



CDMaker

iSeries CD-ROM Premastering Utility

Version 2 Release 0

January, 2023

CDMaker

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<http://www.navan.co.uk>

VERSION 2 RELEASE 0

This edition applies to Version 2 Release 0 of the CDMaker Program Product.

Unless otherwise stated, all pages in this edition are to Version 2, Release 0 and refer to the iSeries Operating System OS/400, Version 7.1 or greater.

CDMaker Version 2 Release 0 is certified to be operationally compliant with i5/OS V7R5.

Any references in this manual to Navan Utilities or NUTIL refer to standard Navan Utility products.

Information on these products can be obtained from your nearest Navan agent.

CDMaker – CD-ROM Premastering utility for iSeries

Welcome to **CDMaker**, the Navan utility that enables you to create iSeries CD-ROM disks for distributing your applications to other iSeries machines.

Hardware and Software Pre-Requisites

The CDMaker software will create the *saved image* files necessary for you to distribute your applications on CD-ROM disks, but there are additional things you need to have in order to complete the process of making your CD-ROM distribution disk. These are:

- A CD-R writer, attached to a PC
- Suitable PC software (e.g. UltraISO, Roxio Easy Media Creator, Nero, Easy CD Pro or similar) that allows you to write to CD-ROM disks. This software usually supplied with your CD-R writer drive.
- A file transfer program that can transfer files from the iSeries to a PC (e.g. an FTP client, IBM iSeries Access, Netsoft Router, Rumba or similar).

The work involved in creating a CD-ROM is not much more complicated than preparing a tape to distribute your software. In fact you actually go through the normal process of creating a tape in order to build your CD-ROM *saved image* data.

Product Limitations

CDMaker works well with most requirements for distributing your user applications and data. Some limitations do exist, however, when it comes to the distribution of the iSeries operating system, or iSeries licensed programs.

CDMaker supports the SAVLICPGM command, although you need to make sure you specify the correct 'work file naming method' on the NENDCDM command. Refer to the appropriate topic later in the manual for further details.

CDMaker does not support the SAVSYS command, the SAVSTG command, or the 'create a distribution tape' option on the GO LICPGM menu.

Installation Procedures

General

Please read this section of the document thoroughly before commencing the installation of CDMaker.

All steps in this installation guide must be performed using the System Security Officer user profile, or by using a user profile assigned *ALLOBJ special authority.

Certain programs in CDMaker adopt authority when in use. This authority adoption must be retained if the system is to operate as intended.

Installing CDMaker

The tape/savefiles supplied contain a complete (replacement) CDMaker library and can be installed automatically. If you already have an old version of CDMaker on your iSeries, your data will be loaded from the old version into your new version, by the installation command. Installation is performed as follows:

1. If already installed, ensure that no users are using any CDMaker functions. No CD-ROM premastering activity is allowed whilst this installation is being performed.
2. Sign on as the System Security Officer QSECOFR, or as a user profile that has *ALLOBJ special authority. This installation MUST be performed by a user with *ALLOBJ authority for all programs to function as designed.
3. If the CDMAKER library is in your library list, remove it:

```
RMVLIBLE CDMAKER
```

4. Save a copy of your existing version of the CDMAKER library (if you have it already installed):

```
SAVLIB LIB(CDMAKER) ...
```

You are now ready to commence the installation. The installation routine can be run using either a CD-ROM disk, a tape, or from savefile objects:

**** IF YOU ARE INSTALLING FROM CD-ROM DISK ****

5(CD). Load the supplied CD-ROM disk into the iSeries CD drive and install the new version of the CDMAKER program product library using the LODRUN command:

```
LODRUN DEV(*OPT)
```

The supplied CD can also be used to extract all CDMAKER documentation. Documentation is stored in the \DOCS directory of the CD and can be accessed using the CD-ROM drive of your PC.

**** IF YOU ARE INSTALLING FROM TAPE ****

5(tape). Load the supplied tape onto the tape drive and install the new version of the CDMAKER program product library using the LODRUN command:

```
LODRUN DEV(TAP01)
```

If you are using a tape device other than TAP01, alter the DEvice parameter in the above command accordingly.

