Seward Consulting Ltd.

Job Assistance

User Guide

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Getting Started

This section provides the information you need to know before you start reading and using the JA User Manual.

In this section, the following topics are covered:

- **The Manual Structure**

- **The Intended Audience**

- **The Manual Conventions**
    - *Instructions*
    - *JA Screen Information*
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- **JA Keying**

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The Manual Structure

This JA User Manual is structured according to JA function.

1) **Chapter 1 – Introducing JA** – provides a brief introduction to JA and the JA Main Menu.

2) **Chapter 2 – JA Setup** – describes the JA directory structure for installation and the definition of the Common and User tables prior to the JA install.

3) **Chapter 3** – **Defining Groups, Jobs and Programs** – defines the Job Group, Jobs and Programs screens and provides instructions on how to create groups, jobs and programs in JA.

4) **Chapter 4 – Issuing and Reviewing Jobs** – provides instructions on how to issue a job, view and print job output.

5) **Chapter 5 – Maintaining JA** – discusses the various functions and tasks of the Maintenance Menu and provides instructions for importing and exporting portions of JA to different environments.

6) **Appendices** – provides JA keying instructions and detailed summary information for a variety of fields on various JA screens.

This manual may be read like a book – start to finish – or, used as reference material where you focus on the those areas that are of interest to you or those areas that help you solve a JA problem or perform a task.

The Intended Audience

The manual is intended for three major user groups:

1) Business Application Developers – these individuals create and maintain programs for business applications that use JA for job scheduling.

   Chapters of Interest: Chapters 1 to 4 and Appendices

2) **Business Application User** – these individuals use the business application to issue jobs and reports.

   Chapters of Interest: Chapter 1, Chapter 4 and Appendix "A" – JA Keying Instructions

3) **JA Administrator** – this individual is responsible for supporting the functioning and maintenance of JA. These users should be familiar with the entire contents of the manual, as required.

   Chapter of Interest: Chapter 5

The Manual Conventions

The following symbols and formatting are used in the manual to display instructions:

All **instructions** are introduced with a major heading and one or more sub-headings as displayed below.

Instructions

Instruction Heading 2

Instruction

- All instructions are bulleted.

↵   Instructs you to press the Enter key.

<name>   Indicates when you should press the key indicated by **name**. For example, **<F#>** indicates you should press one of the twelve function keys, from F1 through F12, at the top of your keyboard. The number of the function key replaces the "#". (Note that you may have to make adjustments in some cases depending on how your terminal emulation software is set up.)

text   Boldface shows text to be typed as part of a procedure.

value   Italics show the name of an item whose value should be typed in as part of a procedure.

JA Screen Information

All screen information is formatted in the following manner:

- A header line with screen name and screen number introduces the screen sample.

- A "**How to get here:**" line providing navigation instructions on how to get to the screen – a couple of examples are listed below.

How to get here: JA Main Menu ? 42 (Utilities) ? 2 (Export)

(displays numeric value that must be entered to reach each successive screen starting from the JA Main Menu)

How to get here: JA Main Menu ? 1 (Groupings) ? Option 'JOBS' ? Option 'JHLP-#'

(displays numeric value or screen option that must be entered to reach each successive screen starting from the JA Main Menu)

- A sample is provided for each screen with a caption listed below describing the screen.

- ▫ All screen fields are defined below the screen sample – Field Descriptions heading.

- ▫ All screen Options are defined below the field descriptions – Options heading.

Additional Information

This annotation is used to emphasize additional information concerning the subject matter.

JA Keying

Before you start working your way through the manual, you may wish to review **Appendix 'A'** – JA Keying Instructions, if you are new to using JA. The appendix provides basic instructions on how to navigate the various JA screens.

If you have access to JA in a TEST environment, signing on JA to access the various screens as you work your way through the manual may help to reinforce the information and concepts the manual describes.

Contact Information

If you have any issues with Job Assistance or the contents of this manual, please contact Seward Consulting.

Suite 1700, 10025 – 102A Avenue
Edmonton, Alberta
Canada T5J 2Z2

Voice: **(780) 448-0745**
Fax: **(780) 425-0465**

E-mail: jasupport@sewardconsulting.com

Chapter 1

Introducing JA

Before exploring in detail the various features of Job Assistance (JA), this chapter provides you with a high level introduction to JA and how it works with your business application.

In this chapter, the following topics are covered:

- **What is JA?**

- **Major JA Features**

- **The JA Main Menu**

- **The JA / Business Application Relationship**
  - *Access To JA*
  - *Custom Job Issuing*
  - *Define Common Tables and Jobs*
  - *Background Processing*
    - *Job Issuer*
    - *Job Batcher*
    - *Job Deleter*
  - *Issuing On –Demand Jobs*
  - *Reviewing Jobs*

What is JA?

JA is a versatile Report and Job Management System that manages scheduled and on-demand jobs for business applications running in a HP/9000 Unix environment. With JA, it is possible to setup a controlled report and batch processing management environment to reduce the costs of installing production ad-hoc reporting and scheduled batch job processing.

Seward Consulting developed JA in PowerHouse using CISAM file structures. JA can be easily integrated into any HP/9000 business application with minimal effort.

Major JA Features

This section summarizes the major JA features for the various users.

For the Business Application user:

- Ability to launch jobs through a menu-based interface.

- Provision to easily enter data selection parameters when issuing jobs (e.g. account code, reporting month, etc.).

- Dynamic redirection of output to any system output device (e.g. printers, email, ftp).

- Saving of jobs and related output to disk for later viewing and printing.

- Banners on output to printers (optional).

For the Application Developer:

- The ability to easily setup jobs through simple table definitions. Many jobs are defined by a single table entry.

- Automatic handling of error checking and logging.

- Flexibility to insert JCL (shell scripting) into jobs as required.

- Ability to define various job-related defaults that make job setup and issuing easy and flexible.

- Device definitions that allow for coding-free implementation of device independence.

- Job groupings of related jobs that appear together for selection by the User.

- Grouping of multiple job outputs (e.g. – reports) for printing at a single output device.

For the System Administrator:

- Automated job cleanup on a schedule.

The JA Main Menu [JA01001]

Figure 1.1, displays the JA Main Menu. The main menu is the gateway to the JA application. The screen provides access to all the JA functions required to enter, maintain and issue jobs.
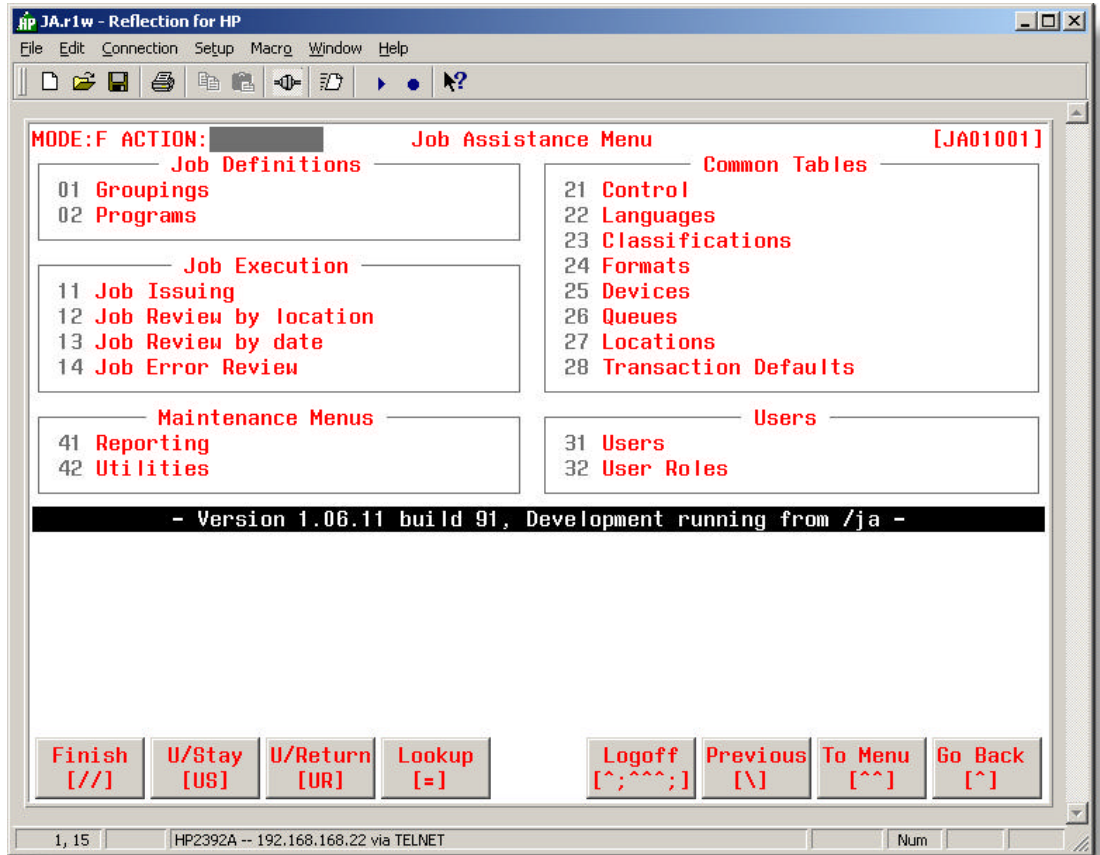
- Figure 1.1 – JA Main Menu [JA01001]

The five main JA function areas are:

Job Definitions

Groupings   This option lists jobs by Job Grouping. With this option you can maintain groupings and job definitions.

Programs   With this option you can define and maintain information about programs that is used in the definition of jobs.

Chapter 3 – Defining Groups, Jobs and Programs provides a detailed description of the Job Definition screens and instructions on how to define jobs in JA.

Job Execution

Job Issuing   From this option you can select individual jobs, enter parameters, and issue jobs for execution.

Job Review   This option displays the current status of jobs that you have issued.

The JA Job Issuing and Job Review screens are visible to the business user.

Job Error Review   This option displays a list of jobs that have failed and were automatically detected by JA.

Chapter 4 – Issuing and Reviewing Jobs describes the Job Execution and Job Review screens and provides detailed instructions on how to issue and review jobs in JA.

Common Tables

Common Tables are used to manage JA, aid in the definition of jobs and the distribution of output. The information in these tables is loaded after JA is installed at the client site.

Control   This table contains the defaults and control information used to control JA. There is only one record in this table.

Languages   The list of languages (e.g. Quick) recognized in JA.

Classifications   Parameter classifications (e.g. 'choose' in Quiz).

Formats   Device control information (PCL - Printer Control Language) for various types of output (e.g. landscape, compressed).

Devices   The setup of output devices such as printers, email and ftp.

Queues   The setup and maintenance of job queues. Queues control when and how jobs assigned to the queue are executed.

Locations   The setup and maintenance of locations. Locations are assigned to users (User screen – JA02005) and devices (Devices screen – JA02004) to provide the ability to select devices based on the user's location.

Transaction   The setup and maintenance of defaults used in the Export process.

Chapter 2 – JA Setup provides a detailed description of the JA Common Tables.

Users

Users   The table of users that have access to JA.

User Roles   The setup and maintenance of permissions assigned to user roles. Each JA user is assigned a role.

Chapter 2 – JA Setup provides a description of the Users and User Roles Tables in JA.

Maintenance

Reporting   A list of JA reports to help maintain the system.

Utilities   A list of JA utilities to help maintain the system.

Chapter 5 – Maintaining JA describes the JA maintenance functions and utilities.

The JA / Business Application Relationship
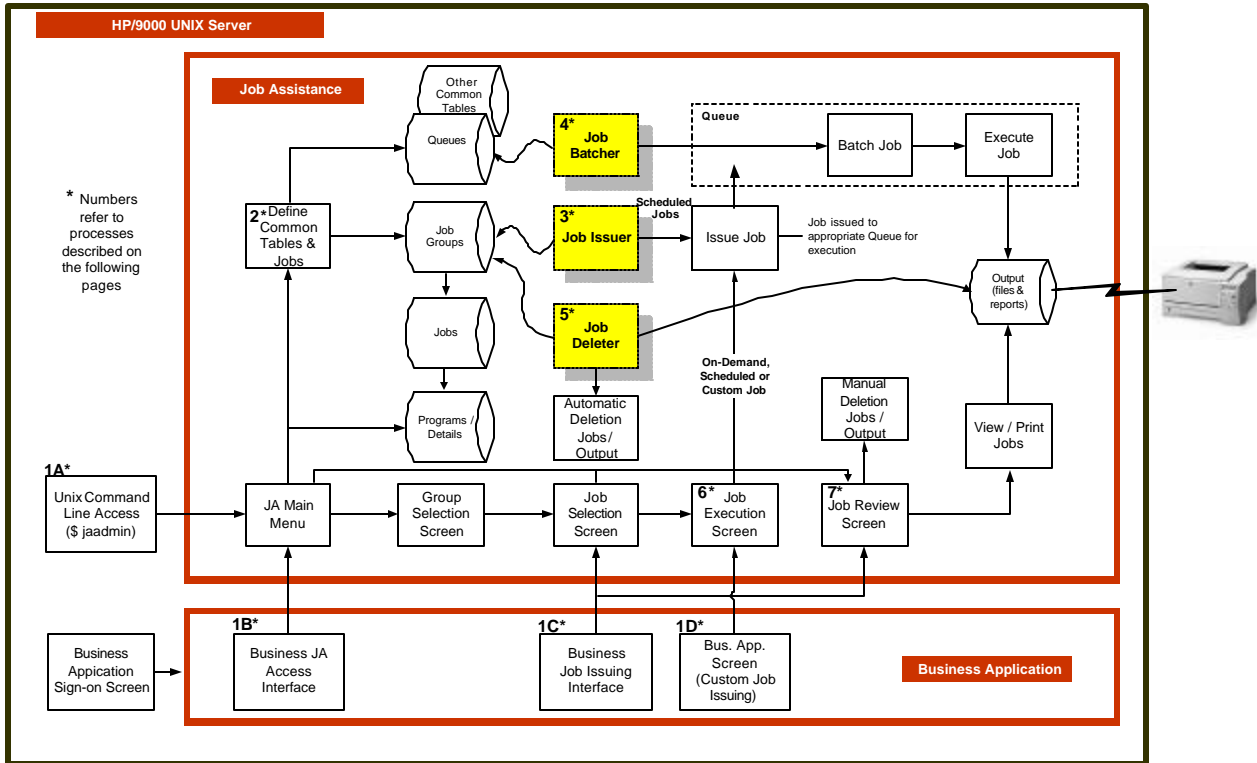
- Figure 1.2 – JA / Business Application Relationship

Figure 1.2 graphically describes the relationship between the business application and JA which controls the issuing, batching, execution and deletion of scheduled and on-demand jobs. The numbered sections below correspond to the numbered processes in Figure 1.2. The remainder of this section provides a high level overview of these processes.

1A, 1B, 1C – Access to JA

Access to JA depends on how JA is initially setup when it is installed at a client site and the roles and privileges assigned to users (See: **Chapter 2 – JA Setup** – User Tables). The 'jaadmin' command at the Unix command line prompt or business application interface screens normally provide access to JA. JA can also be indirectly accessed through the "custom issuing" of jobs from the business application.

Access to JA is discussed in more detail in **Chapter 2 – JA Setup** – How to Access JA?

1D – Custom Job Issuing

The business application may be modified to issue jobs directly through JA (Job Execution screen) based on specified processing criteria. Special JA code must be added to the business application to create custom issued jobs (See: **Chapter 4 – Issuing and Reviewing Jobs** – Custom Job Issuing).

2 – Define Common Tables and Jobs

Prior to JA installation, JA Common Tables are defined (See: **Chapter 2 – JA Setup** – Defining Common and User Tables). The Common Tables control various aspects of JA processing. After JA installation the business application's scheduled and on-demand jobs are defined (See: **Chapter 3 – Defining Groups, Jobs and Programs**). Scheduled jobs are run at specific times based on the schedules defined for the individual Job Groups. Three background processes control the issuing, batching and execution of jobs.

3, 4, 5 – Background Processing

The background processes automatically issue, batch (select) and execute scheduled jobs. Expired jobs and their associated output are also deleted. The default JA logon ID starts and stops the background jobs.

3 – Job Issuer

The Job Issuer background job automatically issues scheduled jobs. The job reviews the scheduling information for each Job Group and issues all jobs into their appropriate queue for execution at the required times. The group of issued jobs is then date stamped to ensure that they are not reissued until the next scheduled time.

Once all the groups are serviced, the Job Issuer "sleeps" for the Issue Interval defined in the Control Table (See: **Chapter 2 – JA Setup** – Common Tables – Control) before starting the process again.

4 – Job Batcher

The Job Batcher background job is the most involved of the background processes. It watches the execution queues to determine when it can execute additional jobs and when it must terminate executing jobs.

