

**Infor ERP** System i A3

# **System Manager Housekeeping Product Guide**

**INFOR**<sup>™</sup>

# Frontispiece

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Publication Information

Release: Infor ERP System i System Manager

Publication Date: December 2011

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# Chapter 1 - Control Details

# Introduction to Housekeeping

For Housekeeping to be fully functional, you should set up the following parameters:

1. The default print queue and save details

You must specify the libraries to hold the save files. The backup method and devices used must also be specified to save to off-line storage.

2. Each library can be given a code to describe its usage.

For example, a library can be part of a standard application, a programmer's development library or a test library.

3. Each library can be given a code to describe the objects that it contains.

For example, a library can contain source or program objects or data files.

4. Each library can belong to a pre-defined group to save as a set so you can store it at an off-site location for system security.
5. Protect libraries not defined to Housekeeping from the Delete Unknown Libraries command.

# Housekeeping Commands

This section lists the routine commands for use within Housekeeping. Enter the command and related parameters on the Command Line. The commands are listed in alphabetical order.

## **COMPALLPGM - Compress All Programs**

Enter this command to run the Compress All Programs routine. This is also run by the batch job submitted from the Compress Libraries activity in Execute Day-End Functions.

## **DLTUNKLIBS - Delete Unknown Libraries**

Enter this command to run the Delete Unknown Libraries routine. This is also run by the batch job submitted from the Delete Unknown Libraries activity in Execute Day-End Functions.

## **DSPDLTAUD - Display Library Deletion Audit**

Enter this command to use Display the Library Deletions Audit Trail. You can also select the Deletion Audit activity in Operational Enquiries.

## **DSPDLTRQS - Display Library Delete Request**

Enter this command to use Display Library Deletion Requests. Alternatively, select the Deletion Requests activity from Operational Enquiries.

## **DSPMED - Display Media**

Enter this command to use the Display Media function. Alternatively, select the Media activity from Operational Enquiries.

## **DSPMYFLR USER(\*USER, User ID) - Display User Folders**

Enter this command to use the Display User Folders function. Alternatively select the User Folders activity in Operational Enquiries.

Parameter USER default value (\*USER) shows the folders owned in Housekeeping by the current user. You can enter a (User ID) to show the Housekeeping folders owned by that user.

## **DSPMYLIBS USER(\*USER, \*SELECT, User ID) CURLIB(0, 1) SLTUSR(0, 1) - Display User Libraries**

Enter this command to use the Display User Libraries function. Alternatively you can select the User Libraries activity from Operational Enquiries.

Add parameter USER default value (\*USER) to show the libraries owned by the current user.



To select from a list of all users registered with Administration Functions, enter the value (\*SELECT). Alternatively enter a User ID directly to show the libraries owned by that user.

Add parameter CURLIB with a default value of **0** to show details of all of the libraries owned by the user: A value of **1** shows details only of those libraries owned by the user on the system. This can, however, take a lot longer to respond.

Parameter SLTUSR with a default value of **0** takes you in normally, whereas a value of **1** has the same effect as parameter USER value (\*SELECT).

### **FREFLRMED - Free Folder Save Media**

Enter this command to display the Free Folder Save Media function. Alternatively select the Free Folder Media activity from Save to Media.

### **FREMED - Free Library Save Media**

Enter this command to display the Free Library Save Media function. Alternatively select the Free Library Media activity from Save to Media.

### **MNGARC - Manage Library Archiving Saves**

Enter this command to display the Manage Libraries Archiving function. Alternatively, select the Archived Libraries activity from Save to Media.

The Archiving function entered (Select/Mass) is set in the Manage Control Information function.

### **MNGCON - Manage Control Information**

Enter this command to display the Manage Control Information function. Alternatively, select the Control Information activity from Control Details.

### **MNGDET TYPE(T, C) - Manage Housekeeping Details**

Enter this command with the parameter TYPE, default value (T) to display the Manage Library Type Codes function. Alternatively, you can select the Library Types activity from Control Details.

Add value (C) for the Manage Library Contents Codes function. Alternatively, you can select the Library Contents activity from Control Details.

### **MNGFLR FLR(\*SELECT, Folder Path/Name) - Manage Folders**

Enter this command to display the Manage Folders function. Alternatively, select the Folders activity from Definitions.

Add parameter FLR default value (\*SELECT) to display the Enter Folder Path/Name window. You can enter a Folder Path/Name to go straight to the Folder Details window, for example:

(MNGFLR FLR (GENERAL/GENERAL.[HK](#)/MANUALS))

### **MNGLIB LIB(\*SELECT, Library Name) - Manage Libraries**

Enter this command to display the Manage Libraries function. Alternatively, select the Libraries activity from Definitions.

Add parameter LIB default value (\*SELECT) for the Enter Library Name window. Alternatively, you can enter a library name (for example, MNGLIB LIB(IPGHKP3)) to bypass this and go straight to the Library Details window.

### **MNGMED - Manage Library Save Media**

Enter this command to display the Manage Media function. Alternatively, select the Media activity from Definitions.

### **MNGOFF - Manage Library Save Groups**

Enter this command to display the Manage Library Save Groups function. Alternatively, select the Off-site Save Groups activity from Control Details.

### **MNGOFFGRP - Manage Save Group to Save**

Enter this command to display the Select Library Save Group to be Saved function. Alternatively, select the Select Off-site Group activity from Execute Day-End Functions.

### **MNGPROLIBS - Manage Protected Libraries**

Enter this command to display the Manage Protected Libraries function. Alternatively, select the Protected Libraries activity from Control Details.

### **MNGRST - Manage Library Restores**

Enter this command to display the Manage Library Restores function. Alternatively, select the Libraries activity from Restore from Media.

### **MNGSAV - Manage Library Saves**

Enter this command to display the Manage Library Saves/Backups function. Alternatively, select the Libraries activity from Save to Media.

The Save/Backup function entered is set up in the Manage Control Information activity.

### **MNGSAVFLR - Manage Folder Saves**

Enter this command to display the Manage Folders Backups function. Alternatively, select the Folders activity from Save to Media.

### **MNGSAVOFF - Manage Library Group Saves**

Enter this command to display the Manage Library Save Groups Backups function. Alternatively, select the Off-site Libraries activity from Save to Media.

### **RGZALLPFMS - Re-organise All Physical Files**

Enter this command to run the Re-organise All Physical Files routine. Alternatively, select the Reorganise Libraries activity from Execute Day-End Functions to submit the batch job.

This executes the Command RGZLIBPFM for all of the libraries with the Reorganise Files Flag set in their Housekeeping Details.

### **RGZLIBPFM LIB(Library Name) - Re-organise Library Files**

Enter this command to execute the IBM AS/400 Command RGZPFM for all the physical files in the Library specified.

### **RSTHKF - Restore Housekeeping Files**

Enter this command to display the Restore Housekeeping Files function. Alternatively, select the Housekeeping Files activity from Restore from Media.

### **SAVHKF - Save Housekeeping Files**

Enter this command to display the Save Housekeeping Files function. Alternatively, select the Housekeeping Files activity from Save to Media menu.

# Control Information

Use Control Information to define the default print queue and save details and specify the libraries to hold the resultant save files. You must also specify the backup method and devices used to save to off-line storage.

## Manage Control Information Window



To display this window, select the **Control Information** activity from Control Details.

Use this window to enter the details of your housekeeping backups.

**Note:** See the Libraries and Folders topics in the Execute Day-End Functions section for more details about the saving to save files of libraries and folders.

```

HK010                               Housekeeping                               System: STUDENT
Manage Control Information
ASP Number . . . . .                               Last Run:
Backup Save File Library Name . HKBUSAVF           Start Date 16/06/99
Off-site Save File Library Name HKGRPSAVF         Start Time 23:38:28
Archive Save File Library Name  HKARCSAVF         End Time . 23:56:13
Job Queue . . . . . QPGMR                         Library *LIBL
Output Queue . . . . . QPRINT                      Library *LIBL
A4 Output Queue . . . . . QPRINT                  Library *LIBL

Default Diskette Device Name . _____
Default Tape Device Name . . . _____
Default Cartridge Device Name . TAP01
Tape Capacity . . . . . _____ Megabytes
Cartridge Capacity . . . . . 147 M M=Megabytes, G=Gigabytes
Tape Density . . . . . 10000 *DEVTYPE,1600,3200,6250,10000
Normal Backup Method . . . . . 2 1=Select, 2=Mass, 3=Cyclic
Mass Backup Media . . . . . 1 1=Cartridge, 3=Tape
Off-site Backup Media . . . . . 1 1=Cartridge, 3=Tape
Number of days in Cycle . . . . . 2

F3=Exit
  
```

## Fields

### ASP Number

Enter the auxiliary storage pool from which the system allocates storage for the save files created. The default is to ASP(1), the system auxiliary storage pool.

Leave this parameter blank to save to the default.

### Backup Save File Library Name

Enter the name of the library that has been specifically created as the location for save files of libraries and folders.

### Off-Site Save File Library Name

Enter the name of the library that has been specifically created as the location for save files of libraries requested for off-site saving.

### Archive Save File Library Name

Enter the name of the library that has been specifically created as the location for save files of libraries to be archived.

Note: The save file library must exist.

### Job Queue/Library

Enter the job queue, and the library name of the library to which this job queue belongs, to which all batch jobs will be submitted.

### Output Queue/Library

Enter the print queue, and the library name of the library to which this print queue belongs, to be used for standard reports.

### A4 Output Queue/Library

Enter the print queue, and the library name of the library to which this print queue belongs, to be used for A4 type reports.

### Default Diskette Device Name

If media saves are to be to diskette, enter the diskette device description.

### Default Tape Device Name

If media saves are to be to tape, enter the tape device description.

### Default Cartridge Device Name

If media saves are to be saved to cartridge, enter the cartridge device description.

### Tape Capacity

If tapes are to be used in the saves to media, enter the storage capacity of a tape in megabytes. If you are using tapes with different capacities, enter the capacity of the smallest tape.

### Cartridge Capacity

If cartridges are to be used in the saves to media, enter the storage capacity of a cartridge. You can express the capacity in either M (mega) or G (giga) bytes.

### Tape Density

If tapes or cartridges are to be used for the saves to media, enter the tape density to be used.

### Normal Backup Method

Enter one of the following as your default backup method:

**1** - To backup a single library per volume

The user will select the library to be saved and be prompted to load the media volume for that library, once specified.

**2** - To backup multiple libraries per volume

Libraries will be divided into groups that will save to a single volume. The user then selects a group and nominates the volume ID to be used.

**3** - To backup multiple libraries per volume, with storage media used on a day-cycle basis

The Save to Media topic contains full details about saving to media.

Note: Folders and off-site libraries will always be saved using the mass backup method.

**Mass Backup Media**

Enter one of the following back up media options:

- 1 - To back up to cartridge
- 3 - To back up to tape

Note: The option to perform mass backups to diskette is not available.

**Off-Site Backup Media**

Enter one of the following back up media options:

- 1 - To back up to off-site cartridge
- 2 - To back up to off-site tape

**Number of Days in Cycle**

If cyclic saving is to be used, enter the number of saves in each cycle.

For example, enter **5** if you always want to have the five most recent backups. The sixth backup made will overwrite the first backup and so on:

Media 1	Media 2	Media 3	Media 4	Media 5
B/U 1	B/U 2	B/U 3	B/U 4	B/U 5
B/U 6	B/U 7	B/U 8	B/U 9	and so on..

Note: This method is not related to a number of calendar days but to a number of saves. The back up saves can be made at any time - 5 times in one day if required.

**Warning: The save medium is freed automatically when cyclic saves are made, therefore Housekeeping does not check if the medium contains the latest saves of any libraries.**

*It is recommended that libraries be set to Force Save=1 and Save frequency less than or equal to the number of days in the cycle, or on a daily basis. Otherwise, you could lose your last save of a library.*

**Last Run**

The start day and time and end time of the last run of the Libraries Auto-Management Routine are displayed. Refer also to the Libraries section.



Press **Enter**.

## Library Types

You can set up library types to classify the different types of library used.

For example you could use type A for applications, or you could code by product type.

Note: You can further categorise libraries by Library Content.

Library types and codes are applied to libraries in the Manage Libraries activity. Use command MNGLIB or select the Libraries activity from Definitions in Housekeeping.

## Manage Library Types



To display this window, select the **Library Types** activity from Control Details and press **Enter**.

Use this window to set up type codes to describe library usage.

```

HK110          Housekeeping          System: STUDB30A
Manage Library Types
Type Code : A          +UPDATE
Type in details and press ENTER to update
Description : Application
F3=Exit  F11=Delete  F12=Previous
  
```

## Fields

### Type Code

Enter the type code of the library.

Note: Press **Enter** to display the Description field.

### Description

Enter or amend the description associated with this library type.