**** IF YOU ARE INSTALLING FROM SAVEFILES ****

5(savf). You should have a library called NAVANSAV on your system, which contains the following objects:

QINSTCDM	The installation program
CDMAKERSV	Save file containing the CDMaker library objects
CMDTAARASV	Save file containing the CDMaker data area

Install the new version of the CDMAKER program product library using the installation program:

```
CALL PGM(NAVANSAV/QINSTCDM) PARM(*SAVF)
```

A pre-check will be made to ensure the objects specified above exist. If they do not, an error message will be sent and the program will end.

6. The procedure will then install CDMaker. At the completion of the procedure you should receive the message

'CDMaker installation procedure completed successfully'

If you do not get this message, the installation procedure was processed incorrectly. You can determine the cause of the error by reviewing the low-level messages for the job. If you cannot resolve the problem, you should contact your CDMaker support representative. You will not be able to continue the installation of this version of CDMaker and you should reinstall your old version of the CDMaker library (if you have them).

**** IF YOU ARE INSTALLING FROM A WEBSITE DOWNLOAD ****

If you have downloaded the product from the Navan website (or an associated website) then the installation instructions are supplied with the download.

The downloaded product is a complete replacement product; if you already have CDMaker installed on your iSeries you must first delete the old CDMAKER library before installing (restoring) the new version on to your machine.

CD-ROM Premastering

Premastering on the iSeries is the process of creating a specially formatted work tape that can be used as input to generate a CD-ROM. The tape contains the data, which can later be used to create a CD-ROM image that can be read on a CD-ROM drive. There are three main stages in premastering:

- Start your mastering session.

The NSTRCDM command puts your job in a premastering state. When the job is in this state, all save operations (SAVOBJ, SAVLIB, SAVLICPGM, SAV, SAVDLO, SAVSYS, and so on) result in information being stored about the sizes of these tape files. Also, while in this state the *SAVRST (save/restore) format of the data written to tape is changed slightly to allow it to be restored from the CD-ROM.

- Perform the required save operations

Once the premastering session is started you can then perform the save commands you normally use to build your software distribution tape.

- End your mastering session.

The NENDCDM command takes your job out of a premastering state. Once that is done it will then re-read your work tape to build the *save image* files that will be used to create the CD-ROM. These files are then transferred (as binary image files) to your PC so that, finally, the PC files are then written to the CD-ROM disk using your CD-R writer and its accompanying software.

Starting your premastering session

The NSTRCDM command puts your job in a premastering state. When the job is in this state, all save operations (SAVOBJ, SAVLIB, SAVLICPGM, SAV, SAVDLO, SAVSYS, and so on) result in information being stored about the sizes of these tape files.

Working in the premastering state

Once the job is in the premastering state, all save operations (SAVOBJ, SAVLIB, SAVLICPGM, SAV, SAVDLO, SAVSYS, SAVS36F and so on) to the designated tape drive are intercepted internally and information is stored away about the tape files that are written to the work tape. This internally stored data is later used by the NENDCDM command to build a *distribution set mapping file* which informs the iSeries of the contents of the CD-ROM when it is later being used to install your iSeries applications.

While in this state, the format of the data written to tape is changed slightly to allow it to be restored from the CD-ROM. As such, the contents of the tape will be unusable after the premastering session ends.

Because of file transfer limitations, you must observe the following on all save operations performed within the premastering session:

- You must ensure that there is no data compaction or compression performed to tape. This means the save commands you use must have parameter DTACPR (data compression) set to *NO and COMPACT (data compaction) set to *NO.
- The default block size must be used by the save commands. The USEOPTBLK (use optimum blocking) parameter must also be set to *NO.

You should also note the following:

Whilst your job is in the premastering state, any tape-write error protection you may have is turned off during the save operations

If you use the SAVSYS command from within the premastering session, there will be additional files automatically written to the tape that are required for a CD-ROM copy of the SAVSYS data. These additional files will be reported in the list that is printed when you end the premastering session.

Ending your premastering session

The premastering state of your job is ended when one of two things happen:

- You use the NENDCDM command to end your premastering session
- You end your job. By default this ends the premastering session and destroys the internally stored data about the premastering session.