Each system can include as many execution queues as required. Each queue has constraints on the status of the queue, the number of concurrently executing jobs, the priority of jobs, and the maximum number of minutes a job can execute within the queue (See: **Chapter 2 – JA Setup** – Common Tables – Queues).

Job Selection

The Job Batcher uses the queue constraints to select the appropriate job to be run.

The jobs are selected based on their priority within the execution queue as well as their scheduled issue time.

Job Termination

Each executing job within the queue is tested to ensure it has not exceeded the Job Time Limit assigned to the queue. If this should occur, the Job Batcher will attempt to terminate this job.

Once all the execution queues are serviced, the Job Batcher "sleeps" for the Batch Interval defined in the Control Table (See: **Chapter 2 – JA Setup** – Common Tables – Control) before starting the process again.

5 – Job Deleter

The Job Deleter background job automatically deletes output for expired jobs. The job group "Delete after" field determines how long output for jobs assigned to each job group may remain on the system before being deleted. The Job Deleter reviews each job group to check the "Delete after" information to determine if job output for completed jobs should be deleted. Job output is deleted as required.

Once all the job groups are serviced, the Job Deleter "sleeps" for the Delete Interval (See: **Chapter 2 – JA Setup** – Common Tables – Control) before starting the process again.

6 – Issuing On-Demand Jobs

On-demand jobs are issued through the JA Job Execution screen (See: **Chapter 4 – Issuing and Reviewing Jobs**). The Job Execution screen can be reached from the JA Main Menu by selecting the appropriate job group and job within the group. Most users may access the Job Execution screen by selecting the appropriate job on a business application interface screen.

Once an on-demand job is issued, the Job Batcher selects (batches) the job for execution.

7 – Reviewing Jobs

Reports can be sent directly to a defined output device, usually a printer, or held until the business application user has an opportunity to view and confirm the results on-line (See: **Chapter 4 – Issuing and Reviewing Jobs** – Reviewing Jobs). The reports can later be sent to a predefined output device or rerouted to a different device. Users can manually delete job output if they do not wish to print it.

Summary

The Introduction provided you with a high level overview of JA processing and how JA works with a business application to define and schedule jobs. The following chapters will fill in the detail of the processes pictorially described in Figure 1.2.

The next chapter takes you through the JA setup process – all the Common Table and User definitions that must be defined when JA is installed at a client site.

Chapter 2

JA Setup

Seward Consulting installs JA at each client site. Before JA is installed, it is necessary to follow a setup process to determine how it will interface or work with the business application. This chapter reviews the setup issues that need to be considered before the JA install takes place.

In this chapter, the following topics are covered:

- **The Recommended JA Directory Structure**

- **How to Access JA?**

- **Defining the Common and User Tables**

    The Common Tables
    Control [JA02001]
    Languages [JA02002]
    Parameter Classifications [JA02003]
    Formats [JA02006]
    Queue [JA02008]
    Locations [JA02010]
    Transaction Defaults [JA02009]
    The User Tables
    User Role [JA02007]
    User [JA02005]

The Recommended JA Directory Structure

When JA is installed on the UNIX server, the various components of the software are loaded into predefined folders or sub-directories under the JA root directory. Figure 2.1 depicts the recommended sub-directory structure under the root directory '**/ja/**'. The root directory for each JA install is defined in the Control Table (See: **Chapter 2 – JA Setup** – Common Tables – Control).

The root directory for JA can be chosen by the user, and it is also possible, if made necessary by the requirements of a client site, to place the first-level subdirectories of that directory, such as the output directory, /ja/out, or the directory containing the JA database, /ja/dat, in directories in the filesystem that are not necessarily under the JA root directory. This might be necessary, for example, in a system with multiple physical disk drives, each of which had limited space. This requires changes to JA command files which could be made for a client by Seward Consulting.
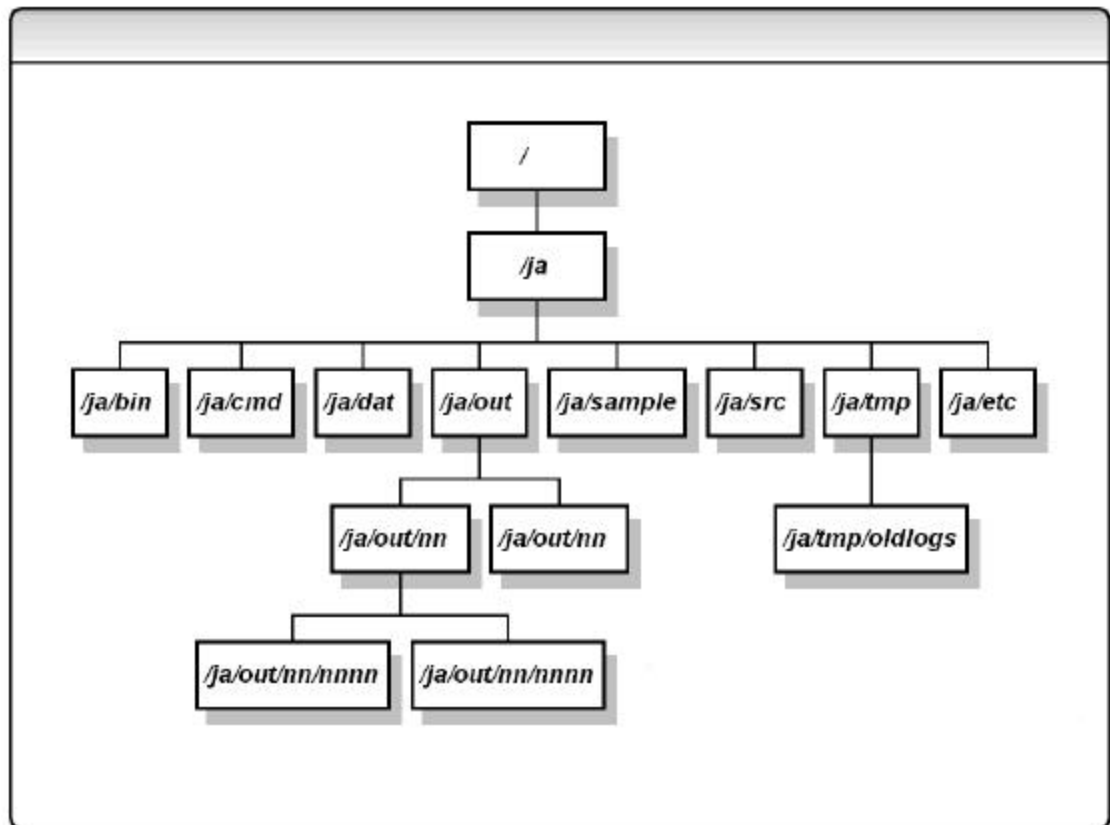
- Figure 2.1 – Recommended JA Directory Structure

The table below describes the contents of each sub-directory. The Sub-Directory column also lists the predefined environment variable (e.g. - $jabinloc) for each sub-directory. At the UNIX dollar prompt ($), environment variables provide short cut access to the various sub-directories using the change directory command (cd).

Example: $ **cd $jabinloc** takes the user directly to the 'bin' sub-directory.

Not all users will have UNIX command line access. This type of access, in most cases, will be restricted to developers and the JA Administrator.

Sub-Directory	Sub-Directory Contents
bin $jabinloc	The 'bin' sub-directory contains static compiled programs and files that are created during installation.
cmd $jacmdloc	The 'cmd' sub-directory contains shell scripts. These scripts may be modified after installation; however, these files may not be compatible with future upgrades once modified.
dat $jadatloc	The 'dat' sub-directory contains dynamic files that are created during installation and modified during operation.
out $jaoutloc	The 'out' sub-directory contains directories, scripts and data created during the execution of jobs maintained by JA. JA partitions the 'out' sub-directory into numbered "clump" (nn) sub-directories. When a job is issued, JA creates a sequentially numbered sub-directory (nnnn) under the appropriate "clump" to contain all of the job output. Numbering for the "clump" and job sub-directories is maintained on the Control [JA02001] screen.
sample	The 'sample' sub-directory contains report and file samples that are created in scheduled and on-demand jobs. Using the SAM Option on the JA Program screen or the business application's on-demand Job Selection screen(s), users can view report samples from this sub-directory.
src $jasrcloc	The 'src' sub-directory contains "ink" files and source code for a cleanup program.
tmp $jatmploc	The 'tmp' sub-directory contains temporary files and logs for information that is not maintained in the database.
etc	The 'etc' sub-directory contains user code, script and demo examples.

- Table 2.1 – JA Directory Descriptions

How to Access JA?

The client has several options in choosing how JA is to be accessed from the business application. Figure 1.2 in the previous chapter provides a schematic of the JA access options. The client may choose one or more of the following options:

▫ **Direct access from the UNIX dollar ($) command prompt.**

At the command prompt enter the 'jaadmin' command

Example: $ **jaadmin**

This option bypasses the business application and permits direct access to the JA Main Menu. This option is usually restricted to the business application's developers and the JA Administrator.

▫ **Access from a business application main screen.**

The shaded options in Figure 2.2 provide an example of access to various JA options including the JA Main Menu from a business application interface screen.
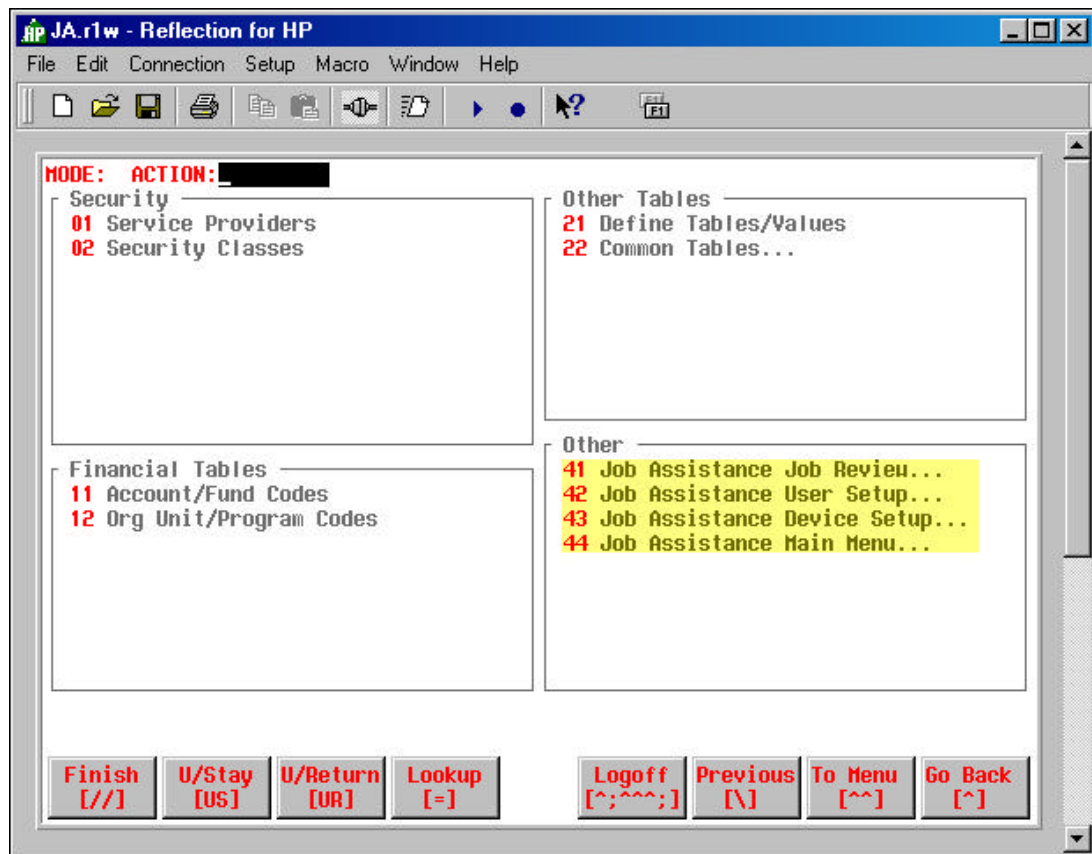
• Figure 2.2 – Example of access to JA from a Business Application screen

Access to JA using this option may be restricted by the security clearance assigned to each user.

Special code needs to be added to the business application screen to create and access the JA options. The code displayed below created the options highlighted in Figure 2.2. When 41, 42, 43 or 44 are entered, the corresponding code is executed to access a JA screen.

```
command "$jacmdloc/jarevjun"    &
  label "Job Assistance Job Review..."    &
  id 41                         &
  refresh all

command "$jacmdloc/jausrsun"    &
  label "Job Assistance User Setup..."    &
  refresh all

command "$jacmdloc/jadevsun"    &
  label "Job Assistance Device Setup..."    &
  refresh all

command "$jacmdloc/jamnumun"    &
  label "Job Assistance Main Menu..."    &
  refresh all
```

- Figure 2.3 – Code to Access Various JA Screens

In this example — starting with option 41 (id 41) — JA commands (shell scripts) are executed from the '**ja/cmd/**' sub-directory to access various JA screens.

`command "$jacmdloc/jarevjun"`   accesses Job Review screen [JA06001]

`command "$jacmdloc/jausrsun"`   accesses User screen [JA02005]

`command "$jacmdloc/jadevsun"`   accesses Devices screen [JA02004]

`command "$jacmdloc/jamnumun"`   accesses JA Main Menu screen [JA01001]

See: **Appendix 'M' – API Calls** – $jacmdloc Command Scripts

□ **Access to the JA Job Selection, Job Execution and Job Review screens.**

Many business users may be restricted to using the Job Selection, Job Execution and Job Review screens (See: **Chapter 4 – Issuing and Reviewing Jobs**) to issue and review jobs. Figure 2.4 provides an example of a business interface screen that allows users access to the Job Selection screen [JA04001] to issue various report jobs.
The Job Review screen, used to view the job output, is accessed using the '**REV**' option on the business application interface screen or on the JA Job Selection screen.
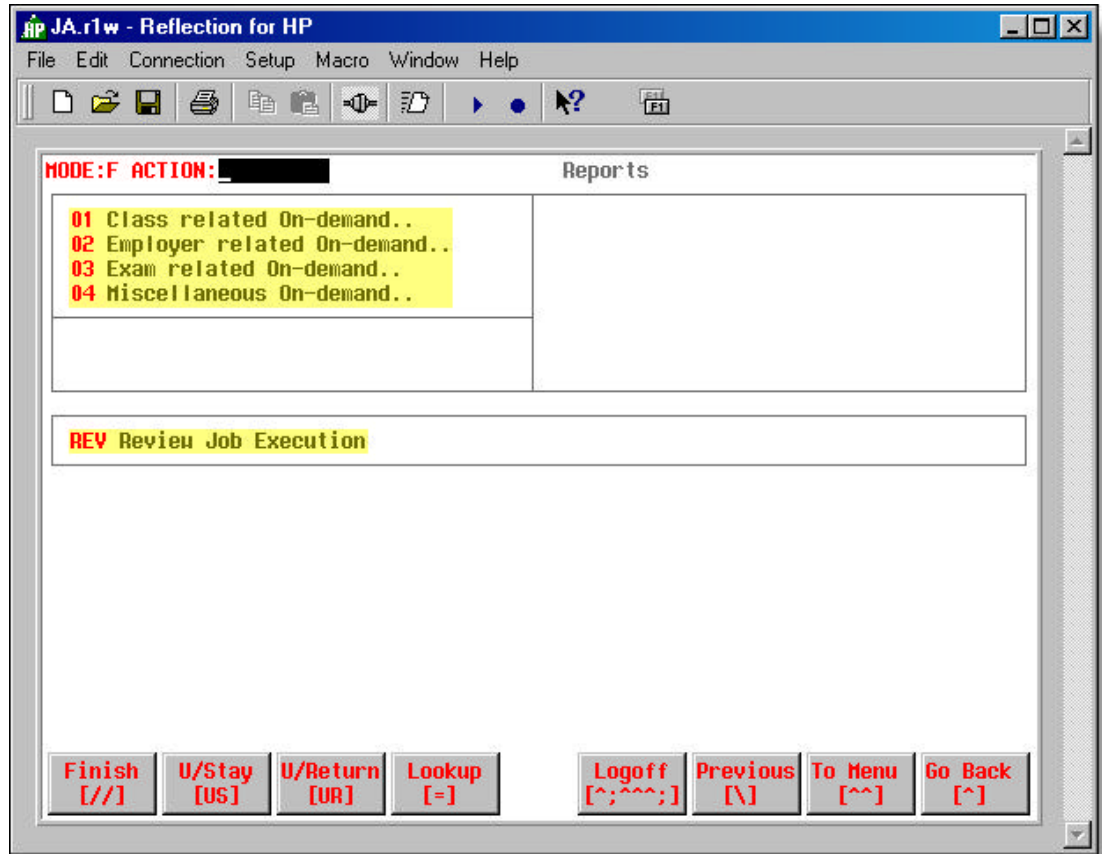
- Figure 2.4 – Access to JA Job Selection and Review screens from Business Application