Note: Library type W (Work) has a specific use within Housekeeping. Use this code for temporary or work libraries, which are cleared out by the next overnight routine. Once the overnight routine has cleared the library, it creates the following source files: QDDSSRC, QRPGRSRC, QCLSRC, QCMDSRC (for more information refer to the Libraries section in the Execute Day-End Functions topic).

## Functions

### F11=Delete

Use this to delete this type code. Press **F11** again to confirm.



Press **Enter** to confirm your changes.



## Library Contents

You can set up library content codes to classify the different contents of your libraries.

For example you could use type D for data, P for programs.

Note: You can further categorise libraries by Library Type.

Library content codes and types are applied to libraries in the Manage Libraries option. Use command MNGLIB or select the Libraries activity from Definitions in Housekeeping.

## Manage Library Contents



To display this window, select the **Library Contents** activity from Control Details.

Use this window to set up contents codes to describe the objects a library contains.

HK110 Housekeeping System: STUDB30A

Manage Library Contents

Contents Code F +UPDATE

Type in details and press ENTER to update

Description . Files (Data)

F3=Exit F11=Delete F12=Previous

### Fields

#### Contents Code

Enter a new contents code or an existing contents code.

Note: To display the Description field, press **Enter**.

#### Description

Enter or amend the description which is to be associated with this library contents code.

### Functions

#### F11=Delete

Use this to delete this library contents type. Select **F11** again to confirm.



Press **Enter** to confirm your changes.

## Off Site Save Groups



To display this window select the **Off-site Save Groups** activity from Control Details and press **Enter**.

Use this window to set up the codes for Library Save Groups.

```

HK140                               Housekeeping                               System: STUDDENT
Manage Library Save Groups

Save Group  #D                               *UPDATE

Type in details and press ENTER to update

Description  Systems Products Literals Libraries

Last saved to Save File          *** NEVER ***
Last saved to Media              *** NEVER ***

F3=Exit  F11=Delete  F12=Previous
  
```

### Fields

#### Save Group

Enter a new save group, or an existing save group.

Note: To display the Description field, press **Enter**.

#### Description

Enter or amend the description associated with this save group.

#### Last Saved to Save File

This is the date this save group was last saved to a save file.

#### Last Saved to Media

This is the date this save group was last saved to off-line media.

Note: Refer to the Off-Site Libraries section and Select Off-Site Group in the Execute Day-End Functions topic for further information about off-site saves.



Press **Enter** to confirm your changes.

# Protected Libraries Window



To display this window, select the **Protected Libraries** activity from Control Details.

Use this activity to prevent selected libraries from being deleted by the Delete Unknown Libraries function.



## Fields

### Library Name

Enter the names of those libraries, which are not defined to Housekeeping, which you want to protect from the Delete Unknown Libraries function. Use \* for generic libraries.

Note: Housekeeping, when shipped, protects the following generic library names: IPG\*, OSL\*, Q\*. You should check that these libraries are still defined to the protected libraries function on your system.



Press **Enter**.

## Chapter 2 - Definitions

# Introduction to Housekeeping Definitions

Use Definitions to set up the various parameters for saving libraries, folders, and media.

The information within these definitions is used to control Housekeeping's backup processes. See the Execute Day-end Functions topic in this product guide for a full explanation of the way in which Housekeeping determines what should be saved.

# Libraries

Use the Libraries facility to create and amend library descriptions in Housekeeping. As well as maintaining library details required for the Housekeeping utilities, this facility also creates libraries on the system. It is therefore recommended that authority to the Create Library and Delete Library commands is revoked, and all library maintenance is carried out using the Libraries facility. This makes sure there is a full implementation of Housekeeping on machines where the module is used.

To do this sign on as [QSECOFR](#). To remove the authority to create libraries, enter the command:

```
GRTOBJAUT OBJ(CRTLIB) OBJTYPE(*CMD) USER(*PUBLIC)  
AUT(*EXCLUDE)
```

To remove authority to delete libraries enter the command:

```
GRTOBJAUT OBJ(DTLIB) OBJTYPE(*CMD) USER(*PUBLIC)  
AUT(*EXCLUDE)
```

Use the libraries facility to create and amend details of a library including its description, extended text, ownership and security profile.

Tip: Since libraries can be both created and deleted via Housekeeping functions, if you wish to use Housekeeping most effectively for object/machine (storage) management, Infor recommend that authority to the commands CRTLIB and DTLIB be revoked.

## Manage Libraries Window



To display this window, select the **Libraries** activity from Definitions.

Use this window to select the library you want to manage. To create a new library, add a new library name.



## Fields

### Library

Enter the name of the library you want to create or maintain.

If the name of the library entered has been previously deleted or archived, and the system can access the library, a window warning of this is displayed. You will be warned that the new version of the library can overwrite the existing library, and you will be given the option to go ahead if required.



Press **Enter** to display the Manage Library Details window.



## Manage Library Modify Library Details for an Existing Library Window



To display this window, enter a library and press **Enter** on the Manage Libraries window.

Use this window to enter or amend the details of the selected library.

```

HK100                               Housekeeping                               System: STUDB30A
Manage Libraries - Modify Library details for an EXISTING LIBRARY

Library  IPGAMF3

Text . . . . . Application Manager File Library
Further text . . . . .
(To describe more fully the purpose of the Library)
Owner . . . . . PEARSONIC

Library Type . . . . . D   Library Contents Code . . . F
Re-organise Files (1/0) . . . . . 0   Compression Required (1/0) . . . I
Force Save (1/0) . . . . . I   Save frequency (days) . . . 1
Off-Site Save Group . . . . . _   Expiry Date . . . . . 99/99/99

Application Code . . . . . _   Release level . . . . . _
Application Source (J/O/U) . . . . . _   Environment . . . . . _

F3=Exit  F4=Browse  F5=Dsp Ct1  F6=Size History  F12=Previous
  
```

### Fields

#### Text

Enter one line of text as a basic description of the library.

#### Further Text

You can add six lines of additional text for a full description of the library.

#### Owner

Enter the system user ID of the library's owner. For new libraries, this defaults to the user ID of the current sign on, but can be changed to any valid user ID. The Owner field is used by the system in enquiries and reports.

#### Library Type

Enter the one-character library type to denote the purpose of the library, for example, standard package, development and so on.

Note: Library Type codes are created in the Library Types activity from Control Details.

Note: Library type W (Work) has a specific use within Housekeeping. Use this code for the temporary or work libraries you want cleared out by the next overnight routine.

#### Library Contents Code

You must enter a code to denote the library contents; for example, source, programs, files.

Note: You can create these codes in the Library Contents activity from Control Details.

### Reorganise Files

Enter one of the following options:

**0** - Do not automatically re-organise the physical files in this library.

**1** - To re-organise all physical files in this library automatically. Re-organisation will free any space taken up by deleted data file records.

Note: Machine Manager includes a standard job to re-organise files and can be included as an auto day-end job. This facility is also provided from Execute Day-End Functions (see the Re-organise Libraries topic in the Execute Day-End Functions section for further information).

### Compression Required

Enter one of the following:

**0** - Do not compress this library.

**1** - To use library compression

Compression can lead to significant savings in disk utilisation without affecting the performance of the program, though it does restrict the information provided by program dumps.

Note: Machine Manager includes a standard job to compress files and can be included as an auto day-end job. This facility is also provided from Execute Day End Functions (see the Compress Libraries topic in the Execute Day-End Functions section for further information).

### Force Save

Enter one of the following:

**0** - Do not save this library if it has not changed.

**1** - To save this library on a given frequency regardless of whether or not it has been changed

### Save Frequency (Days)

Specify how often this library is to be saved by entering the number of days between saves.

The overnight routine will calculate whether a library is due for save, based on its last save date and this save frequency. If a library is due for save, the system will then check if it has changed. If it has changed, the system will recommend a save.

If Save Frequency is set to a value other than 0 or 999, the system recommends a save if one of the following applies:

- The library is due for saving according to the frequency and has changed.

- The library is due for saving according to the frequency, no changes have been made, but Force Save is set to 1.

If Save Frequency is set to 0 or 999, the system will not recommend a save.

### Off-Site Save Group

You can optionally enter the off-site save group to which this library belongs.

Note: You can set these groups up using the Off-Site Save Groups activity in Control Details.

### Expiry Date

Enter the last date that this library is required on the system. For a permanent library enter a date of 99/99/99.

Libraries that have exceeded their expiry date will be included on the Passed Expiry Date report.

### Application Code/Release Level/Environment

You can complete these fields for information purposes and to identify a library as belonging to a particular [Application Manager](#) defined application.

## Functions

### F5=Dsp Ctl

Use this to display an enquiry containing control details about the library. This enquiry gives details of the last save and sizing, and a list of the media volumes on which the library has been saved.

### F6=Size History

Use this to display an enquiry giving the size history of this library in bar chart form. From the bar chart display you can then display the size history, listed by byte size, by selecting **F15=Actuals**.

### F11=Delete

Note: This is available when maintaining the details of the registration of an existing library.

To delete the library select **F11=Delete**, then select **F11** again to confirm.

Note: Libraries should only be deleted if they have no further use at all. At this point, the library is only flagged for deletion; the next overnight routine will perform a final save to save file, if required, and then the physical deletion of the library.

If you wish to remove a library which is likely to be used in the future, then it should be archived. This differs from library deletion in that two saves to off-site storage are made. This reduces the dependence on a single storage media in the unlikely event that it is faulty.

A library can be flagged for archiving via the Display User Libraries activity (in Operational Enquiries).

### **F15=Base On**

Use this when you are creating details for a new library and you want to use the details of an existing library as the basis.

Note: If you create the details for a library that does not yet exist, Housekeeping will automatically create the library for you.

## Manage Libraries Control Details Window



To display this window, select **F5=Ctl Dtl** on the Library Details window.

Control details are displayed for your information.

### Fields

#### **Last Saved to Media Direct On**

This date and time are updated when you use Housekeeping to save libraries directly.

#### **Last Saved to a Save File On**

This date and time are updated when the Housekeeping overnight routine performs a save of this library to the designated save file library.

#### **Last Saved to Media From a Save File**

This date and time are updated when the Housekeeping save to media routine is performed for this library.

#### **Last Analysed for Size and Last Change On**

This information is maintained by the Housekeeping Re-sizing Routine and when a save to save file is performed.

#### **Last Changed On/Size when Last Analysed**

This information is maintained by the Housekeeping Re-sizing routine and when a save to save file is performed.

Note: Machine Manager includes a standard job to re-size libraries that can be included as an Auto Day-End job. This facility is also provided from Execute Day-End Functions.

Details of all current saves to media are shown in date sequence, with the latest first.

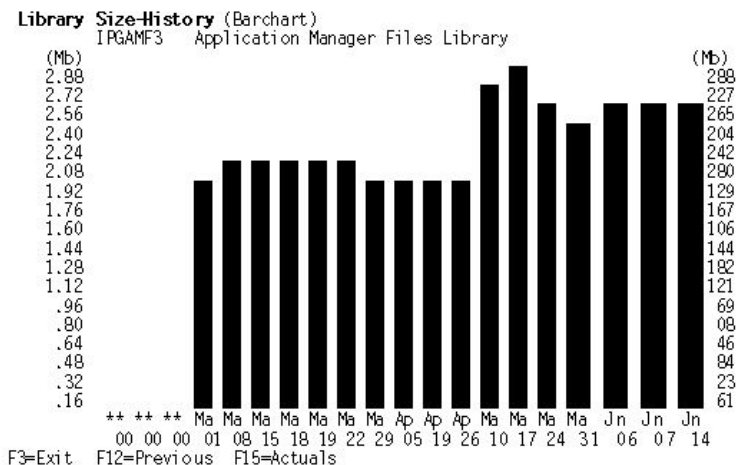
## Library Size History (Barchart) Window



To display this window, select **F6=Size History** on the Library Details window.

The bar chart displays the library size in megabytes on each analysis date (date last checked).

Note: Machine Manager includes a standard job to re-size libraries and can be included as an Auto Day-End job. This facility is also provided from the Resize Libraries activity in Execute Day-End Functions.



### Functions

#### F15=Actuals

Use this to re-display the size details in actual figures, rather than as a barchart. This window will list the library size in bytes for each date that the library size was changed.

## Manage Libraries Flag Library for Deletion Window



To display this window, select **F11=Delete** on the Library Details window.

Libraries selected for deletion will not be deleted immediately. This is carried out as part of the next Housekeeping overnight routine, following a security save if required.

**Note:** The routine is set up in the Libraries activity in Execute Day-End Functions.

```

HK100                               Housekeeping                               System: STUDB30A
Manage Libraries - Flag Library for DELETION

Library  IPGMF3      Application Manager Files Library

You have selected to flag the above Library for DELETION.

On taking the option to confirm deletion this Library will be flagged for
deletion and will be deleted from the system in the overnight routines.

This request will be logged as having been made BY . . . BRIGHTN
                                                FROM . . . VRTDSP73
                                                ON . . . 4/07/91
                                                AT . . . 18:45:42

Do you wish a security copy to be taken prior to deletion ? 1 (1/0)

If a security copy is requested the above Library will not be deleted
from the system until it has been saved to media.

F3=Exit  F11=Confirm Deletion  F12=Previous
  
```

### Fields

#### Do You Wish a Security Copy to be Taken Prior to Deletion?

Enter one of the following:

**0** - A security copy is not required.

**1** - To perform a security media save

Select **F11** again to confirm deletion of the library.