If you specify NENDCDM with the OPTION parameter set to *BUILD the following will then happen:

- Your job will be taken out of a premastering state
- The work area (library or IFS path) you specify (on the NENDCDM command) will be created
- The internally stored data (relating to the save functions that were performed to your work tape) will be converted into a *distribution set map* file. This file is named QDSETMAP and will be created in the work area. The contents of this file are not readable on the iSeries.
- The tape will then rewind and each tape file label will then be read and the contents of each tape file converted into a *database saved image* file in the work area (one file per tape label). The contents of these *saved image* files are not readable on the iSeries.
- A report will be printed showing you a list of the files that must be transferred to your PC. It also shows whether the file should be renamed (on the PC) before being written to the CD-ROM disk.
- The tape will then be re-initialised to remove the work contents of the tape

If you specify NENDCDM with the option parameter set to *CLOSE, the following will happen:

- Your job will be taken out of a premastering state
- The internally stored data (relating to the save functions that were performed to your work tape) will be destroyed.
- The tape will then be re-initialised to remove the work contents of the tape

Transferring the files in the work area to your PC

Using the 'premastering information' list created from the NENDCDM command you must now transfer all of the *saved image* files plus the QDSETMAP file, as listed in the report, from the work area up to your PC.

The method of transfer is not important, but you must ensure that your transfer program does not alter it in any way. No translation or conversion of the file is allowed. If you are using FTP to transfer the file you must specify a BINary mode transfer to ensure no transformation or conversion is attempted during the copy.

Transferring tape image files from a *LIB work area

To upload the Tape Image files from the work area to your PC by FTP you would start an FTP session on your PC command line (in Windows this can be done from an MS DOS command prompt box):

```
ftp iSeries_hostname

your_userid    (when prompted for it)
your_password  (when prompted for it)

cd iSeries_work area library_name
lcd PC_folder_name

bin

get qdsetmap
get tape_image_file_name(s)

close
quit
exit
```

Transferring tape image files from an *IFS work area

If your iSeries IFS is accessible as a network drive you have many options available to you for transferring the Tape Image files from the work area to your PC.

If you are transferring by FTP you would start an FTP session on your PC command line (in Windows this can be done from an MS DOS command prompt box):

```
ftp iSeries_hostname

your_userid    (when prompted for it)
your_password  (when prompted for it)

cd iSeries_work area IFS path name
lcd PC_folder_name

quote site namefmt 1
bin

get qdsetmap
get tape_image_file_name(s)

close
quit
```

exit

Referring to the Premastering Information Report that is produced by the NENDCDM command you should now make sure that all files are correctly named, using the *CD file label* name shown on the report. You must not alter the name of the file to anything else. You must not add any extension to the file name, unless one is shown on the report.

Once all of the listed files have been transferred to the PC and the names correctly set you can now start-up your PC software that is used to write CD-ROM disks.

The name of the CD-R volume is important; you must use the one shown on the report produced by the NENDCDM command. If you are creating a multi-volume set of CD's you must use a correctly sequenced volume ID number when naming your CD-ROM disk set, for example CDR001, CDR002, CDR003... and so on.

Write all of the files to the **root directory** of the CD, unless a path is shown on the report (in the *CD file label* column of the report). When writing the CD-R the sequence of the files on the CD is not important.

When performing a 'system type' save, such as SAVSYS or SAVLICPGM, the path shown on the premastering report is very important - you must specify the directory path exactly as shown on the report for the related restore command to work correctly.

Where you have saved a lot of data, the report may show that you need to create more than one CD to hold your files. If so you will see a number higher than 1 in the sequence field of the report. You must save the files to the correct sequence CD-ROM in a multi-volume set, as shown on the report. If you do not do this as shown on the report the iSeries CD-ROM drive will not be able to find the file.

Copying tape image files to the PC using Batch FTP

You can manually process the individual FTP subcommands by starting an FTP session via the DOS prompt in your PC and then entering the required subcommands to retrieve your Tape image files. A faster way is to use Windows notepad to create an “ftp script” file and then run that in FTP batch mode.

The ftp script file for uploading CDMaker tape image files takes the following form:

```
open iSeries_hostname
user userid password
cd iSeries_library_name or IFS path name
lcd PC_folder_name
quote site namefmt 1          (for IFS transfers only)
bin
get qdsetmap
mget TSI*
quit
```

The “open” subcommand tells FTP which iSeries to connect to

The “user” subcommand allows you to type in your user ID and password, separated by a space

The “cd “ subcommand allows you to specify the iSeries library name that contains the CDMaker take image files to retrieve

The “lcd” subcommand allows you to specify which PC folder to put the retrieved files in to

The “bin” subcommand sets FTP in to binary mode

The “quote” and *namefmt* subcommands tells FTP to use IFS file notation. Only use this when the NENDCDM BLDTYPE used was *IFS (not required for BLDTYPE *LIB)

The “get” subcommand retrieves the QDSETMAP file from the iSeries library specified

The “mget” subcommand gets all of the CDMaker tape image files from the iSeries library specified

The “quit” subcommand closes the FTP session.