Again, special code must be added to the business application to access the JA Job Selection screen. The code displayed below created the options highlighted in Figure 2.4. When 1, 2, 3, or 4 are entered, the corresponding code is executed to access the Job Selection screen for the appropriate Job Group.

```
use $jasrcloc/jadmnug.ink nolist

command "#comment see designer procedure 1" &
   label "Class related On-demand.."
command "#comment see designer procedure 2" &
   label "Employer related On-demand.."
command "#comment see designer procedure 3" &
   label "Exam related On-demand.."
command "#comment see designer procedure 4" &
   label "Miscellaneous On-demand.."

hilite title default
title "REV" at 12,3
hilite title halftone

use $incloc/ciproc.ink nolist
use $incloc/cippree.ink nolist
use $incloc/cippreu.ink nolist

procedure initialize ; Set function keys
```

```
begin
  do common_init
end

procedure exit        ; Restore function keys
begin
  do common_exit
end

procedure designer 01 ;Operational report menu (class)
begin
  let t_jagroupid = "SNREP01A"
  do external jagroupset(t_jagroupid, t_jarc)
  run command "$jacmdloc/jamnugun" clear all
  do external jagroupreset(t_jarc)
end

procedure designer 02 ;Operational report menu (employer)
begin
  let t_jagroupid = "SNREP01B"
  do external jagroupset(t_jagroupid, t_jarc)
  run command "$jacmdloc/jamnugun" clear all
  do external jagroupreset(t_jarc)
end

procedure designer 03 ;Operational report menu (exam)
begin
  let t_jagroupid = "SNREP01C"
  do external jagroupset(t_jagroupid, t_jarc)
  run command "$jacmdloc/jamnugun" clear all
  do external jagroupreset(t_jarc)
end

procedure designer 04 ;Operational report menu (misc.)
begin
  let t_jagroupid = "SNREP01D"
  do external jagroupset(t_jagroupid, t_jarc)
  run command "$jacmdloc/jamnugun" clear all
  do external jagroupreset(t_jarc)
end

procedure designer rev ;Review Job Execution screen.
begin
  run command "$jacmdloc/jarevjun" refresh all
end
```

- Figure 2.5 – Code to Access JA Job Selection Screen for Various Job Groups

In Figure 2.4, when 1, 2, 3 or 4 is entered, a designer procedure is executed to access the Job Selection screen for the appropriate Job Group. For example, if option 1 is entered, designer procedure 1 executes the **jamnugun** command from the $jacmdloc location to access the Job Selection screen for the jobs in Job Group SNREP01A.

For more detailed information on Job Groups, see **Chapter 3 – Defining Groups, Jobs and Programs**.

When the REV option is entered the rev designer procedure executes the jarevjun command from the $jacmdloc location to access the Job Review screen.
The above code samples may be modified to create JA interfaces for any business application.

See: **Appendix – 'M' API Calls** for more details.

Defining the Common and User Tables

Prior to JA installation, information in the Common and User tables must be defined. The Common Tables support the operation of JA. The User Tables identify who has access to JA and the tasks users are allowed to perform. Once JA is installed at the client site, these tables are loaded with the predefined information.

The remaining section of this chapter discusses the function of each table and the fields within each of the tables.

The Common Tables

The Common Tables (Figure 2.6) are Options 21 thru 28 on the JA Main Menu screen. Each of the tables (Control, Languages, Classifications, Formats, Devices, Queues, Locations, Transaction Defaults) performs a specific function in defining, controlling and maintaining the JA / business application relationship.

```
┌─── Common Tables ───┐
│ 21 Control          │
│ 22 Languages        │
│ 23 Classifications  │
│ 24 Formats          │
│ 25 Devices          │
│ 26 Queues           │
│ 27 Locations        │
│ 28 Transaction Defaults │
└─────────────────────┘
```

• Figure 2.6 – The Common Tables (JA Main Menu)

Control [JA02001]

How to get here: JA Main Menu ? 21 (Control)

The Control screen (Figure 2.7) allows you to view, enter and maintain JA control information that is used to support the operation of JA. Most values entered on this screen remain as entered, while JA changes the value of some fields periodically (e.g. – the 'System Internal Ids').
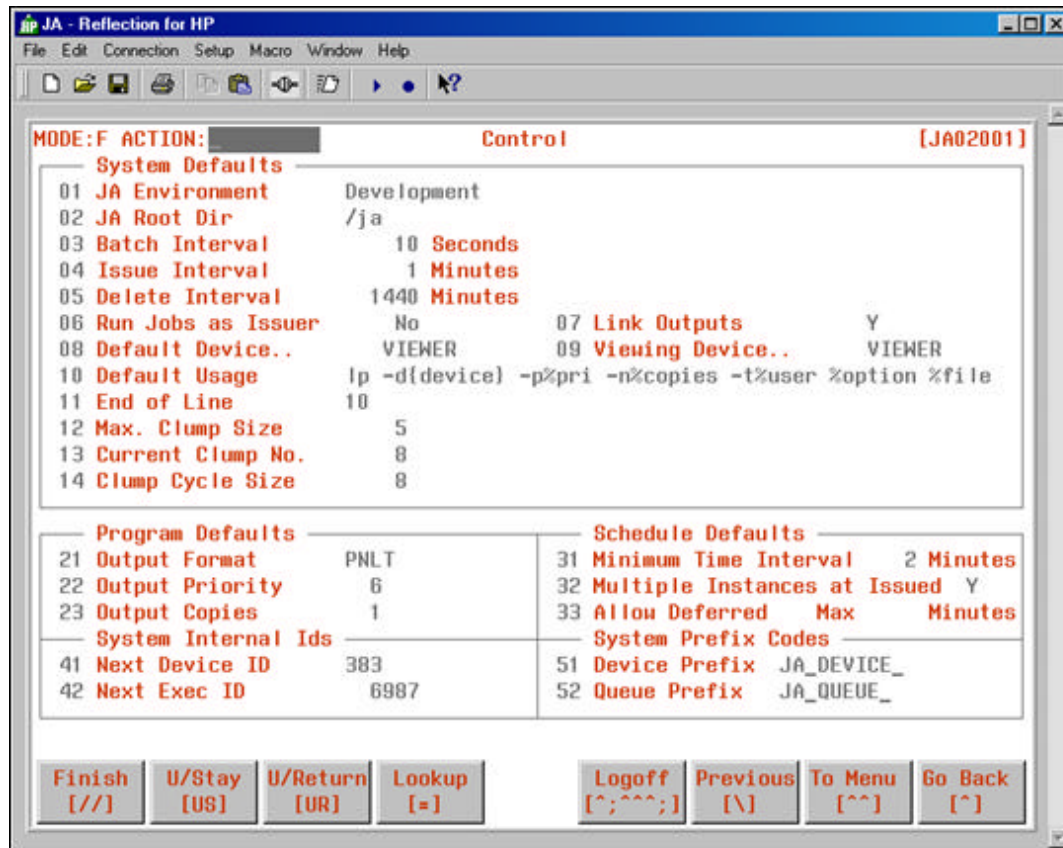
- Figure 2.7 – Control screen [JA02001]

Field Descriptions – System Defaults

01 JA Environment

- ◻ The environment name that displays on the JA Main Menu screen.

02 JA Root Dir

- ◻ Root directory of the JA install.

03 Batch Interval

◘ Identifies the length of time (in seconds) that the 'Job Batcher' background job waits after completing batching process before batching more jobs.

04 Issue Interval

◘ Identifies the length of time (in minutes) that the 'Job Issuer' background job waits after issuing jobs before issuing more jobs.

05 Delete Interval

◘ Identifies the length of time (in minutes) that the 'Job Deleter' background process waits between passes.

06 Run Jobs as Issuer

◘ Identifies which logon ID is used to execute jobs. Jobs are normally executed using the default JA logon ID. However, the ability to execute jobs as the user who issued them is valuable when file or database access (including the use of database private synonyms) is controlled on a per user basis.

◘ Jobs will be executed using the logon ID of the user who issued the job when the value is 'Y'. The JA default logon ID, usually 'jamgr', will be used to launch the JA background processes.

◘ To use this feature, a free 3rd party utility called 'SUDO' (http://www.courtesan.com/sudo/) must be installed on the system and configured to allow the default JA logon ID to run the SU command. The SUDO command allows JA to use the 'SU –' command without being prompted for the user password. When JA attempts to execute a job as 'issue user', it does everything it normally does but uses the SUDO and 'SU - <issuer logon ID>' command to run the job script. The login output is sent to a $jaoutloc/execID/execID_login.log file.

07 Link Outputs

◘ Identifies whether a link will be created for job output files. This is used only for backward compatibility where group associations were used as part of the output file name.

08 Default Device..

◘ Identifies a device to which output will be sent if no other device is specified. If a user device is not specified or a device is not specified within the job, this device will be used.

09 Viewing Device..

◘ Identifies the device to which a program will send it's output when output is to be viewed on the screen (VIEWER). If no other device is specified at the time an output is to be viewed, this device will be used.

10 Default Usage

◘ Identifies system commands that will be used by JA to send information to the device.

◘ Specifies the default device usage to use if no device usage is assigned to the device.

- Substitution codes are provided so that needed information may be embedded within the command(s) you specify. These include:

%USER	User logon ID
%COPIES	Copies specified for the output
%PRI	Priority specified for the output
%OPTION	Option codes specified for the output format
%FILE	File generated by JA for the output

- In most cases, this field will contain the system command(s) that send output to a printer.

11 End of Line

- Decimal number representing ASCII character identifying how each parameter is to be delimited when passed to programs within a job. Many ASCII characters can be entered as long as a comma separates them. See: **Return Code** on Parameter Classifications screen [JA02003].

12 Max. Clump Size

- The maximum number of job sub-directories that are to exist at one time in a clump sub-directory (**/ja/out/ *cccc*/ *nnnn*** – where *cccc* is the "clump" sub-directory number and *nnnn* is the sequentially numbered job sub-directory).

13 Current Clump No.

- The current clump sub-directory to which JA assigns the job sub-directories.

14 Clump Cycle Size

- The number of clump sub-directories that JA will create before cycling back to the first clump sub-directory (**/ja/out/1**).

See the Recommended JA Directory Structure for more information on job output.

JA creates Clump sub-directories (starting with Clump 1 - /ja/out/1) to place the job sub-directory for each issued job. When the current Clump is "full" (i.e. – reached Maximum Clump Size), JA creates the next Clump sub-directory. This process continues until the Current Clump Number equals the Clump Cycle Size and the current Clump is "full". JA then sequentially cycles through the existing Clumps (starting with Clump 1) looking for a Clump that is no longer "full". If all the Clumps are "full", JA increments the Clump Cylce Size by 1 and creates a new Clump with the new Clump Cycle Size value.

*Over time, space will be made available in the existing Clumps because of the **Job Deleter** background process. (See: **Background Processing**)*

Field Descriptions – Program Defaults

21 Output Format

- ◻ Identifies the control codes that will be included with the output file sent to a system device if no other format is specified. When output is sent to a system device, such as a printer, the ASCII codes associated with a format are also sent.

- ◻ See: **Chapter 2 – JA Setup** – Common Tables – Formats.

22 Output Priority

- ◻ Identifies the priority that is assigned to an output if no other priority is assigned.

23 Output Copies

- ◻ Identifies the number of copies that is assigned to an output if no other number of copies is assigned.

Field Descriptions – Schedule Defaults

31 Minimum Time Interval

- ◻ Identifies the minimum interval (in minutes) that a job can be scheduled to be issued.

- ◻ When using the Schedule Time pattern '##:##', this identifies the interval that will be used.

- ◻ No time pattern will be allowed to issue jobs more frequent than this interval.

32 Multiple Instances at Issued

- ◻ Identifies whether multiple copies of a scheduled job can appear in the queue at an Issued status. If 'N', will allow only one instance of the scheduled job to be in the queue at 'IS', a warning message will be written in the system warning log for any other attempts.

33 Allow Deferred

- ◻ Identifies whether scheduled jobs can be issued after the scheduled time. This flag, along with the Max minutes will be used to decide if the job should be issued. The valid values are:

    Blank   All scheduled jobs will be issued even after the scheduled time.

    Y   All scheduled jobs will be issued even after the schedule time up to the Max minutes. After this is reached, the jobs will be deferred to start the following day.

    N   All scheduled jobs will be issued even after the schedule time up to the Max minutes. After this is reached, the jobs will not be issued and a warning message will be written to the system-warning log. This is the system default and can be overridden on an individual group or job basis.

Max __ Minutes

- The maximum minutes a scheduled job can be deferred prior to issuing. Will be used with Allow Deferred to determine if a scheduled job should be issued, not issued, or deferred to the next day.

Field Descriptions – System Internal Ids

41 Next Device ID

- Identifies the next automatically assigned device ID to be used when adding a new device. Whenever a new device is added, this value is automatically incremented by 1.

42 Next Exec ID

- Identifies the next automatically assigned execution ID to be assigned to a new job in the execution queue. Whenever a job is selected and issued, this value is automatically incremented by 1.

- This is the sequential number that is used to create the job output sub-directories under **/ja/out/** *cccc* – where *cccc* is the current "clump" number.

Field Descriptions – System Prefix Codes

51 Device Prefix

- Identifies the device prefix used in the dynamic assignment of a device. The device can be dynamically assigned at the time of issuing by exporting the device. The exported device would include this prefix to instruct JA to use this device instead of the assigned default device. If no exported device is found, JA will use the default device assigned to the job.

52 Queue Prefix

- Identifies the queue prefix used in the dynamic assignment of a queue. The queue can be dynamically assigned at the time of issuing by exporting the queue. The exported queue would include this prefix to instruct JA to use this queue instead of the assigned queue. If no exported queue is found, JA will use the queue assigned to the job.

Languages [JA02002]

How to get here: JA Main Menu ? 22 (Languages)

The Languages screen (Figure 2.8) allows you to view, enter and maintain a list of languages used in the business application and recognized by JA. Each language in the table identifies a path to the command required to execute the program.

```
JA.r1w - Reflection for HP                                        _ □ X
File  Edit  Connection  Setup  Macro  Window  Help

  D  🖿  🖬  🖨   🖹 🖹  ⬦  🗐   ▶  ●  ▶?   🖼

 MODE:F ACTION:▓▓▓▓▓▓            Languages                    [JA02002]
   ┌── Language ─┬─ Path ──────────────────────────────────────────────┐
   │ 01 C        │ nice -1 %p                                           │
   │ 02 COB      │ nice -1 %p                                           │
   │ 03 KSA      │ run ksamutil.pub.sys;stdin=%p;stdlist=$null          │
   │ 04 KSH      │ ksh -v %p.ksh                                        │
   │ 05 KSH2     │ ksh -v %p                                            │
   │ 06 KSHLOCAL │ . %p.ksh                                             │
   │ 07 KSHSECURE│ ksh %p.ksh                                           │
   │ 08 PYTHON   │ nice -1 %p                                           │
   │ 09 QKC      │ nice -1 quick auto=%p.qkc dict=$phdloc term=VT100 procloc=$appl>│
   │ 10 QKG      │ nice -1 quick auto=%p.qkg dict=$phdloc term=VT100 procloc=$appl>│
   │ 11 QTC      │ nice -1 qtp auto=%p.qtc dict=$phdloc                 │
   │ 12 QTS      │ nice -1 qtp auto=%p.qts dict=$phdloc                 │
   │ 13 QTSDC    │ qtp info="auto=%p.qts nolist cc=(DC)"                │
   │ 14 QTSPROV  │ qtp info="auto=%p.qts nolist cc=(PROVINCE)"          │
   │ 15 QTSREG   │ qtp info="auto=%p.qts nolist cc=(REGION)"            │
   │ 16 QTSSDA   │ qtp info="auto=%p.qts nolist cc=(SDA)"               │
   │ 17 QZC      │ nice -1 quiz auto=%p.qzc dict=$phdloc                │
   │ 18 QZCNOGO  │ nice -1 quiz dict=$phdloc procloc=$apploc/bin nolist │
   │ 19 QZS      │ nice -1 quiz auto=%p.qzs dict=$phdloc nolist         │
   │ 20 QZSDC    │ quiz info="auto=%p.qzs nolist cc=(DC)"               │
   └─────────────┴─────────────────────────────────────────────────────┘

 ┌─Finish─┐┌─U/Stay─┐┌─U/Return┐┌─Lookup─┐  ┌──Logoff──┐┌Previous┐┌To Menu┐┌Go Back┐
 │  [//]  ││  [US]  ││  [UR]   ││  [=]   │  │[^;^^^;] ││  [\]   ││  [^^]  ││  [^]  │
 └────────┘└────────┘└─────────┘└────────┘  └──────────┘└────────┘└───────┘└───────┘
```

• Figure 2.8 – Languages screen [JA02002]

Field Descriptions

(01 to 20)

Languages

◻ A mnemonic that uniquely defines a class of programs.