## Folders

Folders cannot be created or deleted through the Housekeeping utility. However, folders can be saved to off-line storage media as part of your backup and recovery procedures by Housekeeping. Such saves can thus be performed on a timely basis and a history of those saves retained.

Each folder can have a name of up to 63 characters. Every folder defined to Housekeeping is assigned a unique 10-character internal reference to aid in the saving of the folder. These references have the prefix FL#, with a system-generated number completing the 10 characters.

## Manage Folders Window



To display this window select the **Folders** activity from Definitions.

Use this window to select the folder to be maintained. You can register a new folder name from this activity and mark a folder for deletion.



## Fields

### Folder

Enter the name of the folder to display the folder details.



## Manage Folders Modify Folder Details Window



To display this window, select a folder and press **Enter** on the Manage Folders window.

Use this window to add or amend the folder owner, description and save details. If this folder is being defined for the first time, it will be assigned a unique internal reference number.

```

HK160                               Housekeeping                               System:
Manage Folders - Modify Folder details

Folder: BRIGHTN
Internal/System name: FL#0000114

Make any changes required and press ENTER to update

Folder Description: . Nick Bright Documents
Owner . . . . . GBJBANB0
Save frequency (days) 5
Force Save (1/0) . . 0

F3=Exit  F5=Display Save History  F11=Delete  F12=Previous
  
```

### Fields

#### Folder

This is the name of the selected folder.

#### Internal/System Name

The unique 10-character internal reference is displayed for your information. This is prefixed FL# with a system-generated number completing the 10 characters.

#### Folder Description

Enter the description to be held by Housekeeping.

#### Owner

Enter the system user ID of the folder's owner. For new folders, the owner will default to the ID of the user creating the folder definition. It can be changed to any valid user ID.

#### Save Frequency (Days)

Enter the number of days between each automatic save of the folder.

The overnight routine (run from Execute Day-End Functions) will calculate whether a folder is due for save, based on its last save date and this save frequency. (The last save date is the last save to off-line media - this information is held in Housekeeping for each folder.) If a folder is due for save, the system will then check if it has changed. If it has changed, the system will recommend a save.

- If Save Frequency is set to 0 or 999, the system will not recommend a save.

- If Save Frequency is set to a value other than 0 or 999, the system will recommend a save if the folder is due for saving according to the frequency and has changed.

### Force Save

Enter one of the following options:

**0** - Do not save this folder if it has not changed.

**1** - To save this folder on a given frequency regardless of whether or not it has been changed.

## Functions

### F5=Display Save History

Use this to display the Save History Enquiry with control information relating to the folder. This enquiry gives details of last save, and a list of the media volumes on which the folder has been saved.



Press **Enter** to confirm your selections.

## Manage Folders (Save History) Window



To display this window, select **F5=Display Save History** on the Manage Folders Modify Folder Details window.

Use this window to enquire on the save history of the selected folder.

HK160		Housekeeping		System: STUDB30A	
Manage Folders					
Folder: <b>PEARSONC/1</b>					
Internal/System name: FL#0000109					
Last saved to a Save File on: 3/07/91 at 8:30:00					
Last saved to Media from a Save File: 2/07/91 at 11:04:48					
Media Type	Vol Id	Locn	Save Date and Time	Back-up Type	
CARTRIDGE	000H01	FS25	2/07/91 at 11:06:02	MASS	
TAPE	000H03	FS27	2/05/91 at 11:06:02	MASS	
					Bottom
F3=Exit F12=Previous					

### Fields

#### Last Saved to a Save File On

This date and time are updated when the Housekeeping overnight routine performs a save of this folder to the designated save file library.

#### Last Saved to Media from a Save File

This date and time are updated when the Housekeeping mass save to media routine is performed on the save file of this folder.

Tip: Details of all current saves to media are then shown in date sequence, with the latest first.

## Media

Use the Media activities from Definitions to record any saves to media you have made outside of Housekeeping.

Details of existing saves to media can be displayed giving the media type and volume ID, together with the date and time which the save was performed. If you have previously recorded saves of the library using this function, they will be displayed with a time of zero.

### Manage Media Window

➔ To display this window, select option **3** from Definitions and press **Enter**.

Use this window to select the saved Library, which is now to be saved to Housekeeping.

The screenshot shows a terminal window titled "Housekeeping" with the following content:

```
HK103                               System: STUDB30A
Manage Media

Library _____

Note: If you make an entry in the 'Library Name' field and use F4, then
      scanning will start from that point.

F3=Exit  F4=Browse
```

### Fields

#### Library

Enter the name of the library that was saved.

➔ Select a library to display the Manage Media Details window.

## Manage Media Details Window



To display this window, select a library on the Manage Media window.

This shows details of existing saves to media recorded by Housekeeping, giving the media type and volume ID, together with the date and time which the save was performed. If you have previously recorded saves of the library using this function, they will be displayed with a time of zero.

You can delete these additional details by entering **4** against them, if required. You can also enter details of additional saves.

When any changes are saved, the list is re-sequenced to include the new details.

```

HK103                               House keeping                               System: STUDB30A
Manage Media
Library  IPGAMP3      Application Manager Programme Library
Type option, press ENTER
4=Delete Save details
Opt Media  Volume Id  Location  Date & Time when Saved
CARTRIDGE MB0005     ST01     21/06/91 at 10:06:28
CARTRIDGE MB0004     ST15     20/06/91 at 10:06:25
CARTRIDGE MB0003     ST24     19/06/91 at 7:04:07
Bottom
To add new save details enter the required details below
Media Type  _      1=Cartridge, 2=Diskette, 3=Tape
Volume Id   _____
Location    _____
Date       . . . _____
F3=Exit    F12=Previous

```

### Fields

#### Media

Enter the type of media used to perform the save:

**1** - Cartridge

**2** - Diskette

**3** - Tape

#### Volume ID

Enter the ID of the media volume used in the save.

#### Location

Enter the volume location, if required.

#### Date

Enter the date on which the save was performed.



Press **Enter** to validate the new details.



## Chapter 3 - Save to Media

## Introduction to Save to Media

You can perform three kinds of library save to media. The method used is determined by Housekeeping's control information.

Note: Use the Control Information activity from the Control Details to set up your save to media methods.

### Select

Each library is saved to a separate series of tapes, cartridges or diskettes. The operator is prompted to save libraries individually. Once the media volume ID has been assigned, all subsequent saves of the library will prompt the operator to load that volume again. Therefore, the same media volume is used.

### Mass

Housekeeping saves as many libraries to a media volume as it can. This is calculated using library sizes and the media size. A library is not split over two volumes. Libraries are thus organised into groups. The operator is prompted to save these groups of libraries. A media volume ID must be entered for each save. This ID is unique and for a volume to be re-used, it must be freed.

Tip: In Mass Normal Backup Method you can set up the Library Force Save flags to **0**, so that libraries are backed up only when changed and according to their save frequencies. This can allow save media to be freed.

Tip: To re-use the media, you can force a media volume to be freed by setting the Force Single Save flags of all of the libraries on that volume whose saves are still active. These libraries will then be included in the next backup run and can then be saved once more; thus the active saves will be superseded and become inactive. When there are no active saves on a media volume, that volume may be freed. This procedure is completed over a period of two backup runs, typically two days.

### Cycle

Specific media volumes are used on specific days to perform the mass save. The number of saves in the cycle is pre-set in Housekeeping's control information. For example, you can use a five-day rotation cycle. This might correspond to daily saving from Monday (Day 1) to Friday (Day 5). This uses five sets of off-line storage media, one set for each day. The operator is prompted to load the same set of volumes in the same order as on this day in the previous cycle. The media are freed up automatically.

The days in a cyclic save need not be consecutive days. The cycle could be one a week or once a year.



Note: As the save media is freed automatically, Housekeeping does not check if the media contains the latest saves of any libraries. Therefore you should set the libraries' Force Save flag to **1** and the Save Frequency to the number of days in the cycle. Otherwise, you could lose your last save of a library. See the Control Information topic in the Control Details section and the Libraries topic in the Definitions section of this product guide.

Note: Folders and off-site libraries can only be saved to media by a mass save routine.

Tip: For easy identification it is recommended that the volume IDs for library, folder and off-site saves are distinguished by a separate ID prefix.

## Housekeeping Data Areas

This section identifies which tasks are assigned to specific data areas.

### **HKDISKLMT - System Auxiliary Storage Usage Limit For Backups**

This holds the auxiliary storage usage level, as a limit for auto-backup saves to save files.

For example, if you have set the value to 95% and the save to save file of a library would take the system auxiliary storage usage beyond this level, then the save will not take place and an appropriate message will be sent to the message queue HKSAVERR.

### **HKFSAVDTA - Last Run Details**

This data area holds details about the last execution of the Save Housekeeping Files activity, that is, of the off-line storage media volume used.

### **HKINTFLR - Last Used Internal Folder Name**

This data area holds the latest internal folder name generated by Housekeeping. It is incremented each time that there is a new folder registration.

### **HKOFFGRP - Library Save Group Designated to be Saved**

This data area holds the code of the library save group to be saved by the Library Save Groups Auto-backups Routine as selected via the select Library Save Group to be Saved activity.

### **HKSIZDATIM - Size All Libraries Last Run Datetime (Cyyymmddhhmmss)**

This data area holds the date and time that the last run of the Re-size All Libraries routine was completed.

# Libraries

The window displayed is determined by the Normal Backup Method selected in Housekeeping's Control Information activity from Control Details.

1. If you perform Select backups, refer to Library Backup - Select Method.
2. If you perform Mass backups, refer to Library Backups - Mass Method.
3. If you perform Cyclic backups, refer to Library Backups - Cyclic Method.

Tip: If you set up Housekeeping to use the Cyclic Normal Backup Method you should set the Housekeeping details for libraries to have a Force Save flag of **1** and a save frequency equal to the number of days in the cycle. The backup method will then automatically free the save media for the current day in the cycle regardless of whether or not there are active saves on the media volumes.

## Library Backups Routine Entry Select Method Window



To display this window, select the **Libraries** activity from Save to Media.

Use this window to choose one of the following:

- To back up libraries directly that the overnight routine could not save to save files
- To back up your save files to off-line media

```

HK800                               House keeping                               System: STUDB30A
Libraries Backups Routine Entry - Select Method

You have selected the option to run the Libraries Backups routine.
The last Library Auto-backup routine was started on 24/06/91 at 20:27:02
ran successfully and finished on 24/06/91 at 20:38:21

Any saves to Save Files will have been made to Library OSLSAVF
The Auto-backup routine will, if possible, have saved all Libraries to
Save Files. The Backup List will show whether or not this has happened.

By taking option 1 below you will be presented with a list of the
Libraries which were not saved to Save Files by the Auto-backup routine.
If there are none then Backups may be made from the Save Files by taking
option 2 below.

Type option, press ENTER

1=Save Libraries Not Saved to Save Files.
2=Save Libraries from Save Files.
Option _

F3=Exit

```

## Fields

### Option

Enter one of the following:

**1** - To save those libraries to media which have not been saved to save files by Housekeeping's overnight routines

Note: Overnight routines are set up in Execute Day-End Functions.

**2** - To save those libraries to media which have been saved to save files by Housekeeping's overnight routines



Enter the required option and press **Enter**.

## Library Backups Save Save Files to Media Selection Window



To display this window, select Backup Method 2 on the Library Backups Routine Entry Select Method window.

Select one library for backup.

```

HK915                               Housekeeping                               System: STUDDENT
Library Backups - Save Save Files to Media
Type option
1=Select to Backup
Opt Library      Text
-  DEVDFNMGR3    Developer Definitions: JBA System 21 Manager V3
-  GBJBABNM      Barry Test Library
-  GBJBAGH0      Work Library for User: Geoffrey P Holdham
-  GBJBAZGS      gurmej singh library
-  HOLDHAGP      Work Library for User: [STUDB30A] HOLDHAGP
-  IPGAGW3       IPG/400 Work Library
-  IPGAGX3       IPG/400 Enhancements/Fixes Library
-  IPGAMF3       Application Manager Files Library
-  IPGAMF4       Application Manager Files Library
-  IPGAMS4
-  IPGAMX3       Application Manager Enhancements Library
-  IPGAMX4       Application Manager Enhancements Library
-  IPGCFE4ROL
-  IPGCF3        Administration Files Library
-  IPGCF4        Common Functions Files
-  IPGCF54
F3=Exit
More...
  
```

## Fields

### Option (Opt)

Enter **1** against the library to be selected for backup.

Tip: If there are no libraries to save then a window will be displayed informing you of this.