You can then run this script by using the FTP command, as follows:

```
ftp -n -i -s:c:\temp\ftpscript.txt
```

The -n switch suppresses auto login upon initial connection

The -i switch turns off interactive prompting in the mget subcommand

The –s: switch specifies the ftp script file to use. You specify the ftp script file name after the colon.

Note that the mget FTP subcommand implementation on the iSeries has been developed to get multiple members in the files as well; so the file name you get on the PC will not be TSI0001, it will be TSI0001.TSI0001 (*file name.member name*). You can correct this by running the following DOS command after the FTP script has completed processing:

```
ren TSI*.* TSI*.
```

Example of batch FTP in action

As an example, take the following script file, which is named GetiSeriesData.txt and (for the purposes of this example) is stored in the C:\cdmaker folder on your PC:

```
open sydneydev
user gjensen happy
cd cdmwork
lcd cdmaker
bin
get qdsetmap
mget TSI*
quit
```

The script is then requested from the DOS command line:

```
ftp -n -i -s:c:\cdmaker\getiseriesdata.txt
```

FTP will then perform the script actions, which will log on to the iSeries named “sydneydev” using User ID “gjensen” and password “happy”. It will access the iSeries library named “cdmwork” and retrieve files to the PC folder named “C:\cdmaker”. Then, using binary format, it will get file QDSETMAP and all files named TSI*. Upon performing all task the FTP session will then close.

This DOS command can then be used to correct the Tape Image file names, by removing the member name:

```
ren TSI*.* TSI*.
```

Writing to the CD-ROM Disk

The formatting and layout of the CD-ROM disk you are creating is important to ensure smooth operation for the users of the disk you are creating.

You should initialise the CD-ROM volume ID's using the generated name shown on the premastering information report printed by the NENDCDM command. Do not use the default name (which is usually a generated name, made up based on the date and time the disk is being written).

The QDSEMAP file **must** reside in the root directory of the CD-ROM disk; the *saved image* files should reside in the directory shown on the premastering report, but this is not essential. If they are not saved in to the root directory then the RSTLIB or RSTOBJ command in your installation program must point to the correct path name, using the OPTFILE parameter on the relevant restore command. If they are in the root directory, the OPTFILE parameter of the relevant restore command can be left blank.

For a 'system save' type function, such as SAVSYS or SAVLICPGM, the files must reside in the directory shown on the premastering report for the relevant restore command to process them correctly.

For more information on this topic, please see '*General information on writing CD-ROM disks for use on an iSeries*' later in this manual.

The CDMaker main menu

The CDMaker commands can be entered directly from a normal iSeries command line (if the CDMAKER library is in your library list) but, if you prefer, they can also be accessed from the CDMaker main menu.