◻ The language is a mnemonic that is associated with class or type of program such as QUIZ (i.e. QZS or QZC). When programs are entered into a job, this mnemonic must be used to identify the means by which the program may be executed.

Path

◻ The method of accessing a language or utility.

◻ The path identifies to the background job how a language or utility associated with a program may run the associated program. Place a %p within the path to identify to the background job where to place the associated program within the path.

◻ For more details on this field see: **Appendix 'B'** – Languages – Path Options.

Parameter Classifications [JA02003]

How to get here: JA Main Menu ? 23 (Classifications)

The Parameter Classifications screen (Figure 2.9) allows you to view, enter and maintain a list of valid parameter classifications. Parameters, defined in the Programs screen [JA03001], are sometimes used in programs to allow users the ability to enter data selection criteria before issuing a job.
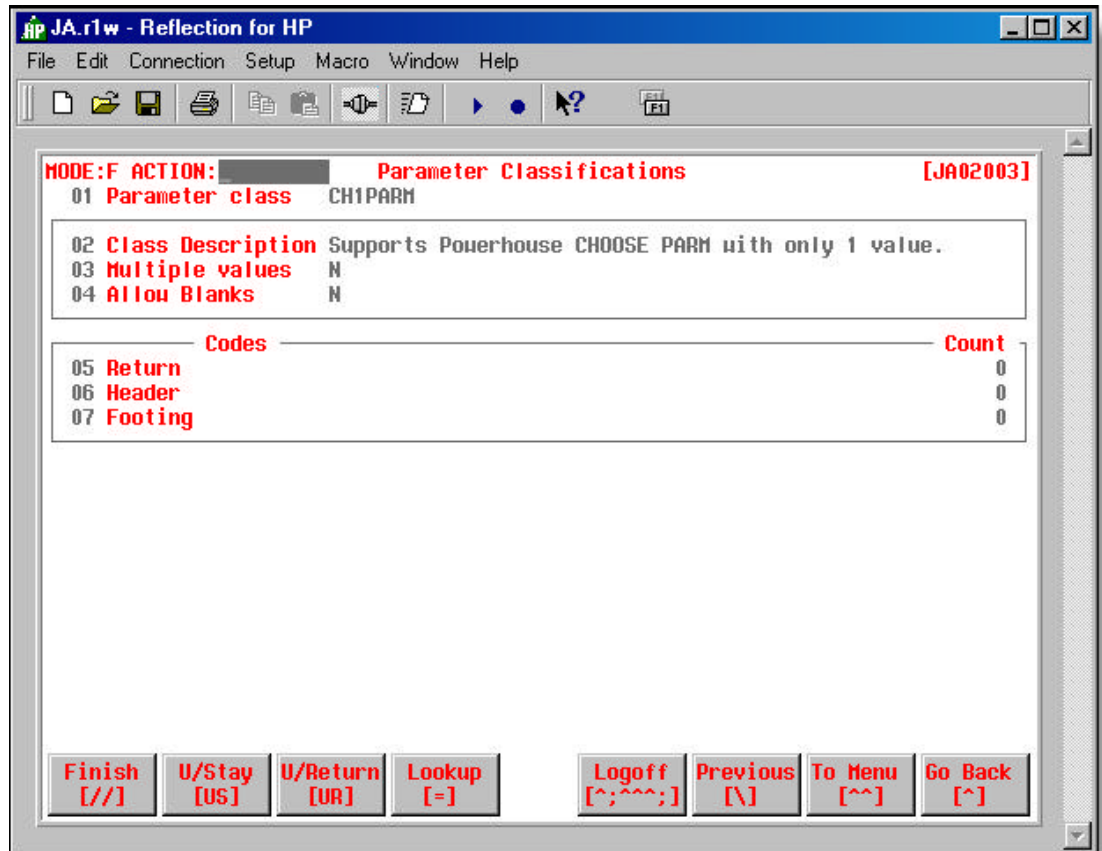
- Figure 2.9 – Parameter Classifications screen [JA02003]

Field Descriptions

01 Parameter Class

- ◻ The parameter class identifies to the execution screens and background job how to accept and use values entered for each parameter.

02 Class Description

- ◻ A brief description of the parameter class.

03 Multiple Values

- Indicates whether or not ("Y" or "N") the parameter will accept more than one value.

04 Allow Blanks

- Indicates whether or not ("Y" or "N") blanks may be entered for the parameter.

05 Return (Code)

- A string containing ASCII decimal value(s), printable character(s) in quotations, or a combination of both separated by commas. This value(s) will be placed in the job file after each value entered for a parameter. For example, to always have a carriage return placed in the job file after a parameter value — return code would be 13. If a line feed were also needed — return code would be 13,10.

Count

- Indicates the number of times the return code will be included in the job file.

06 Header (Code)

- A string containing ASCII decimal value(s), printable character(s) in quotations, or a combination of both separated by commas. This value(s) will be placed in the job file prior to the first value entered for a parameter. For example, to always have a carriage return placed in the job file before a parameter value, the header code would be 13. If a line feed were also needed, the header code would be 13,10.

Count

- Indicates the number of times the header code will be included in the job file

07 Footing (Code)

- A string containing ASCII decimal combination of both separated by commas. This value(s) will be placed in the job file after the last value entered for a parameter. For example, to always have a carriage return placed in the job file after the last parameter value, the footing code would be 13. If a line feed were also needed, the footing code would be 13,10.

Count

- Indicates the number of times the footing code will be included in the job file.

Formats [JA02006]

How to get here: JA Main Menu ? 24 (Formats)

The Formats screen (Figure 2.10) allows you to view, enter and maintain a list of output formats used to identify and select device control information that will be sent to a given device prior to any output being sent.
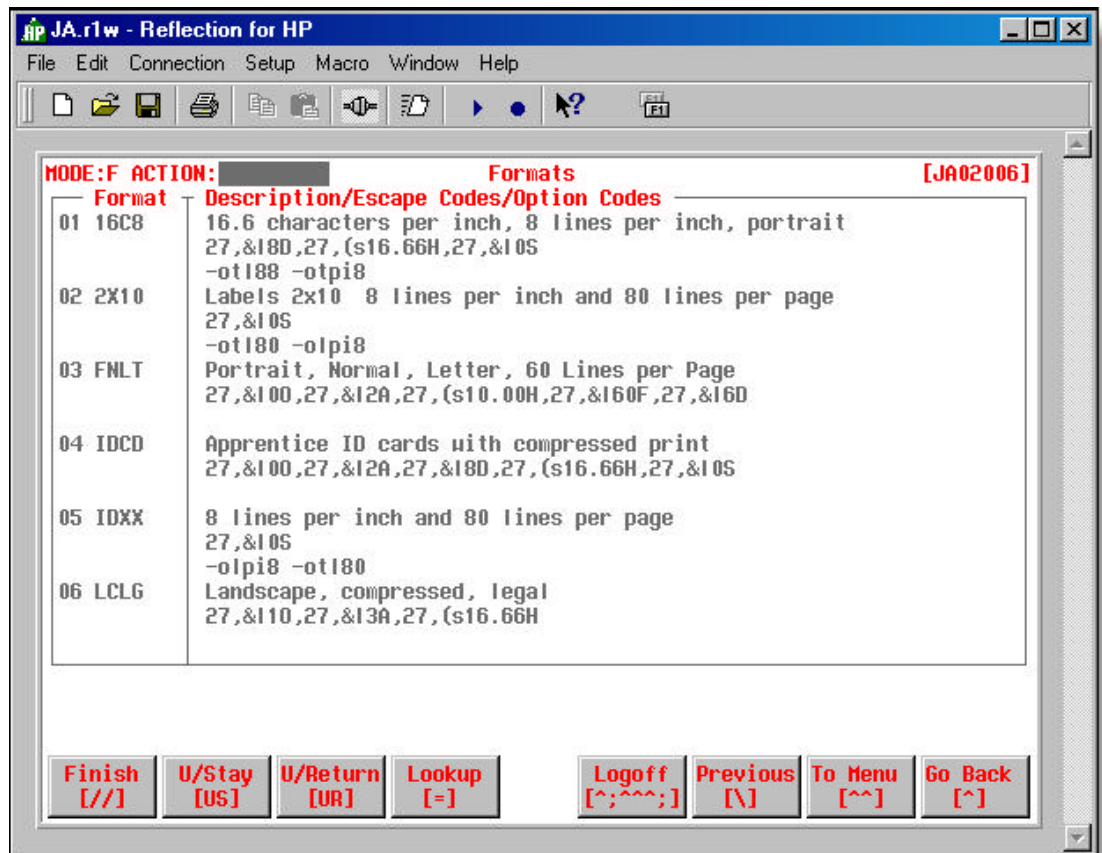
- Figure 2.10 – Formats screen [JA02006]

Field Descriptions

(01 to 06)

Format

- ◻ Specifies the control codes that will be included with an output file sent to a system device. When output is sent to a system device such as a printer, the ASCII codes associated with a format are sent with it.

Description

An unrestricted text field within which a name or brief description associated with the format is or may be given

Escape Codes

This section contains codes which may or may not begin with an escape character, and which are usually used for selecting format options from those offered by printers.

A sequence of these control codes specifies a string of ASCII characters, which may include non-printable control characters, to be sent to an output device. These sequences will usually be specified in order to control the format of printed output.

These codes are expressed as follows:

- When an escape code, as delimited by commas, consists entirely of numeric digits, those digits will be interpreted as giving the ASCII code value of the character to send.

- When an escape code is enclosed by quotes, the characters within the quotes will be sent to the device as they appear on the screen.

- When an escape code contains any characters which are not numeric digits, then the same characters as appear on the screen will be sent to the device.

Thus,

27, &12A

will result in <ESC>&12A being sent to the printer, where <ESC> represents the ASCII control character for the *escape* function.

Option Codes

This section contains an unrestricted text field, the contents of which replace **%option** in the definition of a job sending output to the device. This allows device-dependent parameters to be included in commands that perform printing.

Devices [JA02004]

How to get here: JA Main Menu ? 25 (Devices)

The Device screen (Figure 2.11) allows you to view, enter and maintain a list of output devices to which output from jobs may be sent. In the Usage field you can define how JA sends output to the device via Unix shell scripting. If format codes are specified for a device, they override those specified on the inherit device.

Each device may have codes associated with it that control the initialization and termination of the device. Initialization codes are sent to the device prior to other information being sent to the device. Termination codes are sent to the device after all other information has been sent. Initialization and termination codes may be defined for the device being setup or may be copied/inherited from the 'inherit device'. Any codes not setup in the current device will be copied from the 'inherit device'.

Initialization/Termination codes may be entered as ASCII equivalent decimal numbers, displayable characters in quotes, or combination of both. A comma must separate each code for a given type. For example, to specify <ctrl-I>80N as initialization codes, enter 137,"80N". The codes used for initialization and termination should be found in the manual for the device in question, according to the task to be performed and the environment in which the device exists.
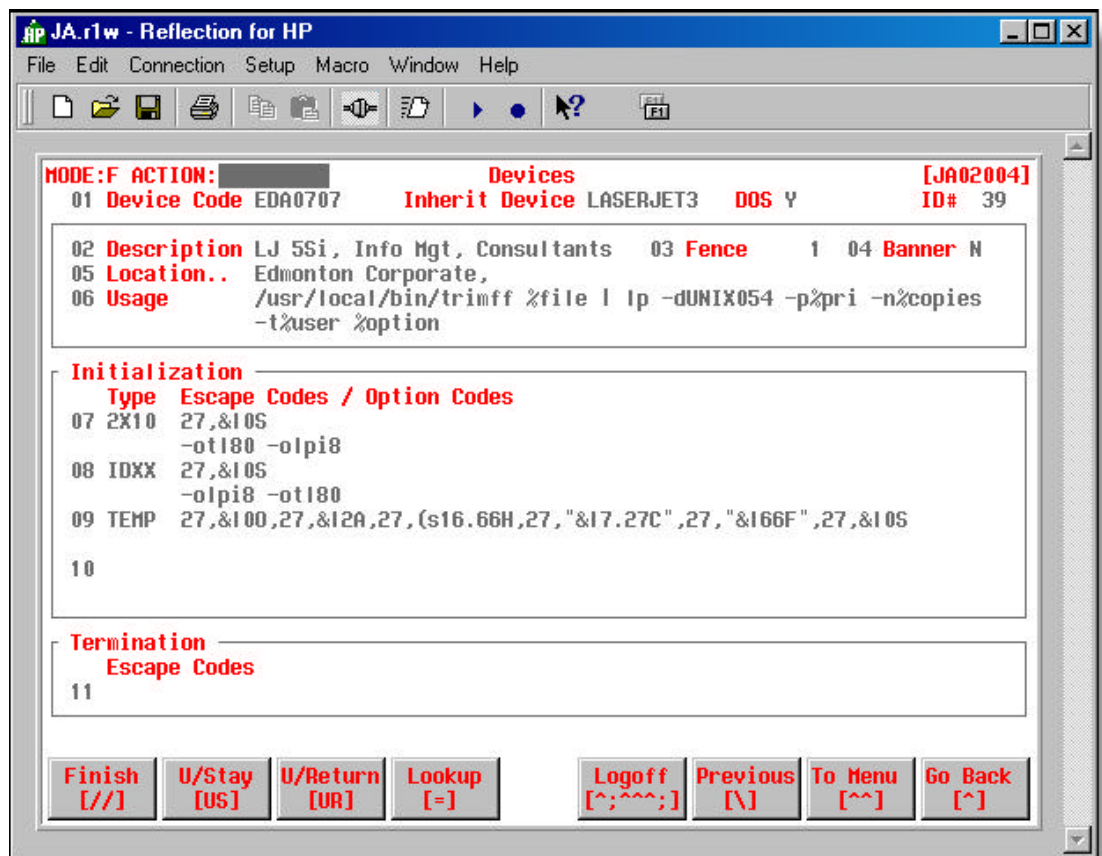
• Figure 2.11 – Devices screen [JA02004]

Field Descriptions

01 Device Code

◻ Code identifying the output device that the job output is sent to.

Inherit Device

◻ A code that identifies another device whose format codes this device will inherit. When format codes are missing for the current device, format codes from the inherited device will be used. This is useful when you don't want to repeat the set up of format codes for similar devices, like printers of the same family. If format codes are specified for the current device then they will be used instead of those specified on the inherited device.

DOS

◻ Flag ('Y' or blank) indicating if device uses a DOS based print server.

    Y   Converts Unix text files to DOS format. Replaces the '**smartux2dos**' system command in the Device Usage field.

ID#

◻ Numeric ID assigned by JA that identifies the device.

02 Description

◻ An unrestricted text field within which a name or brief description associated with the device is or may be given.

03 Fence

◻ Determines which outputs are copied to the physical device associated with the logical device. Any output with a number less than or equal to the device fence will not be copied to the physical device – any output with a priority less than or equal to this number will not be printed.

04 Banner

◻ Indicates if a banner page ("Y" or "N" or blank) is sent as the first page of the output.

◻ See: **Appendix 'K'** – Banner Page Sample

*The banner setting on the **Job Output** screen [JA03009] overrides the banner setting on the Device screen.*

05 Location

◻ A defined location from the Location Table.

    <F4> to make selection from Location Selection screen [JA00012]

06 Usage

◻ The device usage identifies system commands that will be used by JA to send information to this device.

Substitution codes are provided so that needed information may be embedded within the command(s) you specify. They are as follows:

%user	User Logon ID
%copies	Copies specified for the output
%pri	Priority specified for the output
%option	Option Codes associated with the output format
%file	File generated by JA for the output

The 'trimff' external script (/usr/local/bin/trimff) deletes the form feed as the first character in the document sent to a printer so that a blank page is not printed.

In most cases this field will contain the system command(s) that send output to a printer. Specified, any output sent to this device will be sent to the JA Job Review Screen.

Initialization

(07 to 10)

Type

◻ The formatting option the output uses.

◻ The format specifies the control codes that will be included with an output file sent to a system device. When output is sent to a system device such as a printer, the ASCII codes associated with a format are sent with it.

Escape Codes / Option Codes

◻ **Escape Codes**: A series of escape codes separated by commas. The escape codes define a series of escape or control codes that will be passed to a device. These codes are usually used to control device setup and output formatting.

When an option code is enclosed by quotes, or contains any characters which are not numeric digits, then the same characters as appear on the screen will be sent to the device. When an escape code, as delimited by commas, consists entirely of numeric digits, those digits will be interpreted as giving the ASCII code value of the character to send. Thus, 27,&12A will result in <ESC>**&12A** being sent to the printer, where <ESC> represents the ASCII control character for the *escape* function.