## Library Backups Save Save Files to Media Window



To display this window, select the library on the Library Backups Save Files to Media Select Library window.

If the library has been previously saved by Housekeeping, you must load the specific media volume used.

If the library has not been previously saved by Housekeeping, select the media type required and the volume ID. You can also specify its location.

```
HK915                               Housekeeping                               System: STUDENT
Library Backups - Save Save Files to Media

You have selected to save the following:-
Library  IPGAGW3      IPG/400 Work Library

No details are available to specify what Media Type, Volume ID, etc.,
you need to save the above Library.

If you wish to save this Library specify the relevant details below.

Type in details, and press ENTER to accept

Media type  _      1=Cartridge, 2=Diskette, 3=Tape
Volume ID   _
Location .   _

F3=Exit    F12=Previous

M8 a                                     13/006
```

## Fields

### Media Type

Enter **1** for cartridge, **2** for diskette or **3** for tape.

### Volume ID

Enter the volume ID of the media to be used. This must be a unique media ID.

### Location

You can enter the location of the media. This is your identifier for the location of the volume, for example, shelf number position.

Tip: You can initialise the media to the specified volume ID before performing the save by selecting **F24=Initialise Media**.



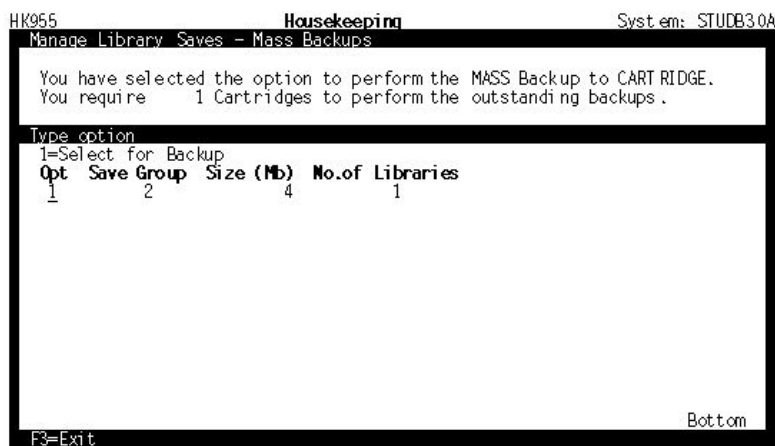
Load the required media and press **Enter** to perform the save.

## Manage Library Saves Mass Backups Window



To display this window, select the **Libraries** activity from Save to Media. You must be using Mass Backups.

A list of the library save groups is displayed. Housekeeping organises libraries into these save groups so that a group of libraries can be saved onto a single media volume. A library will not be saved across two volumes.



### Fields

#### Option (Opt)

Enter **1** against the save group you want to save to media.

Tip: If there are no libraries to save, a window is displayed informing you of this.

## Manage Library Saves Mass Backups Window



To display this window, enter **1** against a Save Group on the Manage Library Saves Mass Backups window.

This displays details of the save group you selected.

After the save has been completed, you will return to the save group selection window. If there are no more save groups to save you will return to the previous window.

Note: An audit report is produced automatically, listing the libraries saved to each media volume and the sequence in which they were saved.

```
HK955                               Hou seeping                               System: STUDB30A
Manage Library Saves - Mass Backups

You have selected to save group      2
This save group has a total size of   4 Mb
and contains                          1 Libraries.
Enter below the Volume ID and Location of the save CARTRIDGE.

Type in details, and press ENTER to perform save

Volume ID  _____
Location   _____

F3=Exit  F12=Previous  F24=Initialise Media
```

## Fields

### Volume ID

Enter the volume ID of the media to use. This must be a unique media ID.

Note: If you wish to re-use existing media, refer to the Free Library Media section of this product guide.

### Location

You can enter the location of the media. This is your identifier for the location of the volume, for example, shelf number, position.

## Functions

### F24=Initialise Media

Use this to initialise the media before performing the save.



Load the required media and press **Enter** to perform the save.

## Library Backups Cyclic Mass Backups Window



To display this window, select the **Libraries** activity from Save to Media. You must be using Cyclic Mass Backups.

This window displays details of the last save in the cycle. A new day in the cycle is assumed, if the last save was carried out prior to today's date.

A list of the library save groups is displayed. Housekeeping organises libraries into these save groups so that a group of libraries can be saved onto a single media volume. A library will not be saved across two volumes.

After the save has been completed, you will return to the save group selection window unless there are no more save groups to save.

**Note:** An audit report is produced automatically, listing the libraries saved to each media volume and the sequence in which they were saved.

```

HK965                               Housekeeping                               System: STUDDENT
Library Backups - Cyclic Mass Backups
You have selected the option to perform the Libraries Cyclic Mass
Backups routine to CARTRIDGE.
You require      1 Cartridges to perform the outstanding backups.

Press ENTER to Save the Group highlighted
Opt Save Group  Size (Mb)  No.of Libraries  Volume ID  Location
  1      1          129         38          MAND02

Bottom
F3=Exit
    
```

### Fields

#### Option (Opt)

Enter **1** against the save group you wish to save to media.

**Tip:** If there are no libraries to save, a window will be displayed informing you of this.



Press **Enter** to continue with the save.

## Library Backups Cyclic Mass Backups Select Media Window



To display this window, press **Enter** on the Library Backups Cyclic Mass Backups window.

This window displays details of the save group you selected. Enter details of the Save Media.



```
HK965                               Housekeeping                               System: STUDB30.A
Library Backups - Cyclic Mass Backups

You have selected to save group      2 which is volume  1 of day  5
This save group has a total size of      4 Mb
and contains      1 Libraries.

Enter below the Volume ID and location of the save CARTRIDGE if not
previously selected. Remember that this will FREE THE MEDIA specified.

Type in details, and press ENTER to perform save

Volume Id  _____
Location   _____

F3=Exit  F12=Previous  F24=Initialise Media
```

## Fields

### Volume ID

Enter the volume ID of the media to be used. This must be a unique media ID.

Note: To re-use existing media, see the Free Library Media section of this product guide.

### Location

You can enter the location of the media. This is your identifier for the location of the volume, for example, shelf number or position.

## Functions

### F24=Initialise Media

Use this to initialise the media before performing the save.



Load the required media and press **Enter** to perform the save.

## Archived Libraries

Once a library has been created by the Housekeeping module, it can remain on the IBM iSeries 400 indefinitely. However, you may want to remove the library from the machine. Housekeeping provides two methods for removing libraries from the system in a controlled and fully audited manner. They can be archived or deleted; see the Library Deletion topic in the Definitions section of this product guide for more information.

If you want to remove a library that is likely to be used in the future, then it should be archived. Two saves to off-line storage are made. This reduces the dependence on a single storage media in the unlikely event that it is faulty.

Note: To flag a library for archiving, use the User Libraries activity in Operational Enquiries.

All libraries flagged for archiving will be saved as save files by the following Housekeeping overnight routine.

Note: If you use the Control Information activity to perform cyclic backups, then archived libraries are saved using the select method.

## Libraries Archiving Routine Entry Select Method Window



To display this window, select the **Archived Libraries** activity from Save to Media. Your normal backup method must be to select for archiving.

You can view libraries not saved overnight and save those not saved.

Tip: The window displayed is determined by the normal backup method in use.

```
HK700                               Housekeeping                               System: STUDB30A
Libraries Archiving Routine Entry - Select Method

You have selected the option to run the Libraries Archiving routine.
There are outstanding Libraries to be Archived.

Any Saves to Save Files will have been made to Library OSLARCLIB.
The Auto-backup routine will, if possible, have saved all Libraries to
Save Files. The Archive Backup List will show whether or not this has
happened.

By taking option 1 below you will be presented with a list of the
Libraries which were not saved to Save Files by the Auto-backup routine.
If there are none then Backups may be made from the Save Files by taking
option 2 below.

Type option, press ENTER

1=Save Libraries Not Saved to Save Files.
2=Save Libraries from Save Files.
Option _

F3=Exit
```

Fields

Option

Enter one of the following:

1 - To save those libraries to media which have not been saved to save files by Housekeeping's overnight routines

2 - To save those libraries to media which have been saved to save files by Housekeeping's overnight routines

➔ Enter the required option and press **Enter**.

Library Archiving Archive Save File to Media Window

➔ To display this window, enter the required option on the Libraries Archiving Routine Entry Select Method window.

If there are no libraries to save, then a window will be displayed informing you of this. Select a library to be archived.



Fields

Option (Opt)

Enter 1 against the library that you wish to save to media.

➔ Press **Enter** to submit the archive instruction.

Library Archiving Archive Save File to Media Select Media Window

➔ To display this window, select a library on the Library Archiving Archive Save File to Media Select Library window.

Enter the media details for the archive.

```
HK710                               Housekeeping                               System: STUCB30A
Library Archiving - Archive Save File to Media

You have selected to save the following:-
Library  IPGMF3    Application Manager Files

If you wish to save this library specify the relevant details below.

Type in details, and press ENTER to accept.

Media Type  _      1=Cartridge, 2=Diskette, 3=Tape
Volume ID   _____
Location    . _____

F3=Exit    F12=Previous
```

## Fields

### Media Type

Enter **1** for cartridge, **2** for diskette or **3** for tape.

### Volume ID

Enter the volume ID of the media to be used. This must be a unique media ID.

### Location

You can enter the location of the media. This is your identifier for the location of the volume, for example, shelf number or position.

Tip: You can initialise the media to the specified volume ID before performing the save by selecting **F24=Initialise Media**.



Load the required media and press **Enter** to perform the save.

## Libraries Archiving Mass Archives Select Group Window



To display this window, select option **1** on the Libraries Archiving Routine Entry Select Method Save to Media window and press **Enter**.

A list of the library save groups is displayed. Housekeeping organises libraries into these save groups so that a group of libraries can be saved onto a single media volume. A library will not be saved across two volumes.

```

HK715                               Housekeeping                               System: STUDB30A
Libraries Archiving - Mass Archives

You have selected the option to perform the MASS Archive to CARTRIDGE.
You require      6 Cartridges to perform the outstanding archiving.
REMEMBER - EACH SAVE GROUP MUST BE SAVED TWICE

Type option
1=Select for Archiving
Opt Save Group  Size (Mb)  No.of Libraries  No.of Saves
  1              2          2                  0
  2             123         1                  0
  3             7895        1                  0

Bottom
F3=Exit

```

### Fields

#### Option (Opt)

Enter **1** against the save group you wish to save to media.

Tip: If there are no libraries to save, a window is displayed informing you of this.

## Libraries Archiving Mass Archives Select Media Window



To display this window, select a group on the Libraries Archiving Mass Archives Select Group window.

This displays details of the save group you selected.

After the save has been completed, you will return to the save group selection window unless there are no more save groups to save.

Note: An audit report is produced automatically, listing the libraries saved to each media volume and the sequence in which they were saved.

```
HK715                               Housekeeping                               System: STUDB30A
Libraries Archiving - Mass Archives

You have selected to save group      2
This save group has a total size of   123 Mb
and contains                          1 libraries.

This is the FIRST save of this save group.
Enter below the Volume Id and Location of the Save CARTRIDGE.

Type in details, and press ENTER to perform save

Volume ID  _____
Location   _____

F3=Exit   F12=Previous   F24=Initialise Media
```

## Fields

### Volume ID

Enter the volume ID of the media to be used. This must be a unique media ID

Note: If you wish to re-use existing media, see the Free Library Media section of this product guide.

### Location

You can enter the location of the media. This is your identifier for the location of the volume.

## Functions

### F24=Initialise Media

Use this to initialise the media before performing the save.



Load the required media and press **Enter** to perform the save.

## Folders

The Housekeeping overnight routines will have calculated which folders are due to be saved.

Note: Overnight routines are created from Execute Day-End Functions.

A list of the folder save groups is displayed. Housekeeping organises folders into these save groups so that a group of folders can be saved onto a single media volume. A folder will not be saved across two volumes.

## Folder Backups Mass Backups Window



To display this window, select the **Save to Media Folders** activity.

Select a folder group to be saved.

```

HK755                               Housekeeping                               Syst em: STUDB30A
Folder Backups - Mass Backups
You have selected the option to perform the MASS Backup to CART RIDGE.
You require      1 Cartridges to perform the outstanding backups .

Type option
1-Select for Backup
Opt  Save Group  Size (Mb)  No.of Folders
  1      1          8          3

Bottom
F3=Exit
  
```

## Fields

### Option (Opt)

Enter **1** against the save group you want to save to media.