To access the menu, go to a command line entry screen, type GO CDMAKER/CDMAKER and press enter. You will then be shown the CDMaker main menu:

```
NCDM          CDMaker - the Navan CD-ROM premastering utility
Select one of the following:

Main menu options
  1. Start CD premastering session          NSTRCDM
  2. End CD premastering session          NENDCDM

Other options
  80. Display installation attributes      NC9000
  90. Sign off

Selection or command
====>

F3=Exit   F4=Prompt   F6=DSPMSG   F9=Retrieve   F12=Cancel   F14=WRKSBMJOB
F18=WRKSPLF

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```

NSTRCDM – Start CD-ROM premastering session

The Start CD-ROM premastering (NSTRCDM) command places your job in a *CD premastering* state. While in this state, any save operations that are performed to the specified tape drive will be intercepted and stored in a special format that is required for CD-ROM premastering.

Note: You must specify DTACPR(*NO) COMPACT(NO) USEOPTBLK(*NO) on all save operations to the premastering work tape. However, you may specify DTACPR(*YES) when saving to a save file, which can then be subsequently saved to tape using the SAVSAVFDTA command.

Tape device name (DEV)

Specifies the name of the tape device to be used for CD premastering. This is a required parameter.

Initialise tape (INZTAP)

Specifies whether the command should initialise the tape. An empty tape must be used for CD premastering.

The possible values are:

- *NO - The tape is already empty and does not require initialising.
- *YES - The tape is to be initialised.

Tape density (DENSITY)

Specifies the recording format of the data to be written on the tape. Allowable values can be seen by typing a '?' into the field and pressing enter. The default *DEVTYPE will initialise the tape based on the type of tape drive being used.

NENDCDM – End CD-ROM premastering session

The End CD premastering (NENDCDM) command takes your job out of CD premastering state. Refer to the section entitled '*Ending your premastering session*' earlier in this manual for a description of the functions performed by the command.

End option (ENDOPT)

Specifies how the command should end your CD premastering session. The possible values are:

- *BUILD - The CD premastering session is ended and the information stored about the data saved within the session is used to build the files necessary to create your CD-ROM.
- *CLOSE - The CD premastering session is ended and the information stored about the data saved within the session is destroyed.

Build Type (BLDTYPE)

For ENDOPT(*BUILD), this specifies the build method to be used when creating the files for your CD-ROM. The possible values are:

- *LIB - Files for your CD-ROM are created in a work library.
- *IFS - Files for your CD-ROM are created in an IFS folder.

CD mastering work library (CDMLIB)

For BLDTYPE(*LIB), this specifies the name of the library to create, which will be used as a work area to store the files containing the save images of the save operations you performed during your premastering session. The library must not currently exist on your iSeries; it will be created by this command.

CD mastering IFS work path (CDMPATH)

For BLDTYPE(*IFS), this specifies the path name of the IFS folder to create, which will be used as a work area to store the files containing the save images of the save operations you performed during your premastering session. The specified path must not currently exist in the IFS; it will be created by this command.

Work file naming method (NAMING)

Specifies how the work files containing the save images in the work library should be named. Regardless of the naming method used you *must* refer to the premastering report to determine the name of the file to be written to the CD-ROM. The possible values are:

- *SEQ - The work files are named TSI $nnnn$, where $nnnn$ is a sequential number starting at 1. The first label on the tape will be copied to work file TSI0001, the second to TSI0002 and so on.
- *TAPELBL - The work files are named based on the name of the data file on the tape (the tape label ID). If the tape label name exceeds 8 characters it will be truncated to create a valid work file name.

The 8 character restriction is because the iSeries CD-ROM drive supports only the ISO9660 file naming convention.

CD-ROM capacity in megabytes (CDRSIZ)

Specifies the size of the CD-ROM, in megabytes, that is to be used in your CD mastering. This information is used to calculate where the files will reside in a multi-volume CD-ROM set, if more than one CD-ROM will be needed to store your save images.

The possible values are:

*DFT - The default value of 650 megabytes is assumed.

CD-ROM size - Specify the size of the CD-ROM, in megabytes, that is to be used in your CD mastering.

Volume identifier prefix (CDRVOL)

Specifies the prefix of the volume identifier for the CD-ROM volumes. Each CD-ROM in the set will be assigned a unique volume identifier that starts with the value entered here.

The possible values are:

CDM00 - Each unique volume identifier will start with the prefix CDM00. So the first CD-ROM in the set will be labelled CDM001, the second will be labelled CDM002 and so on.

CD-ROM volume identifier prefix - Specify the prefix of the volume identifier to be used for the CD-ROM volumes.

Which work file naming method should I use?

It is important to use the correct work file naming method to ensure the data copy works correctly. As a general rule you should use the NAMING(*SEQ) method as this option will always work.

If you use NAMING(*TAPELBL) you must be sure that the tape labels will create valid work file names.

You *must not* use NAMING(*TAPELBL) if you are performing SAVSYS, SAVLICPGM or any other 'system save' type functions.

Appendix

Using CDMaker with Virtual Tape

Virtual tape is the same as Physical tape - except that you save to image files on disk instead of actually using physical tape media.

Virtual Tape image files (or “volumes”; the virtual equivalent of a physical tape cartridge) are stored in the IFS and are accessed via an Image Catalog (which is basically just an indexing object for keeping track of defined volumes).

Virtual Tape support is available from V5R4 of the i5/OS Operating System.

Configuring for Virtual Tape

First you need to create a virtual tape device:

```
CRTDEVTAP DEVD(TAPVRT01) RSRCTYPE(*VRT)
```

Once created, vary it on so that it is available for use:

```
VRYCFG CFGOBJ(TAPVRT01) CFGTYPE(*DEV) STATUS(*ON)
```

Now create a virtual tape image catalog to hold your virtual images:

