering 'Q'. The upgrade will display the message 'Aborted.' and return to the UNIX prompt.

If continuing with the update, the following information message is displayed:

During this installation you will be prompted for various tapes and/or CD-ROM.

You will need to have the following ready:

1. Charisma update tape/CD-ROM (containing Install and Charisma programs)
2. Savefiles tape (for storing Charisma datafiles backup)
3. Program backup tape (for storing Old Charisma version backup)
4. 2nd Program backup tape (for storing New Charisma version backup)

NOTE: Please leave tapes in the drive until prompted to remove.

Loading updated install script and info.

x Install(*), 126006 bytes, 247 media blocks.

x Update_Info, 515 bytes, 2 media blocks.

x Conversions, 4023 bytes, 8 media blocks.

The Install script will display all the information relevant to the update about to take place:

Machine and O/S details

Source machine : {source machine}

Source user : {source user}
Source directory : {source directory}
Version : {new version}
Date : {new date}
Copy type : {copy type}
Tape format : {tape format}
Size : {new size}
Cobol : {new cobol}
Iq data dict : {iq data}
Machine and O/S : {machine}
Old Charisma : {old size} Blocks
New Charisma : {new size} Blocks
Space needed : {needed} Blocks
Free space : {freespace} Blocks
Current version : {current version}
COBOL version : {cobol version}

If the versions of COBOL on the tape/CD and on the computer system are different the following message is displayed:

COBOL version on Update is not the same as the version currently running on this machine, is this ok:

This message is informational only and an entry of 'Y' will ignore it and Install will continue.

If 'N' is entered Install stops after displaying the following message:

A Check was made on version of COBOL run time you are currently running, and this was found to be different to the one needed for this update. Call BML support

If the version of CHARISMA on the computer system and the version on the update tape/CD are the same, the following message will be displayed:

The version of Charisma on the tape/CD is the same as the version currently running on this machine, is this ok:

This message is informational only and an entry of 'Y' will ignore it and Install will continue.

If 'N' is entered Install stops after displaying the following message:

A Check was made on the version of Charisma you are currently running and was found to be the same version as the update tape/CD. If you are expecting to update versions, for example, if you are currently on v8.2.26 and are expecting v9.1.xx, this is incorrect. If, however, you are just expecting an upgrade of your current version, re run Install and next time answer yes to the "Is this ok" question when this error appears.

If these are not displayed, the following will appear:

Press Return

The system will pause so the details can be read, then press RETURN to continue.

Phase 2

The Install script must have sole use of the system. To ensure that this is the case a check is made to see if any CHARISMA users are logged on or if there are any background processes running (such as reports or a scheduler).

If any users are logged on the following message appears:

There are processes currently running that appear to be Charisma processes. Please ensure everyone is logged off and all background tasks are either completed or killed (this includes the scheduler, which will be killed anyway if you continue)

Do you want to continue y/n:

To manually stop users, enter 'N' to this question, to automatically 'kill' the process and continue, enter 'Y'. If 'Y' is entered and the update cannot automatically 'kill' any processes necessary then one of the following two messages will appear. In these cases it is advised that you call your BML Support Team for assistance.

The installation can't take place if there are any COBOL processes running. Ensure everybody is logged off, all background reports are killed and the scheduler is killed. Rerun Install. If problems still occur call BML support.

The installation can't take place if the scheduler is running.

This was found to be the case and Install attempted to kill them, but failed. Call BML support.

Phase 3

When the Install has successfully ascertained that no other processes are running, a check is performed to see if any file conversions are required and if the amount of disk space available is adequate.

Checking if conversions need to be run

If there is anything to convert, each file is reported as a list on the screen. A message line appears with the relevant details:

Need to run {program name} *to convert* {file to be converted}

When the complete list of files has been displayed enter RETURN to continue. A check is made to ensure that the largest file for conversion has enough disk space available. While the files are being checked a series of informational messages appear:

Check for largest datafile:

Looking for files

Now getting sizes

If there is **not enough** disk space available, the following message is displayed:

Largest file found was {filename} at {number} bytes

This equates to {number} blocks. You have {number} blocks of free space in the SF directory, this means that there might not be enough space to run a Charisma file conversion. Before proceeding with this conversion, please clear some space .

1.11 Customer Checks

Advise the customer the data copy has completed and ask them to log into Charisma and check their data integrity. They should do this by comparing to the data on the oldmachine. If the data is not identical then the customer must advise BML so any data discrepancies can be investigated. Ask the customer to test all aspects of the application

1.12 Charisma Checks

Call Charisma support and ask them to approve the installation, Charisma support or a Charisma implementor will then access the new server and check that all aspects of the Charisma installation have been successfully completed.

2. Merchant Sites

2.1 On the old server

Perform the following from SYSPROG to a tape device:

```
>FILE-SAVE <cr>
```

2.2 On the new server

If a different version of UniVision has been installed then perform the following from

SYSPROG:

Insert the FILE-SAVE tape, select the relevant tape drive and:

>**ADD-ACCOUNTS** <cr>

Once complete Login to SYSPROG and take option 4 Upgrade all Accounts

Select **all** for ACCOUNT name and select **NO** to recompile.

2.3 Merchant Account MD Changes

Then Instruct the Customer to action the following from UCL in each of their Merchant accounts including the test account (Only if ADD-ACCOUNTS performed):

>**CREATE.LOGGER.VERB** <cr>

>**COPY ▼ MD ▼ SI ▼ SI (O** <cr> (where O = Overwrite)
TO:**DI ▼ DO** <cr>

2.4 Same Version of UniVision

If the same version of UniVision is installed on the new server then perform the following from SYSPROG:

Insert the FILE-SAVE tape, select the relevant tape drive and:

>:**FILELOAD** <cr>

2.5 Customer Checks

Advise the customer the data copy has completed and ask them to log into Merchant and check their data integrity. They should do this by comparing to the data on the oldserver. If the data is not identical then the customer must advise BML so any data discrepancies can be investigated. Ask the customer to test all aspects of the application

2.6 Merchant Checks

Call Merchant support and ask them to approve the installation, Merchant support or a

Merchant implementor will then access the new server and check that all aspects of the Merchant installation have been successfully completed.