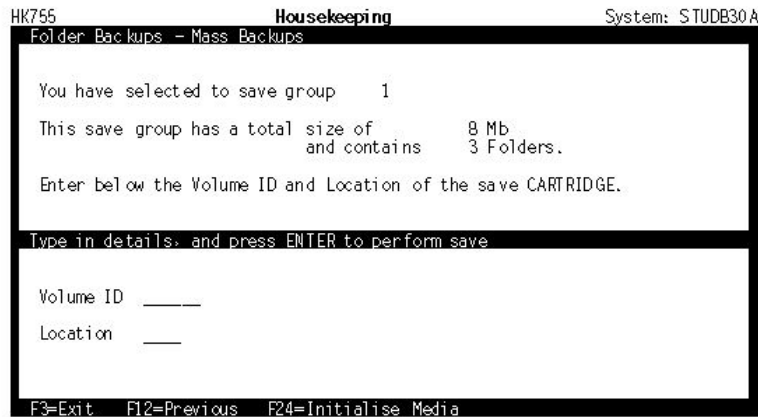
Tip: If there are no folders to save, a window is displayed informing you of this.

## Folder Backups Mass Backups Select Media Window



To display this window, select a group to be backed up on the Folder Backups Mass Backups window.

Details of your selected save group are displayed.



### Fields

#### Volume ID

Enter the volume ID of the media to be used. This must be a unique media ID.

Note: If you wish to re-use existing media, refer to the Free Folder Media section of this product guide.

#### Location

You can enter the location of the media. This is your identifier for the location of the volume.

### Functions

#### F24=Initialise Media

Use this to initialise the media before performing the save.



Load the required media and press **Enter** to perform the save.

After the save has been completed, you will be returned to the save group selection window unless there are no more save groups to save.

Note: An audit report is produced automatically, listing the folders saved to each media volume and the sequence in which they were saved.



## Off-Site Libraries

The Housekeeping overnight routines will have saved a group of libraries belonging to an off-site save group to save files. The off-site save group which will have been saved is determined by the Select Off-Site Save Group function which must be run before the initiation of the Off-Site Libraries Day-End routine (refer to the Off-Site Libraries section in the Execute Day-End Functions topic).

A list of the saved library volume groups is displayed. Housekeeping organises saved libraries into these volume groups so that a group of saved libraries can be saved onto a single media volume. A library will not be saved across two volumes.

Note: Archived Libraries are backed up twice and then flagged for deletion from the system. Libraries assigned to an off-site save group do not get flagged for deletion; they just get additional backups made, as a set, which are beyond the normal or regular backups as individuals by the Libraries Auto-Management routine.

## Library Save Groups Backups Mass Backups Window



To display this window, select the **Off-Site Libraries** activity from Save to Media.

Select the group for backup.

```

HK765                               Housekeeping                               System: STUDB30A
Library Save Groups Backups - Mass Backups
You have selected the option to perform the MASS Backup to CART RIDGE.
You require      1 Cartridges to perform the outstanding backups .
Type option
1=Select for Backup
Opt  Save Group  Size (Mb)  No.of Libraries
  1      1          1          2
F3=Exit                                     Bottom

```

### Fields

#### Option (Opt)

Enter **1** against the save group you want to save to media.

Tip: If there are no libraries to save, a window will be displayed informing you of this.

## Library Save Groups Backups Mass Backups Select Media Window

- To display this window select a group on the Library Save Groups Backups Mass Backups window.

Details of the save group you have selected are displayed at the top of the window.

After completing the save, you will return to the Save Group Selection window, unless there are no more groups to save.

**Note:** An audit report is produced automatically, listing the libraries saved to each media volume and the sequence in which they were saved.

```
HK765          Housekeeping          System: STUDB30A
Library Save Groups Backups - Mass Backups

You have selected to save group      1
This save group has a total size of    1 Mb
and contains                          2 Libraries.

Enter below the Volume ID and Location of the save CARTRIDGE.

Type in details, and press ENTER to perform save

Volume ID  _____
Location   _____

F3=Exit  F12=Previous  F24=Initialise Media
```

### Fields

#### Volume ID

Enter the volume ID of the media to be used. This must be a unique media ID.

**Note:** If you wish to re-use existing media, see the Free Library Media section of this product guide.

#### Location

Enter the location of the media. This is your identifier for the location of the volume.

### Functions

#### F24=Initialise Media

Use this to initialise the media before performing the save.

- Load the required media and press **Enter** to perform the save.

# Housekeeping Files

One of the principal functions of Housekeeping is to produce an accurate history of library saves. This log is important if you need to restore a library. It is of even greater importance if you need to restore a system. In this case, Housekeeping needs to be restored initially to tell the Installation Manager where to find the latest save of each library, so that they can be restored. The most accurate picture of the saves performed is immediately after all the backups have been completed. If you rely on the save of the Housekeeping files library by the Housekeeping overnight routine, details of the day's backups are not reflected in the current save of the Housekeeping files.

It is recommended, therefore, that the Housekeeping file save routine be performed as a separate activity, after the backups have been completed. The option to restore Housekeeping files, as one of the first steps in the recovery process, is also available.

## SAVLIB Failure

The failure of the Libraries Auto-backups routine to save a library to save file may occur for any of the reasons that may cause the command SAVLIB to fail. Most commonly this will be due to the user of the routine not having sufficient authority to the library, or due to there being locks held on the library. When saves are not made because the given system auxiliary storage usage limit would be exceeded, a message is sent to the message queue HKSAVERR.

## Save Housekeeping Files

The Save Housekeeping Files operation should be routinely carried out after all of the other save operations have been completed, so that the data saved, fully records the current state of all of the saves known to Housekeeping. If the execution of a Save Housekeeping Files operation is interrupted before it completes normally, there may be copies of the Housekeeping files, which would normally be deleted by the operation, left in the library QTEMP. These should be deleted, or the job (session) ended, before any further Housekeeping operations are carried out, to prevent the copies rather than the real files from being updated.

## Save Housekeeping Files Window



To display this window select option **5** from Save to Media and press **Enter**.

Select the save media details.

```
HK990                               Housekeeping                               System: STUDB30A
Save Housekeeping Files

You have selected the option to Save the Housekeeping Data Files to
off-line storage Media.

Temporary copies of the Files will be made and these then saved, and a
report of the save details produced.

Details from the previous run of this routine are shown.

NOTE: The Media will firstly be initialised.

Type details, press Enter.

Save to Media Type . _ (1=cartridge, 3=tape)
Save to Media Volume _____

F3=Exit
```

## Fields

### Save to Media Type

Enter one of the following:

- 1 - Save to cartridge.
- 3 - Save to tape.

### Save to Media Volume

You can enter the volume ID of the media to be used. This must be a unique media ID.

Note: If the media volume you enter is already in use, you cannot use it to save Housekeeping files. If the media has not been used before or has been used previously for Housekeeping files it is now initialised.



Press **Enter** to perform the save.

## Free Library Media

Use this activity to free up media that you have previously saved libraries onto. You can only free up media, which contain no active libraries. In other words, all the libraries must have subsequently been saved to off-line media.

### Select Library Save Media to Free Window



To display this window select the **Free Library Media** activity from Save to Media.

A list of all the media available to free up is displayed.

### Reports

Reports detailing the following are automatically produced:

- Media available to be made free
- Media which contains active backups, and so must be kept
- Media you have selected to be freed

HK505 Housekeeping System: STUDB30A

Select Library Save Media to Free

Type options, and press ENTER

1=Select to free

Opt	Media Type	Volume ID	Location	Backup Type
-	CARTRIDGE	MB0003	T525	MASS
-	CARTRIDGE	MB0004	S857	MASS
-	CARTRIDGE	MB0008	R986	MASS
-	CARTRIDGE	MB0012	T258	MASS
-	CARTRIDGE	MB0013	Y826	MASS
-	CARTRIDGE	MB0027	S565	MASS
-	CARTRIDGE	MB0850	D552	MASS

F3=Exit F15=Media to Keep Bottom

### Fields

#### Option (Opt)

Enter 1 against the media you want to free up for future use.



A prompt window is displayed for you to confirm the selections you have made.

### Functions

#### F15=Media to Keep

Use this to display the Display Library Save Media to Keep window.

## Display Library Save Media to Keep Window



To display this window, select **F15=Media to Keep** on the Select Library Save Media to Free window.

This window details the media to keep: that is, media that contains at least one active library.

```
HK505                               Housekeeping                               System: STUDB30A
Display Library Save Media to Keep
Type options, and press ENTER
1=Display details
Opt  Media Type  Volume ID  Location  Backup Type  No. of active
      CARTRIDGE  NB0500    ST48     MASS        1
  1  CARTRIDGE  NB0501    ST48     MASS        1
  -  CARTRIDGE  NB0503    ST52     MASS        30
Bottom.
```

### Fields

#### Option (Opt)

Enter **1** against a media volume to display full information about the libraries it contains.



Select a media volume to display the Force Save window.

## Display Media Volume Details Force Save Window



To display this window, select a media volume on the Display Library Save Media to Keep window.

This window displays the details for the selected media volume. This includes all of the libraries contained on the media.

**Note:** The force save will save the library or libraries selected as part of the next Housekeeping overnight routines. Once those saves have been saved to media, the library is no longer active on this particular media volume, and this can be freed.

```

HK505                               Housekeeping                               System: STUDB30A
Display Media Volume Details
Media Type CARTRIDGE Volume ID MB0501 Location ST4 B Backup Type MASS
Type options, and press ENTER
1=Single Force Save
0 Library Text Active Messages F
_ IPGAMP3 Application Manager Progr *YES S
F12=Previous                               Bottom

```

### Fields

#### Select (O)

To free up media for subsequent saves, select an active library to force save by entering **1** alongside the library.



Press **Enter** to display the next window.

## Free Folder Media

Use this activity to free up media that you have previously saved folders onto. You can free up media, which contains no active folders; that is, all the folders must have subsequently been saved to off-line media.

### Select Folder Save Media to Free Window



To display this window, select the **Free folder Media** activity from Save to Media.

A window containing a list of all media available to be freed will be displayed.

### Reports

Reports detailing the following are automatically produced:

- Media available to freed up for re-use
- Media that contains active folders and so must be kept
- Media you have selected to free up



### Fields

#### Option (Opt)

Enter **1** against the media you want to free up for future use.



A prompt window will then be displayed for you to confirm the selections you have made.



## Chapter 4 - Operational Enquiries

# Introduction to Operational Enquiries

Use Housekeeping's operational enquiries to enquire about the following:

- Libraries
- Folders
- Media
- Deletion Requests
- Deletion Audit
- Libraries Total Size History

In addition to performing management information tasks, you can also use these enquiries to initiate various functions elsewhere in the system. For example, you can initiate the archiving of a library from the User Libraries enquiry.

# Housekeeping Message Queues

This section identifies the types of message that appear in specific message queues.

## **Deletions Message Queue**

Messages relating to Housekeeping Library Deletion operations appear on this message queue.

## **HKSAVERR**

### **Housekeeping Save Error Message Queue**

If a library is not saved to save file by the Libraries Auto-backups routine because the system auxiliary storage usage limit would be exceeded, then a message will be sent to this message queue.

# User Libraries

Use this activity to enquire on the libraries created for a selected user name.

Note: The library owner in the Housekeeping module is not necessarily the same as the owner of the OS/400 \*Lib Object.

## Display User Libraries Window



To display this window, select the **User Libraries** activity from Operational Enquiries.

The window displays all the libraries defined to Housekeeping which are owned by the chosen user. This defaults to the current user's libraries.

Tip: To display a list of user IDs from which to select, select the User Libraries activity and select **F4** instead of pressing **Enter**.

HK120 Housekeeping System: STUDB30A

Display User Libraries

User PEARSONC

Type options, and press ENTER

1=Enquire, 2=Amend, 3=Single Force Save, 4=Archive

Library	Date Changed	Date Last Checked	Last Save Date	to Media Days Ago	Save Freq	Library Size	A S F F
0 Library							
- IPGAGX3S	13/05/91	14/06/91	21/06/91	13	1 *	0.30 K	Y
- IPGAMD3	13/06/91	14/06/91	21/06/91	13	1 *	0.31 M	Y
I IPGAMP3	14/06/91	14/06/91	21/06/91	13	1 *	0.96 M	Y
- IPGAMS3	13/06/91	14/06/91	21/06/91	13	1 *	0.10 M	Y
- IPGAMX3	13/06/91	14/06/91	21/06/91	13	1 *	0.00 M	
- IPGCFD3	8/06/91	14/06/91	13/02/91	141	999	0.09 M	
- IPGCFE3	14/06/91	14/06/91	13/02/91	141	999	0.41 K	
- IPGCFP3	14/06/91	14/06/91	13/02/91	141	999	0.99 M	
- IPGCFQ3	0/00/00	0/00/00	13/02/91	141	999	0.00 K	
- IPGCFX3S	14/06/91	14/06/91	21/06/91	13	1 *	0.09 M	
- IPGMMD3	10/06/91	14/06/91	21/06/91	13	1 *	0.52 M	
- IPGMNF3	14/06/91	14/06/91	21/06/91	13	1 *	0.89 K	

F3=Exit F5=Refresh More...

## Fields

### Option

Enter one of the following:

- 1 - To enquire on library details
- 2 - To maintain library details

This takes you to the Manage Library Details window. See the Manage Library Details Window section of this product guide for further information.