◻ **Option Codes**: An unrestricted text field, the contents of which replace **%option** in the definition of a job sending output to the device. This allows device-dependent parameters to be included in commands that perform printing.

Termination (11)

Escape Codes

◘ A series of escape codes separated by commas. The escape codes define a series of escape or control codes that will be passed to a device. The codes entered in this field are usually used to control device cleanup.

When a control code is enclosed by quotes, or contains any characters which are not numeric digits, then the same characters as appear on the screen will be sent to the device. When an escape code, as delimited by commas, consists entirely of numeric digits, those digits will be interpreted as giving the ASCII code value of the character to send. Thus, 27,&12A will result in <ESC>**&12A** being sent to the printer, where <ESC> represents the ASCII control character for the *escape* function.

Queue [JA02008]

How to get here: JA Main Menu ? 26 (Queues)

The Queue screen (Figure 2.12) allows you to view, enter and maintain a list of Queues. Queues organize and provide rules for running jobs. Jobs are assigned to Queues for execution at job definition time (See: **Chapter 3 – Defining Groups, Jobs and Programs** – Jobs [JA03013]).
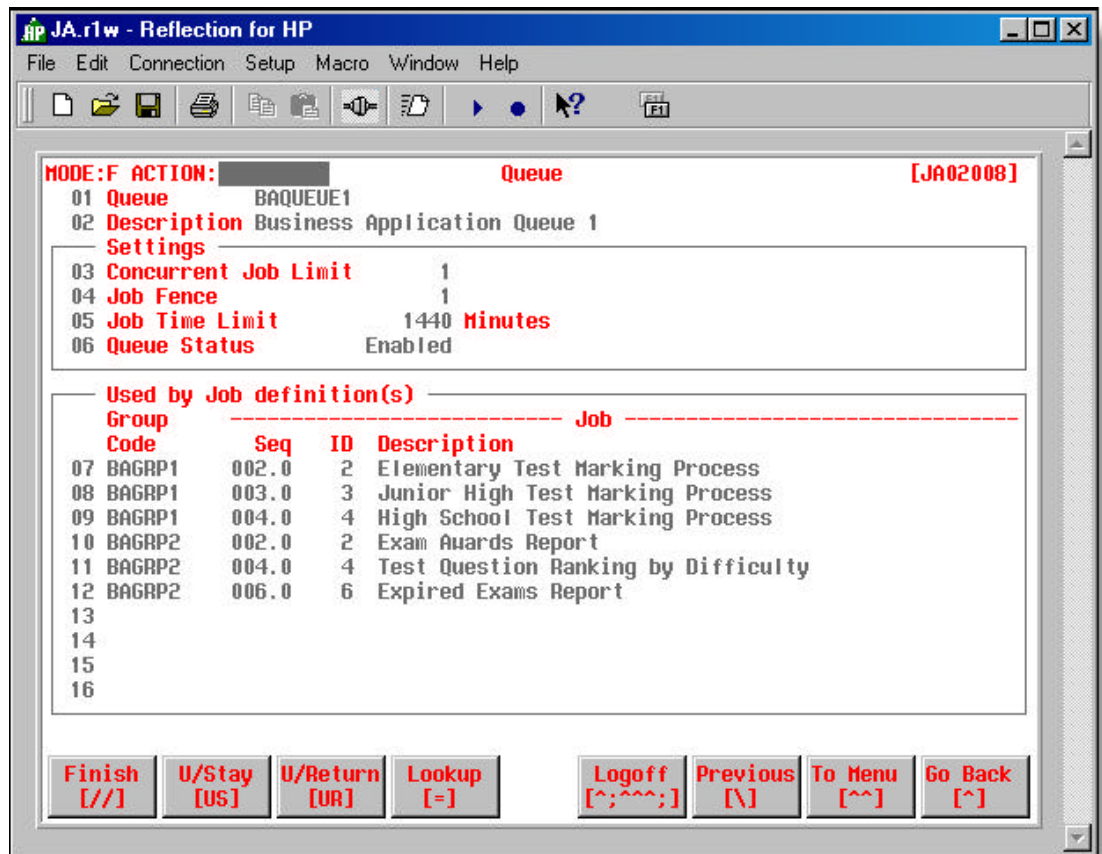
- Figure 2.12 – Queue screen [JA02008]

Field Descriptions

01 Queue

- ◘   A code that uniquely identifies the logical job queue.

- ◘   This code is required, when setting up jobs, so that the job may be assigned to a particular queue for execution.

02 Description

- ◘   A name or brief description associated with the job queue may be provided.

03 Concurrent Job Limit

- Identifies how many jobs run at the same time in this queue.

- Any number of jobs may be issued into this queue but only the number identified by this field may execute at the same time. Jobs will execute concurrently to the maximum of concurrent limit. Once the limit is reached, the 'Job Batcher' will not batch any more jobs until there is a space available.

04 Job Fence

- Any job with a priority less than or equal to this number will not be batched.

- The Job Fence determines which jobs are allowed to make the transition from **issued** to **batched** status. Any job with a number less than or equal to the job fence will remain issued. User batched jobs and jobs that have already changed to the batched status are unaffected by the Job Fence.

05 Job Time Limit

- Determines how many minutes a job may run before JA terminates it.

- This is a safeguard against jobs that run longer than expected and jeopardize other jobs and processes like backups.

06 Queue Status

- Identifies a queue's current status.

- The queue status identifies the queue's current ability to process jobs. It may have one of the following values:

    EN (Enabled) – The queue is receiving and processing issued jobs based on the job fence and job priority. If the queue was previously disabled it will start processing jobs that are in the queue.

    DI (Disabled) – The queue is receiving issued jobs but will not process them until it is enabled. If the queue was previously enabled, jobs that are executing will be allowed to complete normally.

Used by Job Definition(s)

(07 to 16)

*The following fields are display fields only and are assigned to the Queue through the Groupings [JA03005] and **Jobs** [JA03013] screens.*

Group Code

- A unique code used to identify a collection of jobs. This collection of jobs may later be displayed on a menu style screen for selection and execution.

(Job) Seq

- Identifies the sequence the jobs appear in the Queue.

(Job) ID

◻   Unique numeric value identifying the job. JA automatically creates the ID when the job is added to the Job Group (Grouping).

(Job) Description

◻   Text description of the job.

Locations [JA02010]

How to get here: JA Main Menu ? 27 (Locations)

The Locations screen (Figure 2.13) allows you to view, enter and maintain a list of locations. The locations table is used as the source for assigning locations on the Devices screen [JA02004] and the User screen [JA02005]. This can be used to display devices and users based on a specific location.
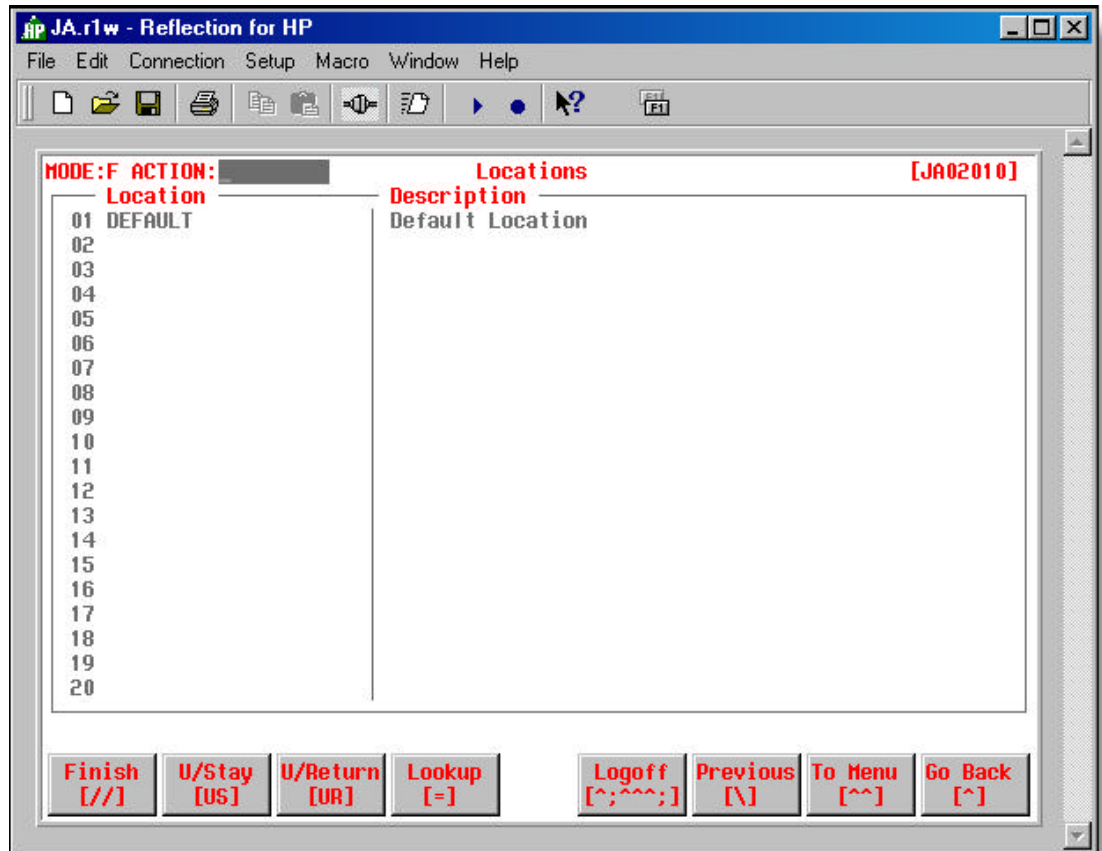
- Figure 2.13 – Locations screen [JA02010]

Field Descriptions

(01 to 20)

Location

- ◘   A code describing a physical location.

Description

- ◘   Text description of the location code.

Transaction Defaults [JA02009]

How to get here: JA Main Menu ? 28 (Transaction Defaults)

The Transactions Defaults screen (Figure 2.14) allows you to view, enter and maintain a list of files or tables for a particular action used in the Export and Import processes (See: **Chapter 5 – Maintaining JA**). The Export and Import processes are used to copy and load a JA version from on Unix server to another.
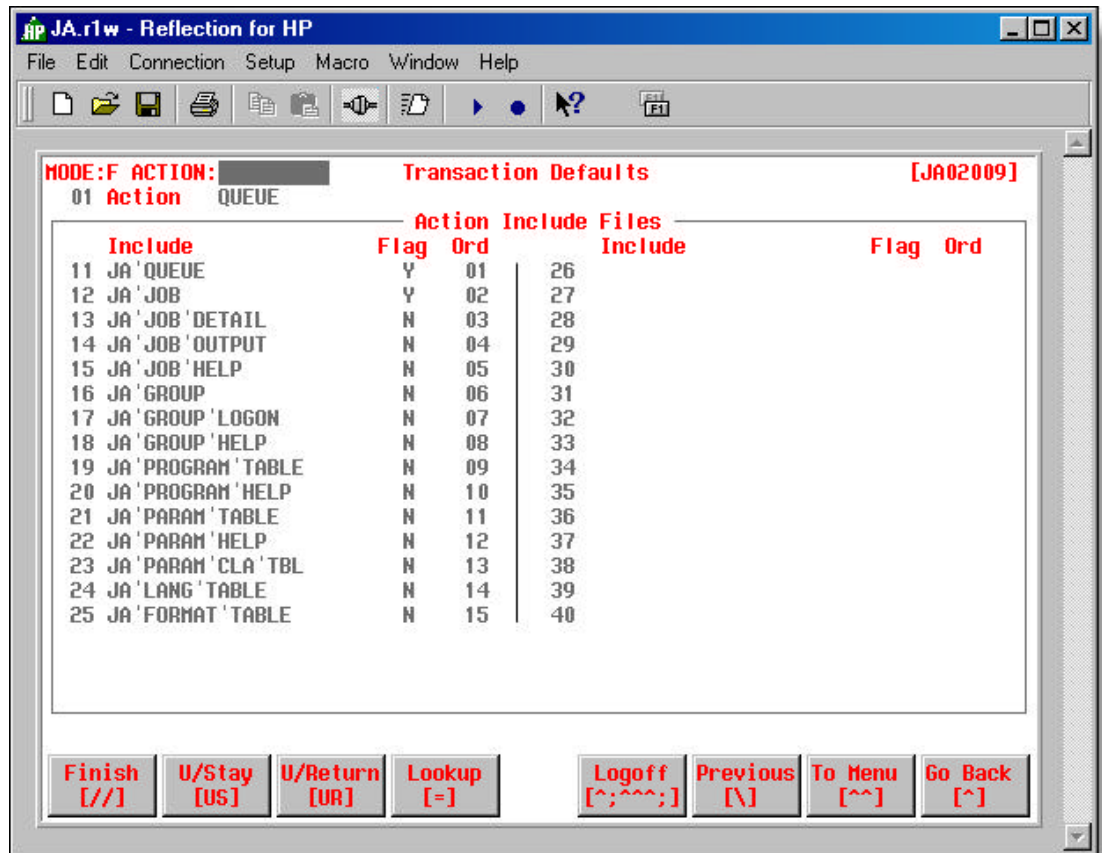
- Figure 2.14 – Transaction Defaults screen [JA02009]

Field Descriptions

01 Action

- ◘ Assigned based on the type of transaction.

    The valid values are:

        JOB
        GROUP
        QUEUE
        PROGRAM
        DEVICE

```
PARAMETER
LANGUAGE
FORMAT
USERROLE
USER
CUSTOM
LOCATION
```

Action Include Fields

(11 to 40)

Include

◻ Default file to be included (copied) in the export or import transaction for the Action.

Flag

◻ Identifies if the file will be included in the action ("Y" or "N")

Ord

◻ The order of the file in the transaction action. This allows the files to be extracted in the correct order.

The Users Tables

The Users Tables (Figure 2.15) are Options 31 and 32 on the JA Main Menu screen. The User and User Roles tables are used to define users and their respective abilities or authorities to JA. Once defined, users and roles can be loaded after the install.

```
┌─────────────────── Users ───────────────────┐
│ 31 Users                                     │
│ 32 User Roles                                │
└──────────────────────────────────────────────┘
```

- Figure 2.15 – Users (JA Main Menu)

User Role [JA02007]

How to get here: JA Main Menu ? 32 (User Roles)

The User Role screen (Figure 2.16) allows you to view, enter and maintain a list of user roles and abilities within the roles. The roles are assigned to users needing the same functionality and security permissions within JA.
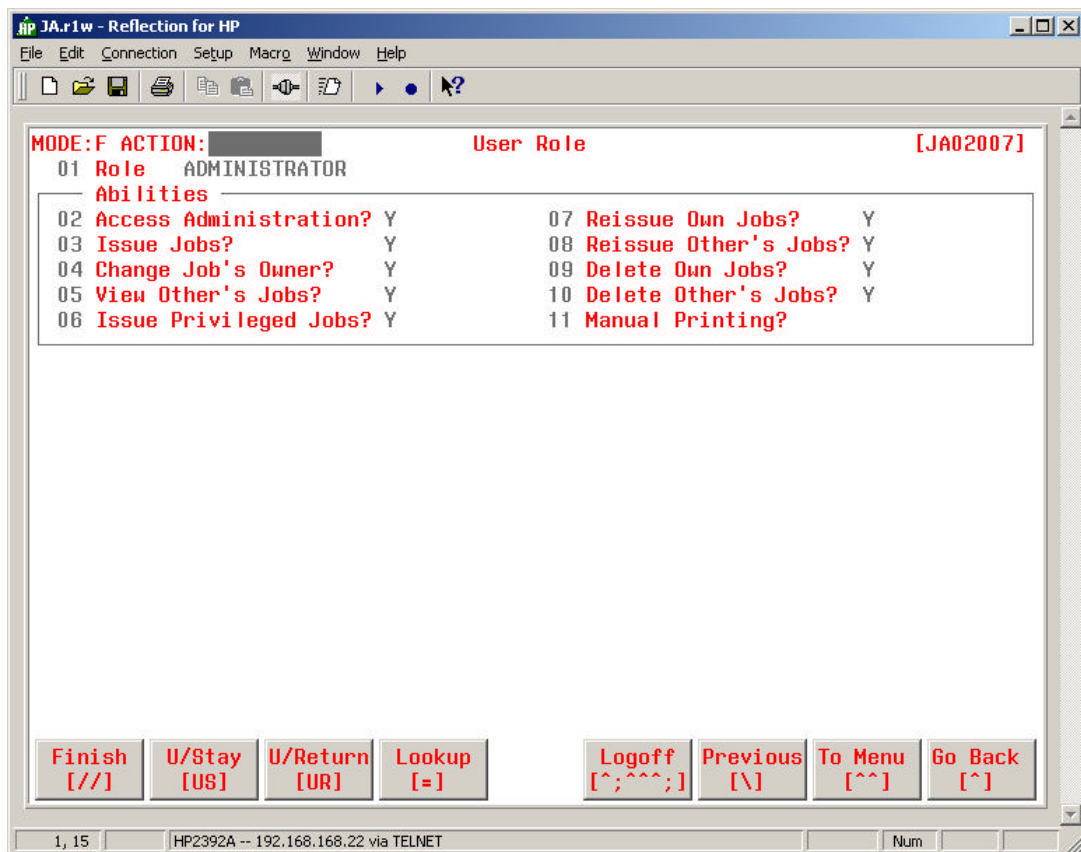
- Figure 2.16 – User Role screen [JA02007]

Field Descriptions

01 Role

- ◻ A code that identifies the group of rights a user may have.