```
CRTIMGCLG IMGCLG(VRRTAP) DIR('/vrttap') TYPE(*TAP) CRTDIR(*YES)
```

In this above example, virtual tape images created via the VRRTAP Image Catalog will be stored in the /vrttap folder in the IFS.

Then create at least one entry in the Image Catalog for the volume:

```
ADDIMGCLGE IMGCLG(VRRTAP) FROMFILE(*NEW) TOFILE(VOL001) VOLNAM(VOL001)  
ALCSTG(*MIN)
```

Finally, load the image catalog onto the virtual device:

```
LODIMGCLG IMGCLG(BACKUP1) DEV(TAPVRT01)
```

At this point, your Virtual Tape device is now ready to use.

Using Virtual tape

For CDMaker, you just specify your Virtual Tape device name on the NSTRCDM command, instead of a physical tape device:

```
NSTRCDM DEV(TAPVRT01)
```

and then CDMaker will run with Virtual tape instead of Physical tape. The image will be stored in the volume specified in the mounted image catalog entry.

Virtual tape housekeeping

Virtual Tape Images can consume large amounts of disk space, and the space allocated for each volume can be quite large. For this reason you should re-use existing volumes where possible, rather than creating new ones each time. If it is necessary to keep a specific volume you should consider saving it to a physical tape rather than having it consume disk storage.

If you need to save a volume to Physical tape you can use the Duplicate Tape (DUPTAP) command, which is option 14 on the WRKIMGCLGE (Work with Image Catalog Entries) work panel.

An important note is that using the INZTAP command with CLEAR(*YES) does not free the allocated volume disk space. The only correct way to reset the allocated disk space for a volume is as follows:

```
INZTAP CLEAR(*NO) ENDOPT(*UNLOAD)      - this un-mounts the virtual volume after the  
                                         initialization completes
```

```
CHGIMGCLGE ALCSTG(*MIN)                - this resets the allocated storage
```

It is strongly recommended that you perform all operations on the IFS Virtual Tape volume files via the Image Catalog Entry commands, and not directly via the Link commands. Failure to adhere to this may render your Image Catalog unusable.

Using the IBM LODRUN command to process your CD

The Load and Run Media Program (LODRUN) command restores a user-written program object (called QINSTAPP), from the device specified, into the library QTEMP. The job then transfers control to the restored program.

The user supplying the QINSTAPP program is responsible for writing and supporting it; the QINSTAPP program is not supplied by IBM or Navan. The program can be designed to accomplish many different tasks.

For example, it could:

- Restore and run other programs or applications
- Restore a library
- Delete another program or application
- Copy data between old and new versions of an application
- Create specific environments
- Apply fixes to existing applications
- Apply fixes to existing data

For a discussion of the IBM LODRUN command, and the requirements for writing and saving a QINSTAPP installation program, please refer to Chapter 6 of the CL Programming Guide manual, IBM book number SC41-5721-04. This book can be viewed at the online IBM *iSeries Information Center* website:

<http://publib.boulder.ibm.com/pubs/html/as400/onlinelib.htm>

CD writing software

As previously mentioned, most CD burner drives come supplied with software for burning your CD's; in most cases these are more than competent in burning AS/400 and iSeries compatible CD's. For reference purposes only, we can advise that we test using three products at Navan:

EZB Systems UltraISO <http://www.ezbsystems.com>

Roxio Easy Media Creator <http://www.roxio.com>

Nero BurningROM <http://www.nero.com>

And these three products more than meet our own needs for burning disks.

However, any comments within this document, relating to either these products or their developers, should be treated as "customer testimonials" only.

Using a QINSTAPP program to install applications from CD-ROM

The method of writing a QINSTAPP installation program for installing your applications does not change dramatically when you install from CD-ROM. The only additional requirement is that you must allow your program to perform a restore from the CD-ROM drive. This is usually configured as device name OPT01.

When the user loads the CD-ROM into the iSeries CD-ROM drive, they must wait for the drive light to stop flashing before attempting to start the installation.

To install from the CD-ROM, the user can then type in