- 3 - To force the library to be saved tonight or by the next overnight routine
- 4 - To archive the library

See the Archiving Libraries topic in the Save to Media (Execute Day-End) Functions section of this product guide for further information.

**Library**

This is the library name.

**Date Last Changed**

This is the date on which the library was last changed.

**Date Last Checked**

This is the date on which the library was last checked.

**Date Last Saved to Media**

This is the date on which the library was last saved to off-line media.

**Last Saved Days Ago**

This is the number of days since the last save.

**Save Freq.**

This is the number of days between each save. A value of 0 or 999 indicates a library which is never to be saved to off-line media.

Note: A flashing asterisk (\*) next to this field indicates that this library is overdue for a save.

**Library Size**

This is the library size at the date last checked.

**Af**

This displays the current archive flag. It shows **Y** when an archive is pending.

**Sf**

A **1** in this column indicates that this library is to be force saved tonight.



Select an item and press **Enter** to display the library details.

## Enquire on Library Details Window



To display this window, select a library on the Display User Libraries window with a 1.

The details of the selected library are displayed.

You can use this to enquire on details of libraries that have been deleted from the system.

Tip: You can refer to the Manage Definitions - Libraries topic in the Definitions section of this product guide for information on setting up the window details in this enquiry.

```

HK121                               Housekeeping                               System: STUDB30.A
Enquire on Library Details
Library  IPGAMP3
Text . . . . . Application Manager Program Library
Further text . . . . .

Owner . . . . . PEARSONC

Library Type . . . . . D      Library Contents Code . . . P
Re-organise Files (1/0) . . . 1  Compression Required (1/0) 1
Force Save (1/0) . . . . . 1  Save frequency (days) . . . 1
Off-Site Save Group . . . . . Expiry Date . . . . . 99/99/99

Application Code . . . . .      Release Level . . . . .
Application Source (J/O/U) . . . Environment . . . . .

F3=Exit  F5=Dsp Ctl  F6=Size History  F12=Previous
    
```

## Functions

### F5=Dsp Ctl

Use this to display the save control details for the library.

### F6=Size History

Use this to display size history in a bar chart format.

### F11>Delete Details

This is only available when you are enquiring on the details of a library that is no longer on the system. You will be asked for confirmation and then all details about this library will be deleted from Housekeeping. This includes records of backups.

Note: You can maintain those deleted details by creating a new library, the backups of which would supersede those of the old library.

## User Folders

Use this enquiry to display all folders owned by a single user.

### Display User Folders Window



To display this window, select the User Folders activity from Operational Enquiries.

Note: This defaults to the current user's folders. If you wish to view the folders owned by another user enter the command: DSPMYFLRUSER(uuuuuuuu)

The window lists all the folders defined to Housekeeping which are owned by the chosen user.

HK270 Housekeeping System: STUDB30A

Display User Folders

User PEARSONC

Type options, and press ENTER

1=Enquiry, 2=Amend, 3=Single Force Save

0 Folder

	Int.Name	Save Freq	Date last saved to Save File	Date last saved to Media	Over -due	Force Save	Single Force Save
1	PEARSONC / 1 FL#0000109	2	1/07/91	2/07/91 11:04:48			N

F3=Exit Bottom

This window highlights the external folder name and internal or system reference, as well as the latest save details. The flashing asterisk (\*) indicates those folders which are overdue for a save.

The Force Save column indicates whether a folder is to be force saved. If a force save has been requested, Y is displayed in this column.

### Fields

#### Option

Enter one of the following:

- 1 - To enquire on folder details
- 2 - To maintain folder details

The Manage Folder window is displayed. See the Folders topic in the Definition section of this product guide for full details of this function.

- 3 - To force the folder to be saved by the next overnight routine

See the Folders topic in the Execute Day-End Functions section of this product guide for further information.



Select a folder with **1**, **2** or **3**, or select **F3=Exit**.

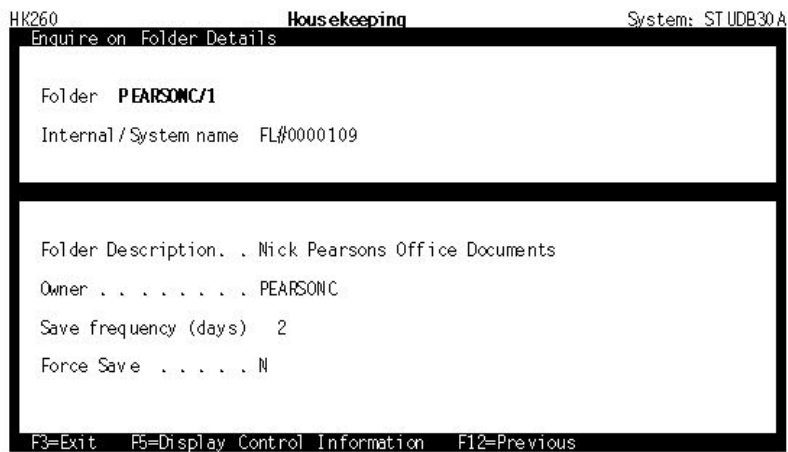


## Enquire on Folder Details Window



To display this window, select a user folder on the Display User Folder window.

This window displays the details for the folder.



## Functions

### F5=Display Control Information

Use this to display save details.

## Display Media Window

→ To display this window select the **Media** activity from Operational Enquiries.

Use this activity to enquire upon active off-line storage media, and the libraries which they contain.

```

HK130                               Housekeeping                               System: STUDB30.A
Display Media
Media Type  1      (1=Cartridge, 2=Diskette, 3=Tape)
Volume ID   _____
Location    _____
F3=Exit
  
```

### Fields

#### Media Type

Enter the media type on which to enquire:

- 1 - Cartridge
- 2 - Diskette
- 3 - Tape

#### Volume ID

For a specific media volume, enter the ID. Omit this to display all the volumes for a media type.

#### Location

You can enter the location of the media volume. This is your identifier for the location of the volume; for example, the shelf number position.

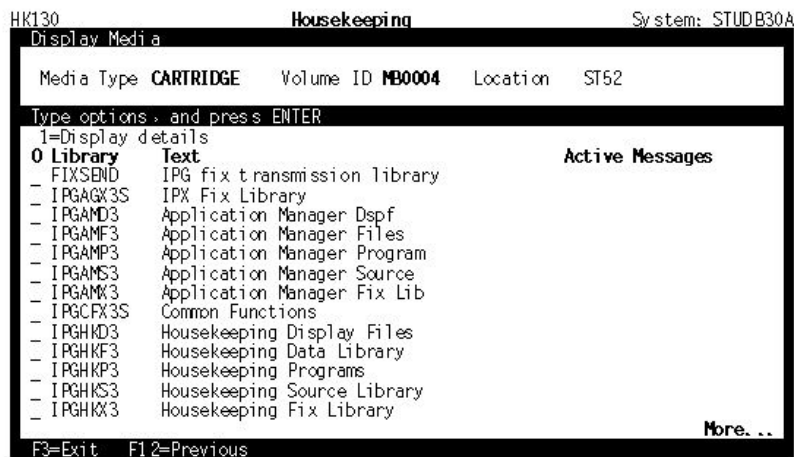
Note: You do not need to enter all of the parameters. For example, if you wish to enquire upon all cartridges, simply enter **1** in media type.

→ When you have made your selections, press **Enter**.

## Display Media Select Library Window

→ To display this window, select the media type and details on the Display Media window.

Once you have selected a single media volume, a window is displayed listing all the libraries it contains.



This listing shows the library name and description, and the current active details. If this library save is the latest one recorded by Housekeeping, **\*Yes** will appear in the Active Messages column.

#### Option (O)

Enter **1** against a library to display individual library details. See the Libraries topic in the Definitions section of this product guide for an explanation of these details.

## Deletion Requests

Use this activity to enquire on all of the libraries that have an outstanding deletion request.

### Display Library Deletion Requests Window



To display this window, select the Deletion Requests activity from the Operational Enquiries.

The window displays the library to be deleted, who requested the deletion, from which terminal, the date and time of the request, and whether a security save was requested to be made before the deletion.

Library	Deletion Requestor	From Terminal	On Date	At Time	Security Save
NYTEST	BRIGHTN	VRTDSP03	20/05/91	12:55:45	NO

HK400 Housekeeping System: STUDB30A  
 Display Library Deletion Requests  
 Bottom  
 F3=Exit

All libraries shown will be deleted by the next overnight routine. They will be deleted if there is no outstanding save request. If there is an outstanding save request that is processed, then the save request is switched off and the library will then be deleted by the next run of the routines.



If you are signed on as QSECOFR you can delete the library there and then interactively, providing it has no outstanding save requests.

See the Libraries topic in the Execute Day-End Functions section of this product guide for further information.

# Deletion Audit

Use this activity to enquire on the complete history of library deletion requests.

Library deletion may fail because:

## Display the Library Deletions Audit Trail Window



To display this window, select the **Deletion Audit** activity from Operational Enquiries.

Use this window to scroll through the list of deletion requests and view their current action status. You can enter the first character to the library name and select the Position To function.

This list is in the alphabetical sequence of the library name. A history is kept of deletion requests, successful deletions and unsuccessful deletion attempts.

```

HK450                               Housekeeping                               System: STUDDENT
Display the Library Deletions Audit Trail
Position list to _____
Library  Requestor  Terminal  On Date  At Time  Save  Action
AA       "       HALLSJ    DSP10    25/01/93 12:16:28 NO  Delete Requested
"       "       HALLSJ    DSP10    25/01/93 22:35:29 NO  Delete Successful
"       "       QSECOFR  DSP10    12/02/93 12:21:36 YES Delete Requested
"       "       QSECOFR  DSP10    12/02/93 12:23:49 YES Delete Cancelled
"       "       QSECOFR  DSP10    12/02/93 12:23:57 NO  Delete Requested
"       "       QSECOFR  DSP10    12/02/93 12:31:28 NO  Delete Successful
ABC123   YATESR    DSP16    28/09/92 17:46:04 NO  Delete Requested
"       "       YATESR    DSP16    29/09/92   3:54 NO  Delete Successful
ADCYCLEVID QSECOFR  DSP10    12/02/93 12:22:23 YES Delete Requested
"       "       QSECOFR  DSP10    12/02/93 12:22:27 YES Delete Cancelled
"       "       QSECOFR  DSP10    12/02/93 12:22:32 NO  Delete Requested
"       "       QSECOFR  DSP10    12/02/93 12:24:05 NO  Delete Cancelled
"       "       QSECOFR  DSP10    12/02/93 12:24:10 NO  Delete Requested
"       "       QSECOFR  DSP10    12/02/93 12:31:33 NO  Delete Successful
BASSDEMO QSECOFR  DSP10    12/02/93 12:24:31 NO  Delete Requested
"       "       QSECOFR  DSP10    12/02/93 12:31:37 NO  Delete Successful
More...
F3=Exit  F4=Re-Position
  
```

Details are listed for the library, the user requesting the deletion, the terminal from which it was requested, the date and time and whether an off-line save has been made. The Action column shows the status of the deletion request.

## Fields

### Position List To

Use this field to reposition the list from a specified library.

Enter the library name and then select **F4=Re-Position**. You can enter a partial library or just the first character of the library.

## Functions

### F4=Reposition

Use this to enter the Library name at which the list should be repositioned.



Select **F3=Exit** to leave the activity.

# Libraries Total Size History

This activity provides a bar chart showing, chronologically, the size of all libraries defined to Housekeeping.

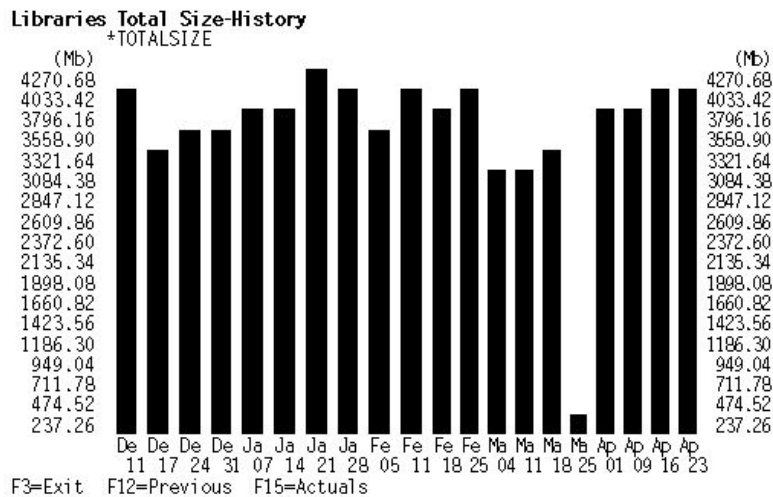
The bar chart will be re-built when you select the Resize Libraries activity from Execute Day-End Functions.

## Libraries Total Size History Window



To display this window select the Libraries Total Size History activity from Operational Enquiries.