- ◻ The user role is a code that uniquely identifies a set of security rights or abilities specified in the User Role table. Examples of values for this field could include ADMINISTRATOR, ADVANCED, RESTRICTED or TESTER.

Abilities

02 Access Administration?

- ◻ Indicates if the role grants users access ('Y' or 'N') to the JA Main Menu and shell commands to modify JA group, job and control definitions.

03 Issue Jobs?

- ◻ Indicates if the role grants the right to users ('Y' or 'N') to issue jobs.

04 Change Job's Owner?

- ◻ Indicates if the role grants the right ('Y' or 'N') to users to change the owner of a completed job.

05 View Other's Jobs?

- ◻ Indicates if the role grants the right ('Y' or 'N') to users to view jobs issued by others.

- ◻ Jobs are viewed on the Job Review screen [JA06001].

06 Issue Privileged Jobs?

- ◻ Indicates if the role grants the right to ('Y' or 'N') to users to issue and review privileged jobs.

- ◻ Privileged jobs are flagged on the Jobs screen [JA03013]

- ◻ See: **Appendix 'L'** – Privileged Job Business Rules

Note! – This field and function is not available at all client sites.

07 Reissue Own Jobs?

- ◻ Indicates if the role grants the right ('Y' or 'N') to users to reissue jobs that they own.

- ◻ Jobs are reissued on the Job Review screen [JA06001].

- ◻ Setting this field to 'N' is useful if you want to maintain an audit trail of the job runs that cannot easily be tampered with.

08 Reissue Other's Jobs?

◻ Indicates if the role grants the right ('Y' or 'N') to users to reissue jobs that are owned by others.

◻ Setting this field to 'N' is useful if you want to maintain an audit trail of the job runs that cannot easily be tampered with.

09 Delete Own Jobs?

◻ Indicates if the role grants the right ('Y' or 'N') to users to delete jobs that they own.

◻ Jobs are deleted on the Job Review screen [JA06001].

◻ Setting this field to 'N' is useful if you want to maintain an audit trail of the job runs that cannot easily be tampered with.

10 Delete Other's Jobs?

◻ Indicates if the role grants the right ('Y' or 'N') to users to delete jobs that are owned by others.

◻ Setting this field to 'N' is useful if you want to maintain an audit trail of the job runs that cannot easily be tampered with.

11 Manual Printing?

◻ Indicates if output from user issued jobs should be manually sent ('Y' or 'N') to the specified output device.

◻ A value of ' ' (a blank space) indicates the default value of manual printing given in the job definition is used.

◻ Setting this field to 'Y' is useful when it is undesirable to have scheduled jobs sent to the output device identified by the default owner of the logon (e.g. – nightly scheduled TEST jobs).

User [JA02005]

How to get here: JA Main Menu ? 31 (Users)

The User screen (Figure 2.17) allows you to view, enter and maintain a list of users that have access to JA. Each user is identified by their sign-on ID and may have a name and default device (i.e. printer) associated with them. The default device is used to override assumptions made by JA regarding where output from jobs will go.
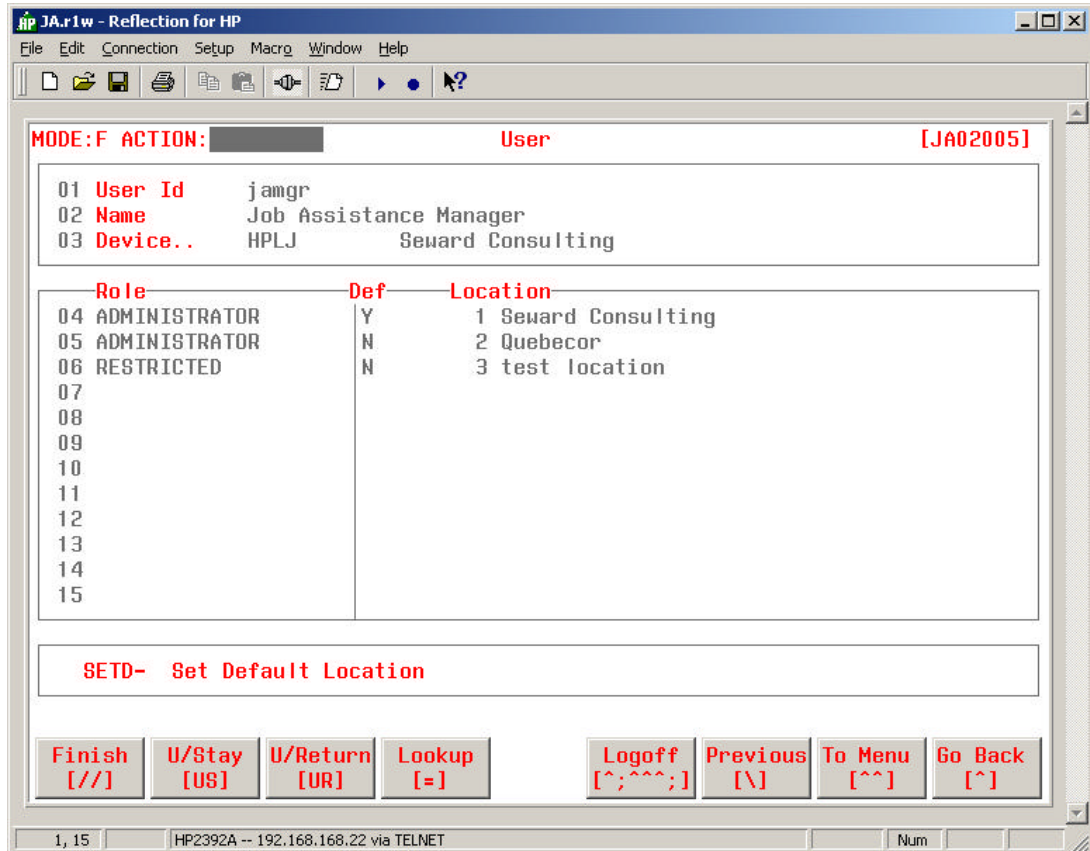
- Figure 2.17 – User screen [JA02005]

Field Descriptions

01 User ID

- ◻   The user's logon ID.

02 Name

- ◻   User's full name.

03 Device

◘   The default output device for jobs issued by the user.

   <F4> to make a selection from Device Selection screen [JA00003].

◘   If no device is specified, the system default device will be used. A system default device can be setup on the Control screen [JA02001].

(4 to 18) Role, Default, Location

Role

◘   A code that identifies the group of rights a user may have.

   <F4> to make a selection from Role Selection screen [JA00010].

Def

◘   Y if the current location is the user's default location.

Location

◘   Location code.

   <F4> to make a selection from Location Selection screen [JA02010]

Options

SETD-   Sets a selected location on the screen as the user's default location.

Summary

This chapter reviewed the recommended JA directory structure when JA is installed at a client site. Various sign on options to JA from the business application were also discussed. The chapter concluded by reviewing in detail the information required for each of the Common Tables and User Tables.

Once the JA setup issues are resolved, JA can be installed at the client site. After JA installation, the initial definition of the Common and User Tables can be completed. The tables can be updated on an on-going basis as business application requirements dictate.

The next step is to define the business application programs and jobs to JA. The following chapter documents the various JA screens used to define job groups, jobs and programs. Step by step instructions are also provided to define each of these items.

Chapter 3

Defining Groups, Jobs and Programs

Once JA is installed at the client site, the business application jobs can be defined to JA. This task, in most cases, is the responsibility of the business application's developers. This chapter describes the 'Job Definitions' environment and the actual process of creating scheduled and on-demand jobs.

In this chapter, the following topics are covered:

- **JA Screens Used to Define Jobs**

- **Job Definitions Options**

- **Defining Job Groups**

  Groupings [JA03005] and Subordinate Screen
  Group Help [JA03006]

- **Defining Jobs**

  Jobs [JA03013] and Subordinate Screens
  Job Help [JA03004]
  Job Outputs [JA03009]
  Job Details [JA03010]
  Job Status [JA03012]

- **Defining Programs**

  Programs {JA03001] and Subordinate Screens
  Program Usage [JA03004]
  Program Help [JA03002]
  Parameter Help [JA03003]
  Report Samples

- **Instructions**

  Updating the Jobs screen [JA03013]
  Defining a Job in JA

JA Screens Used To Define Jobs
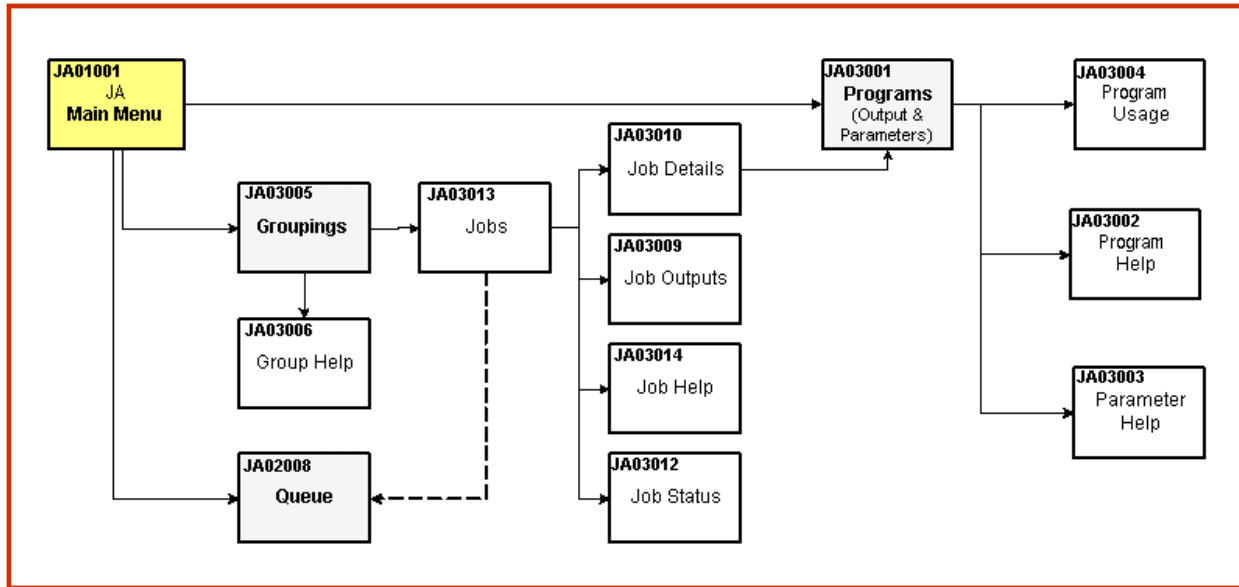
- Figure 3.1 – JA Screens Used To Define Jobs

Figure 3.1 displays the screens used to define jobs in JA.

Business application programs, related output, and input parameters are defined on the Programs screen [JA03001].

Jobs are assigned to Groupings [JA03005], also called Job Groups. The Jobs screen [JA03013] is accessed from the Groupings screen to define jobs that are common to a Job Group.

The Job Details screen [JA03010] is accessed from the Jobs screen to assign programs (previously defined on the Programs screen), various JA commands and operating system or batch file commands including control commands (e.g. – if then else logic). In short, the Job Details describe the list of tasks the job is to perform.

After the Job Details are entered, the Job Outputs screen [JA03009] can be accessed from the Jobs screen to view and update the program output parameters (name, format, copy, priority and banner). Modifying the program output parameters on Job Outputs does not update the original definitions as defined on the Programs screen.

On the Jobs screen, each job is assigned to a Queue for execution, as defined on the Queue screen [JA02008]. All jobs within a Job Group do not have to be assigned to the same Queue.

Various Help screens are also available to document processing features and functions of Programs, Jobs and Job Groups.

The remainder of this Chapter reviews each job definition screen in greater detail. The Chapter ends by taking you through the step-by-step process of defining a job in JA.

Job Definitions Options

The Job Definitions functions are options 1 (Groupings) and 2 (Programs) on the JA Main Menu.

```
┌──────────── Job Definitions ────────────┐
│  01 Groupings                            │
│  02 Programs                             │
└──────────────────────────────────────────┘
```

- Figure 3.2 - Job Definitions (JA Main Menu)

Defining Job Groups

Groupings [JA03005] and Subordinate Screen

How to get here: JA Main Menu ? 1 (Groupings)

The Groupings screen (Figure 3.3) and sub-options allow you to view, enter and maintain information for Job Groups.
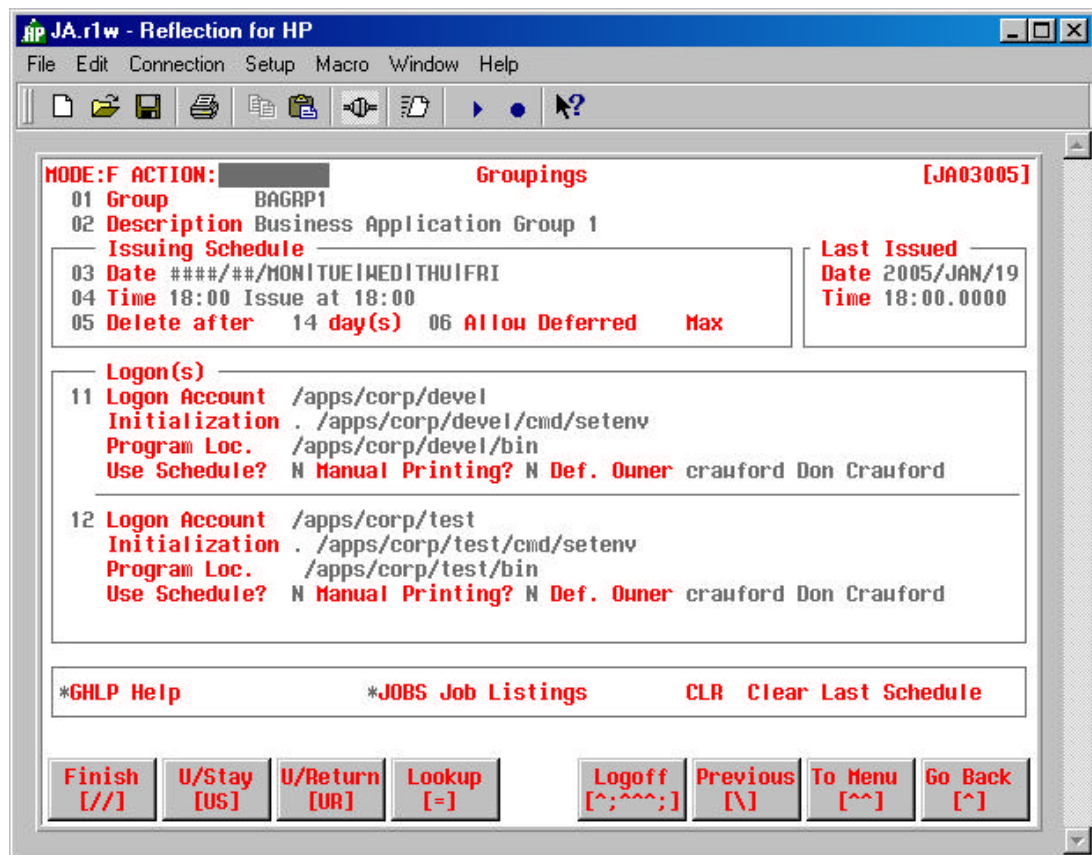
- Figure 3.3 – Groupings screen [JA03005]

Field Definitions

01 Group

- ◘ A unique code identifying a collection of jobs.

- ◘ The collection of jobs may later be displayed on a menu style screen for selection and execution.

02 Description

- ◘ A description of the job group.

Issuing Schedule

03 Date

- ◘ The date the jobs in the group will automatically be issued.

- ◘ See: **Appendix 'C'** – Groupings – Date and Time Entry

04 Time

- ◘ The time the jobs in the group will automatically be issued.

- ◘ See: **Appendix 'C'** – Groupings – Date and Time Entry

05 Delete after

- ◘ Specifies the number of days after which an issued job and its output will be removed from the output queue. The output can be held and viewed on the Job Review screen [JA06001], if required.

- ◘ Valid values: 0 to 365. If 0, the job must be deleted manually.

06 Allowed Deferred

- ◘ Indicates if jobs can be issued ("Y" or "N") after the scheduled time.