```
LODRUN *OPT, or  
LODRUN optical_device_name, if the default CD-ROM drive is not being used.
```

Refer to the CL reference manual (CD-ROM book name QB3AUP01) for a description of the LODRUN command. This also includes information on how the QINSTAPP program should be designed and written and then saved onto the installation media.

Also refer to topic '*Loading and Running an application from Tapes or Diskettes*' in the CL Programming manual (CD-ROM book name QB3AUO01). This information equally applies to CD-ROM and includes a simple example of a QINSTAPP program.

If you have the Navan NUTIL program product library installed on your machine you can view a sample QINSTAPP model program in source file NUTIL/QSTUFF, member name QINSTAPP.

General information on writing CD-ROM disks for use on an iSeries

When creating CD-ROM disks for an iSeries you would normally follow the instructions that were supplied with your PC CD Writer drive hardware and accompanying software – the same rules that apply to a PC CD-ROM also apply to iSeries CD-ROM disks. Refer to the OS/400 Optical Support manual (CD-ROM book name QB3AL800) for full details of the iSeries CD-ROM drive.

If you use the Roxio Easy Media Creator software, do not use the DirectCD or Drag-To-Disc option (other products also have similar options). You should use the '*Create a Data CD for use on different types of computers*' option.

File names on the CD-ROM must follow the ISO9660 (old DOS) standard of file naming, which uses the 8.3 (8 characters for the file name, with a 3 character file type extension) naming format. This is because the CD-ROM drive on the iSeries only accepts that standard.

The iSeries save image work files can not have an extension specified, so therefore the file name should be a maximum of 8 characters long.

This work file name is automatically generated by the NENDCDM command based on the NAMING parameter of the command. If you specify NAMING(*TAPELBL) you should ensure that your tape labels do not exceed 8 characters in length.

The iSeries can not read a multisession, CD Plus, Enhanced CD or CD Extra CD-ROM disk. You must write your *Data only* disk in a single session and close the disk.

It is also recommended that you do not use CD-RW disks as these can not be read by older AS/400 and iSeries CD drives.

You can use the ISO9660 or JOLIET standard of data format when writing the disk, but the iSeries will still only read the standard 8.3 DOS file name regardless of the file name on the CD-ROM. If you have file names longer than 8 characters you may have trouble getting the iSeries to read them.

File names are not case sensitive. The QOPT file system on the iSeries will always convert lowercase characters in the file name to uppercase.

When writing data from your PC to the CD-ROM disk you should have as few applications as possible running on your PC at the same time. It is important that the CD-Writer hardware receives a constant, uninterrupted stream of data when writing the CD-ROM disk.

An interruption of any kind could ruin the CD-ROM disk that you are writing.

Business Contingency Planning

In the event of a serious failure of the CPU for which you have licensed this copy of CDMaker, it may be necessary to temporarily transfer your business processing to another CPU.

While it is not possible to temporarily transfer your CDMaker product license to another CPU, it is possible to temporarily run your copy of CDMaker on another machine. The way to do this is as follows:

Using your most recent backup copy of CDMaker, restore the library from your offline storage media onto the temporary CPU. Now type the following commands *exactly as shown* on a command line:

```
ADDLIBLE      LIB (CDMAKER)
CHGDTAARA    DTAARA (CDMAKER (17 8))  VALUE (*DCS)
```

Now type CALL NC9000 (menu option 80) and press *enter* to display the CDMaker Installation Attributes panel. Verify that there is no 'copyright violation' error message displayed, and that an expiry date 30 days from now has been established for this temporary copy.

CDMaker will now function correctly on the temporary CPU. Please note that this copy is installed as a demonstration version and is bound by the terms and conditions of a demonstration version as explained in your license agreement.

Please note that this Disaster Contingency Support option *cannot be extended beyond 30 days*. Any attempt to re-use the *DCS option will result in a copyright violation message and CDMaker will cease to function.

Once your operations on your main CPU have been re-established you should remove this copy of CDMaker from the temporary CPU.

Support Contacts

Europe, Middle East and Africa

Navan (UK) Limited
The Courtyard
Brooklands Broughton
Milton Keynes BUCKS MK16 0HU
England

Fax: +44 1622 790520
Email: helpdesk@navan.co.uk

Rest of the World

Navan Australia Pty Ltd
22 Torrington Road
Maroubra
NSW 2035
Australia

Fax: +61 2 9344 9853
Email: helpdesk@navan.com.au

<http://www.navan.co.uk>

The latest version of this manual, as well as the latest PTF's to this product, can always be downloaded from the Navan Internet Website, which can be found at

<http://www.navan.co.uk/page3.html>

Support and Assistance for any Navan product can be obtained using the online request form, which can be found at

<http://www.navan.co.uk/page21.html>