Use this window to view a bar chart of the total size history of all current Housekeeping libraries.



The last twenty changes to the size of your libraries are displayed in megabyte size.

## Functions

### F15=Actuals

Use this to change the window to list the date and size values which were used to build the bar chart.



Select **F12=Previous** to return to the previous window or **F3=Exit** to leave the activity.

## Chapter 5 - Documentation



## Library Name

This report details all of the libraries on your system, regardless of whether or not they have been defined to Housekeeping. The report information includes:

- Library name and text
- Date and time last saved
- Last save media type and location
- Messages, for example "Not defined to Housekeeping", "Never saved"



Select the **Library Name** activity from Documentation. Press **Enter** to submit a batch job to produce the report. You can choose to exit without producing the report.

# Library Last Saved Date

This report sequences libraries by the date they were last saved. The following details are included in the report:

- Library name and text
- Date and time last saved
- Last save media type and location
- Messages, for example "Not defined to Housekeeping", "Never saved"



Select the **Library Last Saved Date** activity from Documentation. Press **Enter** to submit a batch job to produce the report. You can choose to exit without producing the report.

## Library Owner

This report provides the following information, sequencing by the library owner:

- Library name and text
- Date and time last saved
- Last save media type and location
- Messages, for example "Not defined to Housekeeping", "Never saved"



Select the **Library Last Saved Date** activity from Documentation. Press **Enter** to submit a batch job to produce the report. You can choose to exit without producing the report.

# Library Size

This report is sequenced by library owner and then library size. It provides the following information:

- Library owner
- Library name and text
- Library size

Note: The library size details are as at the last time the library sizing routines were run. Refer to the Re-size Libraries topic in the Execute Day-end Functions section of this product guide.



Select the **Library Size** activity from Documentation. Press **Enter** to submit a batch job to produce the report. You can choose to exit without producing the report.

# Not Changed Since Given Date

Use this report to determine those libraries that may be obsolete.

## Libraries Not Changed Since Date Report Enter Date Window

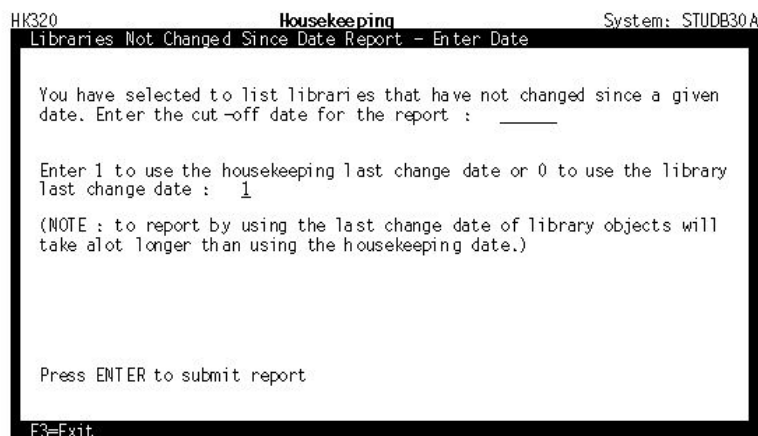


To display this window select the **Not Changed Since Given Date** activity from Documentation.

The report contains the following information:

- Library name and text
- Library owner
- Last saved date and time
- Last saved media type and location
- Last changed date
- Date last checked by Housekeeping

Note: The date a library was last re-sized is either when the re-size libraries day-end function was run, or if its save frequency indicates it should have been saved.



## Fields

### Cut-off Date

You can select a date from which to test whether or not the library has changed.

You can either use the last change date held within the Housekeeping files, or you can examine the last change date held against each of the objects contained within each library.

Note: If you choose to use the library object last change date, then depending on the number of libraries and the number of objects contained within those libraries, this function could take a long time to process.



Press **Enter** to submit a batch job to produce the report. You can choose to exit without producing the report.

## Passed Expiry Date

This activity produces a report of those libraries, which have passed their expiry date. The library expiry date is contained within the library definition.

The report contains the following information:

- Library name and text
- Date and time last saved
- Last save media type and location
- Messages, for example "Not defined to Housekeeping", "Never saved"



Select the **Passed Expiry Date** activity from Documentation. You can press **Enter** to submit a batch job to produce the report, or you can exit without producing the report.

## Library by Last Used Date

This report provides a list of libraries sorted by the date they were last used. The report provides the following information, sequenced by last changed date.

- Library name and text
- Last changed date
- Library size
- Library creator
- Library owner

## Libraries Last Changed Date Report Window



To display this window, select the **Library by Last Used Date** activity from Documentation.

Use this window to select which last change date should be used for the report.

```

HK328CLP                               Housekeeping                               System: STUDENT
Libraries Last Changed Date Report

You have selected to list all libraries showing the date when they were
last changed.

Enter 1 to use the housekeeping last change date or 0 to use the library
last change date :  1

(NOTE : access to the last changed date is considerably quicker via
housekeeping.)

Press ENTER to submit report

F3=Exit
  
```

### Fields

#### Last Change Date

Enter one of the following:

- 0** - To use the last change date held by the OS/400
- 1** - To use the last change date held by Housekeeping

Note: The last used date within OS/400 is held at object, not library, level. Thus, if you select to use the library last change date held by Housekeeping the report is produced more quickly.



Press **Enter** to submit the report or select **F3=Exit** to leave the activity without submission.



## Chapter 6 - Execute Day-end Functions

## Introduction to Execute Day-end Functions

Housekeeping's day-end functions perform two major activities:

- The saving of libraries and folders to save files for subsequent saving to media

See the Save to Media section of this product guide for further information.

- Activities to make best use of your iSeries 400:
  - Deleting libraries not defined to Housekeeping
  - Compressing libraries
  - Re-organising the physical files contained within libraries

The above activities should be performed as part of an overnight routine. To perform them on a regular basis it is recommended that they be run as part of [Machine Manager](#)'s auto day-end.

[Machine Manager](#) is provided with Housekeeping's day-end functions as standard jobs (for more information see the Auto Day-end Jobs section of the [Machine Manager](#) product guide). This makes the setting up of these tasks very simple.

Before you initiate any of the day-end functions, you should first make sure that you have set up Housekeeping's control details and definitions. See the Control Details and Definitions sections of this product guide for further information.

# Housekeeping Auto Day-end Routines

This section deals with the day-end activities and routines that form part of the Housekeeping functionality.

Tip: Infor recommend that you set up the Housekeeping auto day-end routines to run under the control of Machine Manager.

## Libraries Auto Backups

This routine calls program HK900CLP, which is run by the batch job submitted from the Libraries activity in Execute Day-end Functions. It clears work libraries (those with a Housekeeping library type code of **W**).

It attempts to delete:

- Libraries flagged for deletion, which do not have an outstanding request for a security save
- Libraries which have been archived to off-line storage media.

It attempts to save:

- Libraries that require a security save before deletion
- Libraries with their Force Single Save Flag set to 1
- Libraries which are due for backup because of their save frequency and their Force Save flag setting, or because changes have been made since their last save
- Libraries which have been flagged for archiving

## Folders Auto Backups

This routine calls program HK970CLP, which is run by the batch job submitted from the Folders activity in Execute Day-end Functions. It will attempt to:

- Save folders with their Force Single Save flag set to 1
- Save folders which are due for backup because of their save frequency and their Force Save flag being set, or because changes have been made since their last save

## Libraries Save Groups Auto Backups

This routine calls program HK975CLP, which is run by the batch job submitted from the Off-site Libraries activity in Execute Day-end Functions. It attempts to save libraries assigned to the save group selected via the Select Library Save Group to be Saved activity.

### Size All Libraries

This routine calls program HK903CLP, which is run by the batch job submitted by the Resize Libraries activity within Execute Day-end Functions. It will measure the size of all of the libraries on the system and can take a very long time to run.

# Libraries

This function performs the following activities:

- Saving libraries to save files
- Deleting libraries tagged for deletion
- Saving archives to save files, which after saving off-line are tagged for deletion

The deletion will not take place if a security copy was requested and this has not yet been performed.

- Deleting libraries tagged for archiving

See the User Libraries section of this product guide for further information.

- Clearing out work libraries

See the Library Types section of this product guide for further information.

- Re-sizing libraries and analysing when they last changed, if the library save frequency indicates they should be saved

A library will be saved to a save file specified in Housekeeping's control details if any one of the following applies:

- The library is due for saving; that is, the number of days since the last save to media equals or exceeds the library's save frequency, and the library has changed since the last save to media.

A library's save frequency is maintained via Library Definitions.

- The library is due for saving and the Force Save flag is set to 1 (Yes).

The Force Save flag is maintained via Library Definitions.

- The library has been flagged for deletion and a security save to media has been requested.

See the sections on Library Deletion, Deletion Requests, and Deletion Audit within this product guide for further information.

- The library has been flagged to be archived.

See the User Libraries section of this product guide, which explains the way in which a library is flagged to be archived.

- The library has been flagged for a forced save at the current day-end.

A library can have been flagged for a forced save at the current day-end either by the User Libraries activity or the Free Library Media activity.

Once the save to save file has been completed, the library can then be saved to media. See the Libraries topic in the Save to Media section of this product guide for further information.

### Libraries Not Saved

There are a number of situations in which a save is not performed even though Housekeeping calculates that a library is due to be saved to a save file. These are as follows:

- If the library is in use
- If the user who initiates the day-end function has insufficient authority to perform the save
- If the disk overhead in auxiliary storage used by the save file generated can cause critical storage to be reached or passed

Before Housekeeping performs the saves to save file it calculates the potential storage needed for each library. If the total potential storage needed exceeds Housekeeping's critical storage threshold, the save to save file will not occur.

Note: The data area HKDISKLMT holds the storage threshold at which saves to save files are to be terminated. This is initially set at 97%.

Note: Error messages from Housekeeping's day-end functions are sent to a message queue called HKSAVERR.



Select the **Libraries** activity from Execute Day-end Functions. The Libraries Auto-Backups Routine window is displayed. Press **Enter** to process the batch job. You can choose to exit without submission.

# Folders



Select the **Folders** activity from Execute Day-end Functions.

This activity performs the saving of those folders due to be saved to the save file specified in Housekeeping's control information.

A folder will be saved to the save file if one of the following applies:

- The folder is due for saving; that is, the number of days since the last save to media equals or exceeds the folder's save frequency, and the folder has changed since the last save to media.

Use the Folder Definitions activity to maintain a folder's save frequency.

- The folder is due for saving and the Force Save flag is set to 1 (Yes).

Use the Folder Definitions activity to maintain the Force Save flag.

- The folder has been flagged for a forced save at the current day-end.

See the Folders topic in the Operational Enquiries section of this product guide for a description of how a folder can be flagged for a forced save.

Once the save to save file has completed, the folder can be saved to media. See the Libraries section of this product guide for further information.

## Folders Not Saved

There are situations where the save is not performed even though Housekeeping calculates that a folder is due to be saved. These are as follows:

- If the folder is in use
- If the user who initiates the day-end function has insufficient authority to perform the save
- If the disk overhead in auxiliary storage used by the save file generated can cause critical storage to be reached or passed

Before Housekeeping performs the saves to save file, it calculates the potential storage needed for each folder. If the total potential storage needed exceeds Housekeeping's critical storage threshold, the save to save file will not occur.

Note: The data area HKDISKLMT holds the storage threshold at which saves to save files are to be terminated. This is initially set at 97%.

Note: Error messages from Housekeeping's Day-End functions are sent to a message queue called HKSAVERR.



Select the **Folders** activity from Execute Day-end Functions. The Folders Auto-backups Routine window is displayed. Press **Enter** to process the batch job. You can choose to exit without submission.



## Off-site Libraries

Each library can belong to a pre-defined group for the purpose of saving a number of libraries as a set, in order to store them at an off-site location. This group of libraries is known as an off-site save group.

Note: You use the Library Definitions activity to designate the off-site group to which a library belongs.

Only one off-site save group can be saved at any one time. The selection of a group of libraries to be saved is performed by the Select Off-site Group activity.

Note: Before you run the day-end activity to save off-site libraries, you must select an off-site group to be saved.

The libraries are saved to a save file, which can subsequently be saved directly to media. Refer to the Select Off-site Group section of this product guide for more information.

### Off-site Libraries Not Saved

There are a number of situations where the save is not performed even though Housekeeping calculates that a library is due to be saved to a save file. These are as follows:

- If the library is in use
- If the user who initiates the day-end function has insufficient authority to perform the save
- If the disk overhead in auxiliary storage used by the save file generated can cause critical storage to be reached or passed

Before Housekeeping performs the saves to save file it calculates the potential storage needed for each library. If the total potential storage needed exceeds Housekeeping's critical storage threshold, the save to save file will not occur.

Note: The data area HKDISKLMT holds the storage threshold at which saves to save files are to be terminated. This is initially set at 97%.

Note: Error messages from Housekeeping's Day-End functions are sent to a message queue called HKSAVERR.