  Y The jobs will be issued only if the current time is less or equal to the scheduled time + the deferred maximum, otherwise will be deferred until the next day

  N Job will be issued only if the current time is less or equal to the scheduled time + the deferred maximum, otherwise a warning will be added to the warning log and the job is not issued.

  These values override the system default (on the Control screen [JA02001]) and can be overridden on an individual job basis. If blank, the system default is used for job deferment.

Max

- ◘ Maximum number of minutes a scheduled job can be deferred prior to issuing; used with Allow Deferred to determine if a scheduled job should be issued, not issued, or deferred to the next day

- ◘ Valid values: 0 to 9999.

Last Issued

Date

- ◘ Date the job group was last issued.

Time

- ◘ Time the job group was last issued.

Logon(s)

Each group can have many logons based on the user account. On-demand jobs issue the job based on the user account of the issuer. Scheduled jobs issue a job for each of the user accounts listed.

(11 to 12)

Logon Account

- ◘ This is an arbitrary value that is set to an environment variable called 'jauseracct'. JA uses this environment variable and matches it with the Group account field to figure out how the job is to log on when it gets batched.

Initialization

- ◘ Specifies a command that is executed at the beginning of each job in the group.

Program Loc.

- ◘ Identifies the location of all programs to be executed for all jobs in the group.

Use Schedule?

- ◘ Will this logon be used for issuing scheduled jobs? ("Y" or "N").

- ◘ In a Development or Test environment, this field can be set to "N" (No) when there is only a requirement to run the jobs on an occasional basis.

Manual Printing?

◻ Manually print jobs? ("Y" or "N")

Y Output for jobs must be manually printed from the Job Review screen [JA06001]. This is good for use in a Development or Test environment, where it is only necessary to view output on-line.

N Output for jobs will automatically be printed when the jobs are completed.

Def. Owner

◻ Identifies the user of jobs that are automatically scheduled and issued.

Options

GHLP Group Help [JA03006]

JOBS Jobs [JA03013]

CLR Clears last scheduled information. Once the group has been automatically scheduled, it will not be scheduled again until the next schedule period. This option clears the prior schedule information allowing the group to be immediately scheduled again – automatically.

Group Help [JA03006]

How to get here: JA Main Menu ? 1 (Groupings) ? Option 'GHLP'

The Group Help screen (Figure 3.4) allows you to view, enter and maintain text help information for job groups. In most cases, business application developers are most interested in this information.
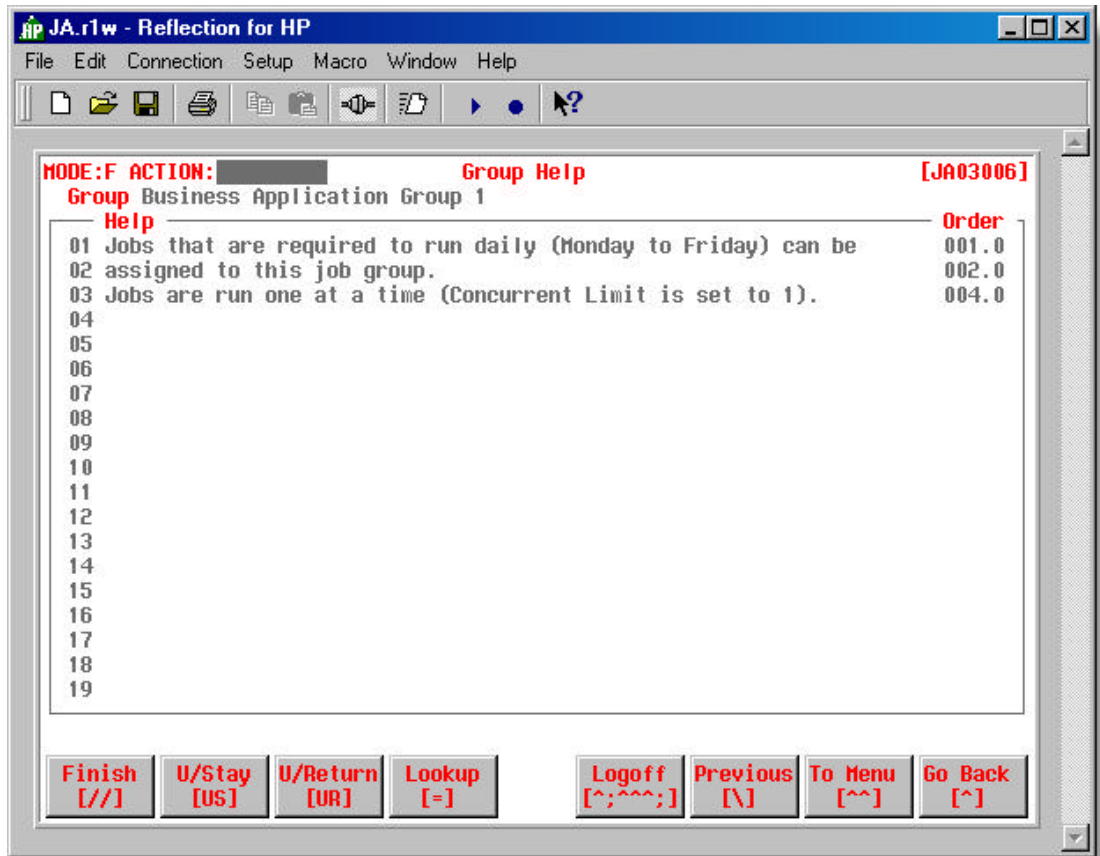
- Figure 3.4 – Group Help screen [JA03006]

Field Descriptions

(01 to 19)

Help

- ◻ Text offering help information for the selected job group.

Defining Jobs

Jobs [JA03013] and Subordinate Screens

How to get here: JA Main Menu ? 1 (Groupings) ? Option 'JOBS'

The Jobs screen (Figure 3.5) allows you to view, enter and maintain jobs that are assigned to job groups. The primary purpose of a job is to perform some process – such as, creating a data extract, updating information, or creating a report. The main pieces of a job are the schedule, the output and the job details.
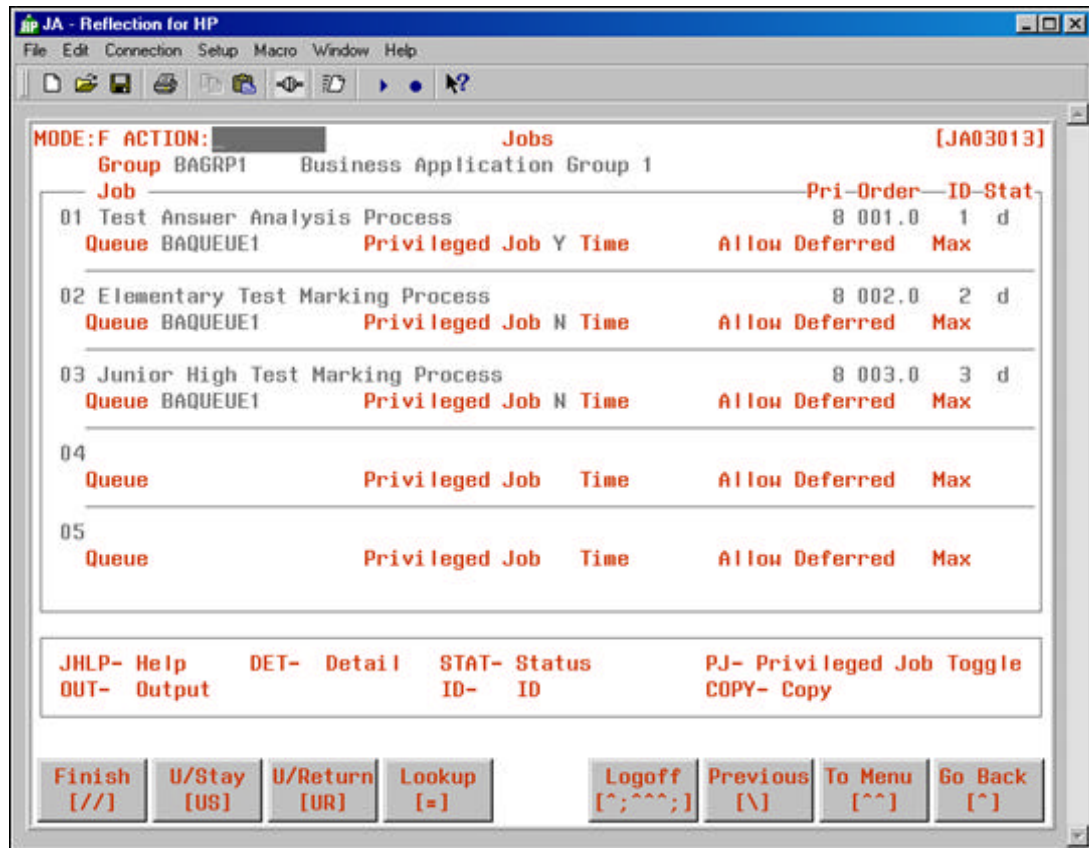
• Figure 3.5 – Jobs screen [JA03013]

Field Descriptions

Job

(01 to 05)

(Description)

◻ Text description of the job.

Pri

◘   The job priority when issued.

◘   Only those jobs with a priority higher than the global Job Fence (set via the jafence shell command) will execute. A job with a priority at or below the global Job Fence will stay in the queue and not execute until they are deleted or the fence is dropped.

◘   Higher priority jobs execute before lower priority jobs. If the job priority is 0, the job will not appear on the automatically generated Job Menus and will be considered disabled.

Order

◘   The order in which the job appears within the job grouping.

ID

◘   Unique numeric that identifies the job within the job group. JA automatically creates this number when you enter a new job into the group.

Stat

◘   Valid values are:

j   Help exists for the job (use **JHLP-** option to view or update Job help)

d   Details exist for the job (use **DET-** option to view or update Job details)

o   Output exists for the job (use **OUT-** option to view or update Job output)

s   Status exists for the job (use **STAT-** option to view Job status)

◘   JA automatically sets the values when the job is defined in the Group.

Queue

◘   Identifies the Queue to which the job is assigned.

Privileged Job

◘   Identifies the job as privileged ('Y') or not ('N')

◘   See: **Appendix 'L'** – Privileged Job Business Rules

Note! – This is field and function is not defined at all client sites.

Time

◘   The time the job is scheduled to run, if different from the time entered for the Job Group.

◘   The time entered here, overrides the time specified on the Groupings screen [JA03005].

Allow Deferred

◻ Indicates if jobs can be issued ("Y" or "N") after the scheduled time.

◻ The value entered here, overrides the "Allow Deferred" setting on the Groupings screen [JA03005].

Max

◻ Maximum number of minutes a scheduled job can be deferred prior to issuing.

◻ The value entered here, overrides the "Max" setting on the Groupings screen [JA03005].

Options

JHLP-   Job Help [JA03014] for the selected job

OUT-   Job Outputs [JA03009] for the selected job

DET-   Job Details [JA03010] for the selected job

ID-   Allows you to update the ID number for the selected job

STAT-   Job Status [JA03012] for the selected job

PJ-   Privileged Job Toggle (*This option is not available at all client sites*)

COPY-   Copy the selected job to a different Job Group

Job Help [JA03014]

How to get here: JA Main Menu ? 1 (Groupings) ? Option 'JOBS' ? Option 'JHLP-#'

The Job Help screen (Figure 3.6) allows you to view and enter job help information for the selected job. Business application developers usually have an interest in this information for documentation purposes.
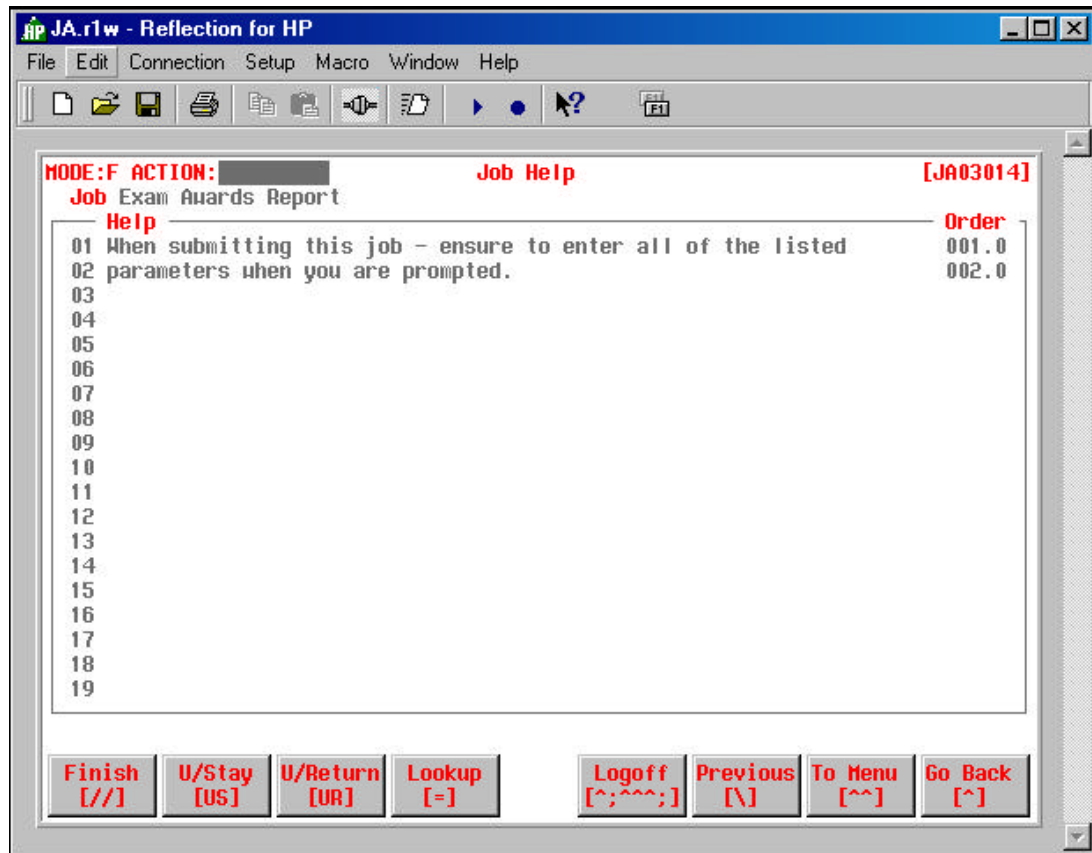
- Figure 3.6 – Job Help screen [JA03014]

Field Descriptions

(01 to 19)

Help

- ◻ Text offering help information for the selected job

Job Outputs [JA03009]

How to get here: JA Main Menu ? 1 (Groupings) ? Option 'JOBS' ? Option 'OUT-#'

The Job Outputs screen (Figure 3.7) allows you to view and customize the output definitions created for the selected job.
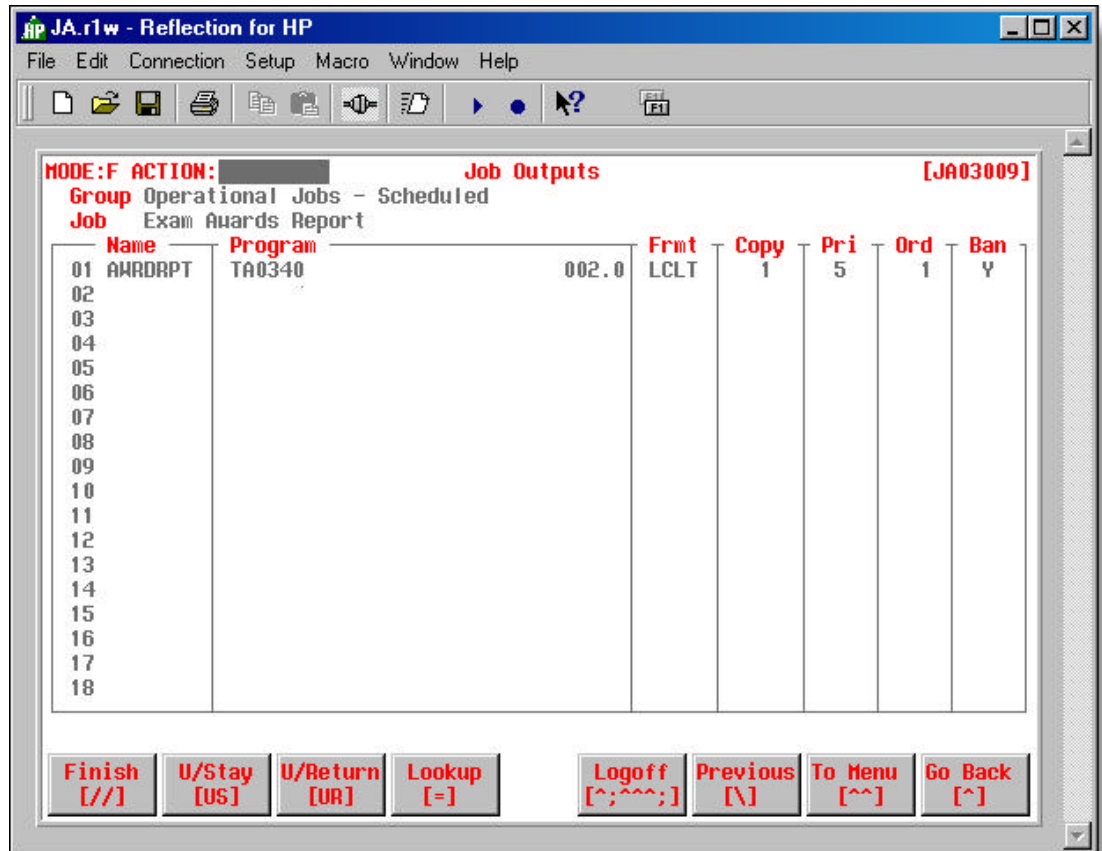
- Figure 3.7 – Job Outputs screen [JA03009]

Field Descriptions

(01 to 18)

Name

◻ Name of the file or report created in the selected job.