Select the **Off-site Libraries** activity from Execute Day-end Functions. The Libraries Off-site Save Group Auto-Backups Routine window is displayed. Press **Enter** to process the batch job. You can choose to exit without submission.

## Select Off-site Group

Use this activity to select the off-site group which will be used by the next run of the day-end function to save off-site libraries.

Note: See the previous section on Off-site Libraries for further information.

## Select Save Group Window



To display this window select the **Select Off-site Group** activity from Execute Day-end Functions.

Use this window to select a save group.

```
HK150                               Housekeeping                               System: STUDB30A
Select Save Group

Enter the code of the Library Save Group to be saved by the next run of
the Auto-Backup Library Save Group routine.
If a Save Group has already been designated, it will be shown.
Press ENTER to update/confirm.

Save Group  _

F3=Exit  F4=Browse
```

### Fields

#### Save Group

Enter the code of the off-site save group that is to be saved in the next day-end run. When you enter a save group the last saved details are displayed for your information.



Press **Enter** to confirm or select **F3=Exit** to return without updating.

## Delete Unknown Libraries

Use this activity to delete from your AS/400 all libraries that are not known to Housekeeping.

Before doing so, you should ensure that the libraries you wish to retain are either defined to Housekeeping (via the Libraries activity in Definitions), or protected by the Protected Libraries activity in Control Details.

**Warning: It is very important that you check that the libraries you wish to keep are either defined to Housekeeping, or protected by the Protected Libraries Function.**



Select the **Delete Unknown Libraries** activity from Execute Day-end Functions. The Delete Unknown Libraries Routine window is displayed. Press **Enter** to process the batch job. You can choose to exit without submission.

## Reorganise Libraries

Use this activity to examine each library defined to Housekeeping and determine whether that library is flagged to have its files re-organised.

The physical files in each of the selected libraries will be re-organised.

The re-organisation of physical files frees up the space occupied by deleted records to make significant savings in storage.



Select the **Reorganise Libraries** activity from Execute Day-end Functions. The Reorganise Libraries Routine window is displayed. Press **Enter** to process the batch job. You can choose to exit without submission.

# Compress Libraries

Use this activity to examine each library defined to Housekeeping and determine whether that library is flagged to be compressed.

The programs in each selected library will have their observable information removed.

Removing the observability of program objects can lead to significant savings in disk space without affecting the performance of the program (though it does restrict the information provided by program dumps).

Note: Removal of the observable information from program objects restricts the information provided by program dumps. Therefore, it is advisable not to remove the observable information from programs until they are stable. All Infor products are shipped with the observable information removed.



Select the **Compress Libraries** activity from Execute Day-end Functions. The Compress Libraries Routine window is displayed. Press **Enter** to process the batch job. You can choose to exit without submission.

## Resize Libraries

Use this activity to examine each library defined to Housekeeping and determine its size. The library size information produced is used in a number of areas within Housekeeping:

- A libraries size history can be viewed in bar chart form.
- Housekeeping's documentation provides a report on Libraries Not Changed Since a Given Date, which utilises information provided by the library re-sizing routines.



Select the **Resize Libraries** activity from Execute Day-end Functions. The Libraries Resizing Routine window is displayed. Press **Enter** to process the batch job. You can choose to exit without submission.

## Set Direct to Media Vol ID

Use this activity to direct the next run of the Libraries Auto-Management routine (the overnight routine) to attempt to save libraries directly to off-line backups rather than saving to the save file.

### Maintain the Direct Backups Control Details Window



To display this window, select the **Set Direct to Media Vol ID** activity from Execute Day-end Functions.

Use this window to add a Volume ID to identify the backup. You can also create a volume ID here.

```

HK410                               Housekeeping                               System: STUDDENT
Maintain the Direct Backups Control Details

You have chosen to Control the Libraries' Automatic Direct Backups.

If you leave the Volume ID blank, the next run of the Libraries'
Auto-Management Routine will attempt to Save the Libraries that are to
be Backed Up to Save Files in the Backup Save Files Library.

If you enter a Volume ID, the next run of the Libraries' Auto-Management
Routine will attempt to Save the Libraries that are to be Backed Up to a
CARTRIDGE with that Volume ID, mounted on Device TAP01

If any Details have already been entered, then they will be shown.

Type in Details, and press ENTER
-----
Volume ID . . . . . _____
Location . . . . . _____
F3=Exit  F21=Initialise Media
  
```

### Fields

#### Volume ID

Leave this field blank to save the next automatic direct backup to your default backup save files.

Enter the volume ID to be used on the next automatic backup run. Libraries will be saved to tape with that ID on the usual device. The device is specified in the Control information for the Mass backup media type. Select **F21=Initialise Media** to create the volume ID.

#### Location

You can add location detail for your information only. This indicates where you are going to store the media.

### Functions

#### F21=Initialise Media

Use this to add your identifying name to a new media save. The Initialise Tape window is displayed. This function prompts the OS/400 Command INZTAP to initialise the media.



Press **Enter**. The Exit Prompt pop-up is displayed, with options to save the amended details or to exit without saving.

## Initialise Tape (INZTAP) Window



To display this window select **F21=Initialise Media** on the Set Direct to Media Vol ID Window.

This is a standard IBM OS/400 Command. See your IBM documentation for further information.



## Chapter 7 - Restore from Media

## Libraries

Use this activity to restore libraries from the media to which they were previously saved.

### Manage Library Restores Selection Window

➔ To display this window select the **Libraries** activity from Restore from Media.

Select a library to be restored.



### Fields

#### Library

Enter the name of the library you wish to restore.

➔ Select a library and press **Enter** to display the Manage Library Restores window.

## Manage Library Restores Window

- ➔ To display this window select a Library on the Manage Library Restores Selection window and press **Enter**.

This window displays all of the saves to media known to Housekeeping. The latest save is displayed at the top of the list.

```

HRB10                               Housekeeping                               System: STUDB3.0A
Manage Library Restores
Library  IPGAMP3      Application Manager Program Library
Type option and press ENTER
1=Select to Restore from
Opt Media  Volume ID  Location  Date & Time when Saved
- CARTRIDGE MB0005   ST15     21/06/91 at 10:06:28 MASS
- CARTRIDGE MB0004   ST22     20/06/91 at 10:06:25 MASS
- CARTRIDGE MB0003   ST27     19/06/91 at 7:04:07  MASS
Bottom
F3=Exit  F12=Previous

```

### Fields

#### Option (Opt)

Enter **1** alongside the media from which you want to restore this particular library.

- ➔ Press **Enter** and enter the device to use. This defaults from Housekeeping's control information.
- ➔ Load the media required and then press **Enter** to perform the restore.

# Housekeeping Files

In the event of a restore being required you should:

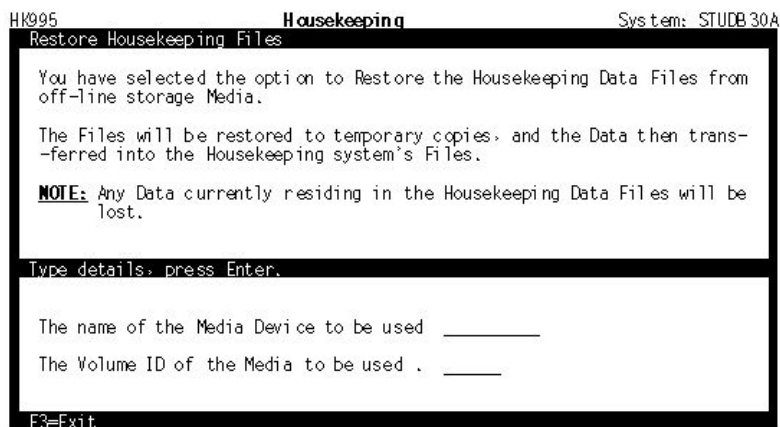
1. Restore the Housekeeping libraries from the last known save, as listed on the save audit reports.
2. Run the restore Housekeeping files routine.
3. Consult Housekeeping as to the last save of all other libraries, and restore them.

## Restore Housekeeping Files Window



To display this window select the **Housekeeping Files** activity from Restore from Media.

Use this window to select the details of the media from which Housekeeping files are to be restored.



### Fields

#### Media Device

Enter the name of the media device used for the restore.

#### Volume ID

Enter the volume ID of the media which contains the latest save of the Housekeeping files.

Note: The Housekeeping files are saved separately (refer to the Housekeeping Files section of this product guide).

# Glossary

## AM

Acronym for Application Manager

## APPC Network

IBM acronym for Advanced Peer-to-Peer Communications

## Application

In System Manager this refers to a group of related modules. For example the Financials application includes modules for General Ledger, Accounts Receivable and Cash Management. Third party applications can refer to any software package.

## Application Manager

This is designed for the easy management of applications. It sits between the iSeries/400 system and the applications it manages, providing a route into them for the user. It can also be used to control third party functional areas and to design bespoke menus.

## APPN Network

IBM term for Advanced Peer-to-Peer Networking

## Drop-through Rules

The drop-through rules govern which versions of menus, tasks and library lists. Application Manager will try to use for a given request according to the environment (whether default or non-default). See [the section Environment Usage for further details](#). See also the [Display Menu/Task Process \(Step-by-Step\) Enquiry, in particular the Thought Process Window, as these enquiry screens demonstrate the drop-through rules](#).

## EDI

Acronym for Electronic Data Interchange

## Electronic Data Interchange

This is a method of transmitting business information over a network, between trading partners. The partners must agree to follow approved national or industry standards for translating and exchanging information.

## E/D Processor

Escalation and Delegation of Schedule Rules as configured in GEAC Active Modeler

## HK

Acronym for House Keeping

## House Keeping

This is designed to manage libraries by recording details such as frequency of use, sizes, owners and dates last changed or saved. It can also perform unattended saves as an overnight job.

## IPG

Acronym for Interactive Program Generator

This is a programming language used to write interactive programs which interface with RPG programs.

## IPL

Acronym for Initial Program Load

This is the iSeries 400 equivalent of boot up on a PC.

## Job Status

The job statuses in Machine Manager are:

A - Active

E - Completed

J - Submitted

S - Started

W - Waiting

X - Warning

Refer also to Task Status.

## Job Types

These are often reported as a one-character code:

E - Auto Day-End Job

I - Initiator

J - Job Scheduler

P - Power Down

S - Auto Day-Start Job

Where the job type has two characters, the second character indicates the current status of the job.

## LDA

Acronym for Local Data Area

Application Manager uses the Local Data Area (LDA) to pass information between programs. The first 256 characters of the 1024 character LDA are fixed and pre-defined. The remainder of the Local Data Area is specifically for application usage. You must make sure that your applications never change the first 256 characters of the Local Data Area.

Note: The exception to this rule is the return code L#RTCD positions 118 to 119 of the Local Data Area. If you are changing the return code then you save the LDA before you execute your routine and restore it back when your routine has completed.

## Log Entry Types

Major Log Types are:

Blank - All Types

S - Auto-Day Start Jobs

I - End-Day Initiator Jobs

E - Auto-Day End Jobs

P - Power Down Jobs

Minor Log Types are:

EE - Auto Day-End Jobs Completed

ES - Auto Day-End Jobs Started

EZ - Authority Violation

IA - Day-End Initiator Activated

IC - Day-End Changed

IJ - Day-End Initiator Submitted

IW - Day-End Initiator Waiting

IX - Day-End Initiator Warning

JJ - Job Scheduler Submitted

JP - Job Scheduler Processing

PE - Power Down System Ended

PJ - Power Down System Submitted

PS - Power Down System Started

PW - Power Down Wait

PX - Power Down Time Limit Passed

SE - Auto Day-Start Jobs Completed

SS - Auto Day-Start Jobs Started

SZ - Authority Violation

## Machine Manager

This is designed to provide automatic management of daytime and night-time operating environments, where daytime processing is mainly interactive and night-time processing is mainly batch. The interface between the two operating environments is controlled through scheduled day-start and day-end jobs.

## MM

Acronym for Machine Manager

## Module

This is the name given to the constituent parts of an application. For example, General Ledger, Accounts Payable and Accounts Receivable are all modules of the Financials application.

## Network Manager

This is designed as a user-friendly interface for configuring and maintaining the network. It uses SNADS (System Network Architecture Distribution Services), the IBM SNA distribution service, to distribute objects and messages between systems on the network. These systems can be linked directly or indirectly.

## QSECOFR

This is the sign-on for the security officer. It gives you super-user status when entering commands on the command line in System Manager.

## Role

A role represents a job title to which certain tasks are assigned. For example, a Sales Order Clerk could be assigned the tasks of Sales Order Entry and Customer Order Enquiry.



## SAA Standards

IBM acronym for System Application Architecture Standards

## SNADS

IBM acronym for System Network Architecture Distribution Services

## Source

The application source codes

For example, use U for your own applications in Administration Management.

## Task Status

The completion status of the task last time it was executed

RS - Ran Successfully

RN - Never Run

RF - Run Failed

SS - Submitted Successfully