Program

◻ Name of the program that creates the output.

Frmt

◻ The format of the job output.

- See: **Chapter 2 – JA Setup** – Common Tables – Formats

Copy

- The number of copies produced.

Pri

- Output priority when set to output device.

Ord

- The order the output is listed on the output queue.

Ban

- Indicates if banner page is printed with the output ("Y", "N" or blank). The setting here is used as the default on the Job Execution screen [JA04005].

- See: **Appendix 'K'** – Banner Page Sample

*The output name, format, copies, priority and banner fields can be updated on this screen without changing the original output definition on the **Programs** screen [JA03001].*

*The banner setting on this screen overrides the banner setting on the **Devices** screen [JA02004].*

If multiple job outputs are assigned the same logical name, all of them will print together.

Job Details [JA03010]

How to get here: JA Main Menu ? 1 (Groupings) ? Option 'JOBS' ? Option 'DET-#'

The Job Details screen (Figure 3.8) allows you to view, enter and maintain the list of tasks the job is required to perform.
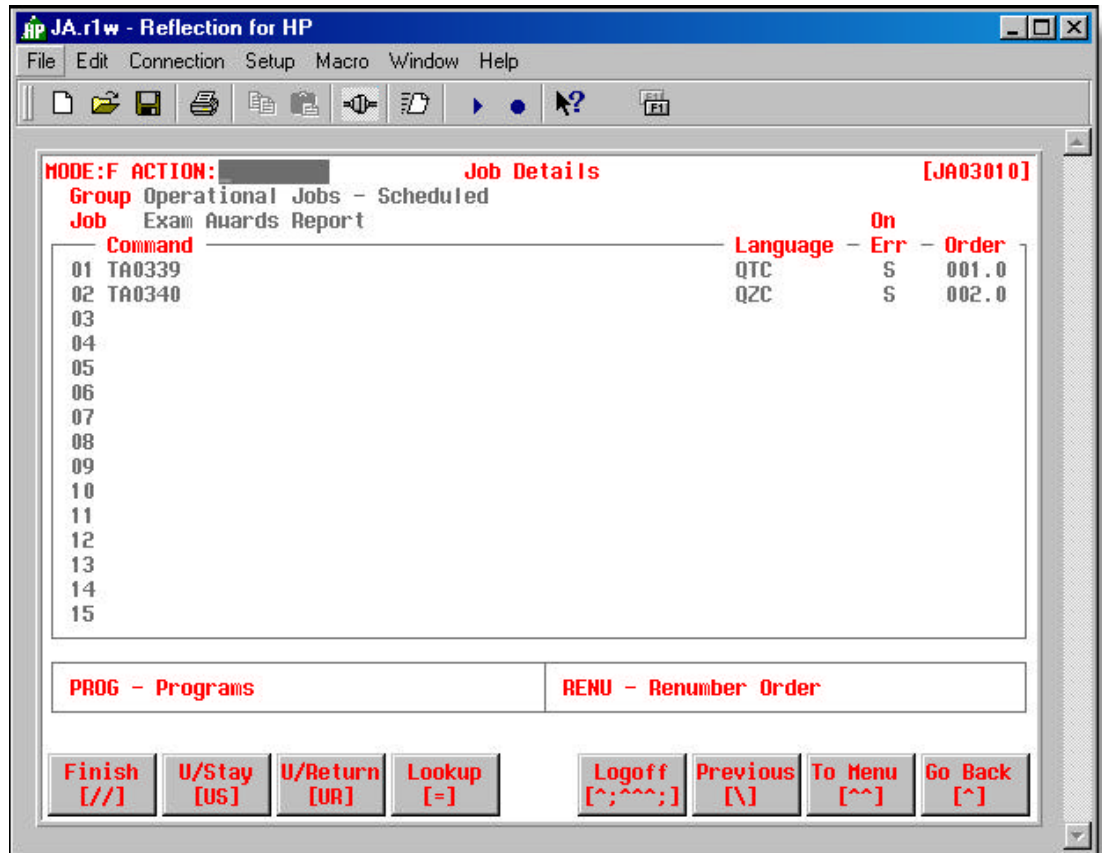
• Figure 3.8 – Job Details screen [JA03010]

Field Descriptions

(01 to 15)

Command

◘　Identifies a specific task to perform. One of three types of information is entered here:

1. Program that is defined on the Programs screen [JA03001]

2. Native operating system commands or batch files

3. JA commands

◘   See: **Appendix 'D'** – Job Details – Command Field Options

Language

◘   A code that identifies a class of programs; identifies the means by which the program is used or executed.

◘   Must be defined on the Languages screen [JA02002].

On Err

◘   Identifies the action that should be taken if an error occurs.

◘   See: **Appendix 'E'** – Job Details – "On Error" Options

Order

◘   Identifies the order in which the commands are executed.

◘   Commands can be added or merged into existing commands by using real numbers.

> **e.g**. – If you want to place a new command between command lines 8 and 9 enter an order number of 8.5 for the new command.

Options

PROG-   Programs [JA03001] screen for the selected detail command line
             (** the command line must contain a valid program name)

RENU   Renumbers the order of the commands

Job Status [JA03012]

How to get here: JA Main Menu ? 1 ? Option 'JOBS' ? Option 'STAT-#'

The Job Status screen (Figure 3.9) allows you to view who has submitted the selected job – and when the last time it was submitted. JA automatically updates this screen each time the job is executed.
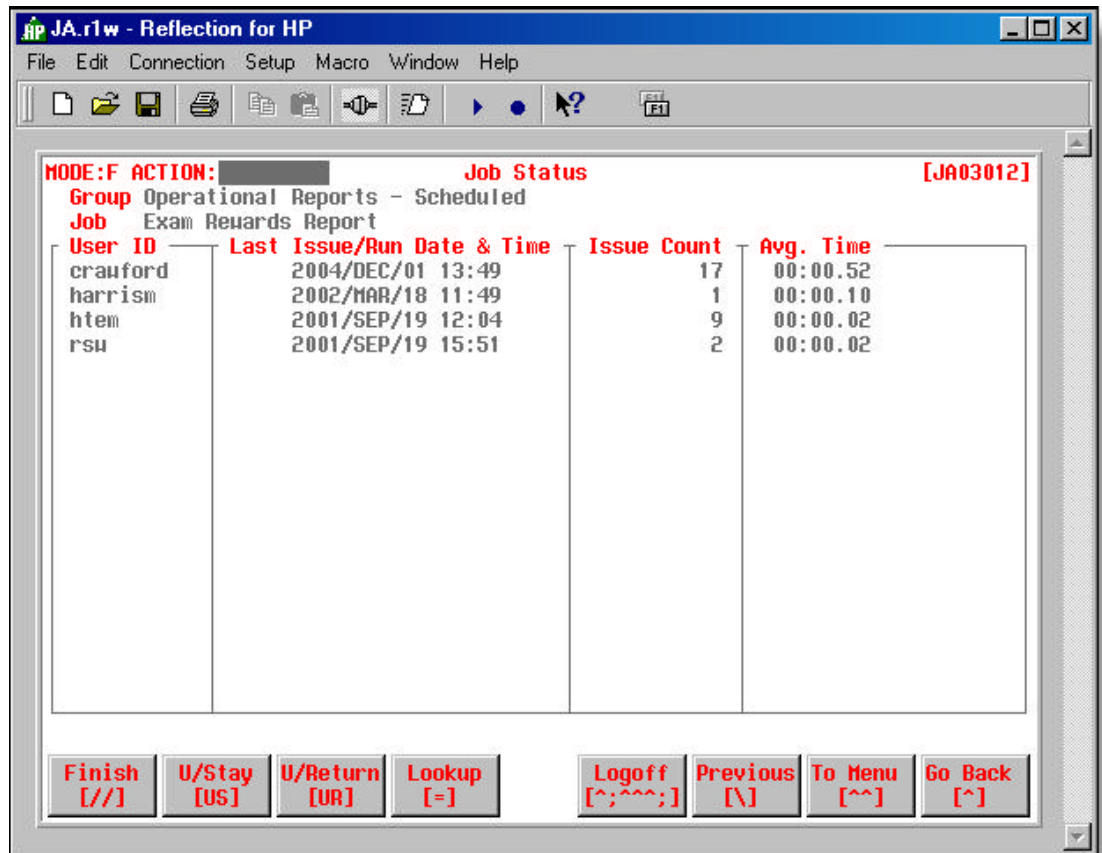
- Figure 3.9 – Job Status screen [JA03012]

Field Descriptions

User ID

- ◻ The logon user ID of the individual who has submitted the job.

Last Issue / Run Date & Time

- ◻ The date and time the user last issued the job.

Issue Count

- ◻ The number of times the user has issued the job.

Avg. Time

◻ The average run time for the job the user submitted.

Defining Programs

Programs [JA03001] and Subordinate Screens

How to get here: JA Main Menu ? 2 (Programs)
or
JA Main Menu ? 1 (Groupings) ? Option 'JOBS' ? Option 'DET-#' ? Option 'PROG-#'

The Programs screen (Figure 3.10) allows you to view, enter and maintain programs that are defined to JA.

- Figure 3.10 – Programs screen [JA03001]

Field Descriptions

01 Program

- ◻ Unique alphanumeric identifying the program (maximum 50 characters).

Lng.

- ◻ A code that identifies a class of programs; identifies the means by which the program is used or executed.

◘ See: **Chapter 2 – JA Setup** – Common Tables – Languages.

02 Descr.

◘ Text description of the program.

Output

This section defines the output that the program creates.

03 File

◘ Name of the file the program creates.

04 Name

◘ The label that identifies the output in the output queue.

05 Redirection

◘ An alternative method to control program output.

◘ See: **Appendix 'F'** – Programs – Output Redirection.

06 Format

◘ The format of the job output.

◘ See: **Chapter 2 – JA Setup** – Common Tables – Formats.

07 Copies

◘ Number of copies of the output the program produces.

08 Priority

◘ The output priority.

◘ Must be above the device fence to be sent.

◘ See: **Chapter 2 – JA Setup** – Common Tables – Devices.

09 Banner

◘ Indicates if banner page is printed with the output ("Y", "N" or blank).

◘ See: **Appendix 'K'** – Banner Page Sample

Parameters

Parameters are program prompts that allow users to request specific information and/or report formatting before the job is issued and executed.

(10 to 12)

Seq

◘ Identifies the order the parameters appear in the list of request parameters on the Job Execution screen [JA04005].

Prompt

◘ Identifies the prompt that is displayed on the Job Execution screen [JA04005].

Type

◘ Identifies the values that may be entered in the parameter.

◘ Valid values are:

Numeric	(0 thru 9)
String	(numbers, letters or symbols)
Date	(yyyymmdd)

Size

◘ Identifies the number of characters or digits allowed.

Decimals

◘ The number of decimals assigned to a numeric type.

Class

◘ Identifies the parameter class.

◘ See: **Chapter 2 – JA Setup** – Common Tables – Classifications.

Case

◘ Identifies if entry must be changed to:

U Uppercase

L Lowercase

I No Change

Req

◘ Identifies if the user must enter a value when issuing the job ("Y" or "N").

Values

◘ Identifies the values (separated by commas) that can be entered for the parameter.

- ◻ See: **Appendix 'G'** – Programs – Parameter Values.

Patterns

- ◻ Identifies and controls the values that are entered in the parameter.

- ◻ See: **Appendix 'H'** – Programs – Parameter Patterns.

Options

USAG   Program Usage [JA03004]

PROH   Program Help [JA03002]

PARH-   Parameter Help [JA03003] for the selected parameter

SAM   View output sample report. **Note** – a file named **xxxx**.**qzc** (where xxxx is the name of the program producing the report) must be maintained in the '/ja/sample/' sub-directory for this option to work.

Program Usage [JA03004]

How to get here: JA Main Menu ? 2 (Programs) ? Option 'USAG'

The Program Usage screen (Figure 3.11) allows you to view the list of job groups and jobs where the program is used.

```
JA.r1w - Reflection for HP                                    _ □ ×
File  Edit  Connection  Setup  Macro  Window  Help

MODE:F ACTION:            Program Usage                [JA03004]
Job group  ─── Job name
 BAGRP2       Exam Awards Report
 BAGRP1       Exam Awards Report




Finish   U/Stay  U/Return  Lookup      Logoff   Previous  To Menu  Go Back
[//]     [US]     [UR]      [=]       [^;^^^;]    [\]      [^^]      [^]
```
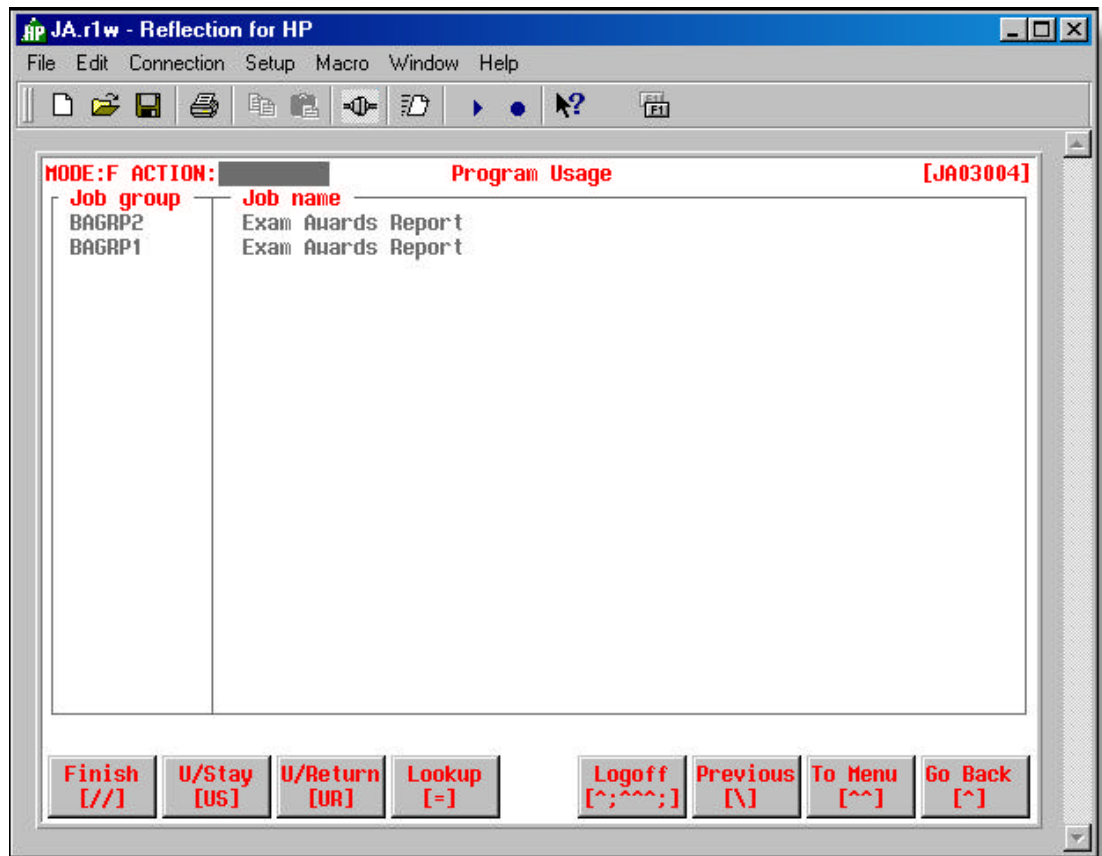
- Figure 3.11 – Program Usage screen [JA03004]

Field Descriptions

Job Group / Job Name

◻ The job group and job name in which the program is used.

Program Help [JA03002]

How to get here: JA Main Menu ? 2 (Programs) ? Option 'PROH'

The Program Usage screen (Figure 3.12) allows you to view program help information. This information may be useful for business application developers who have to work with the program.
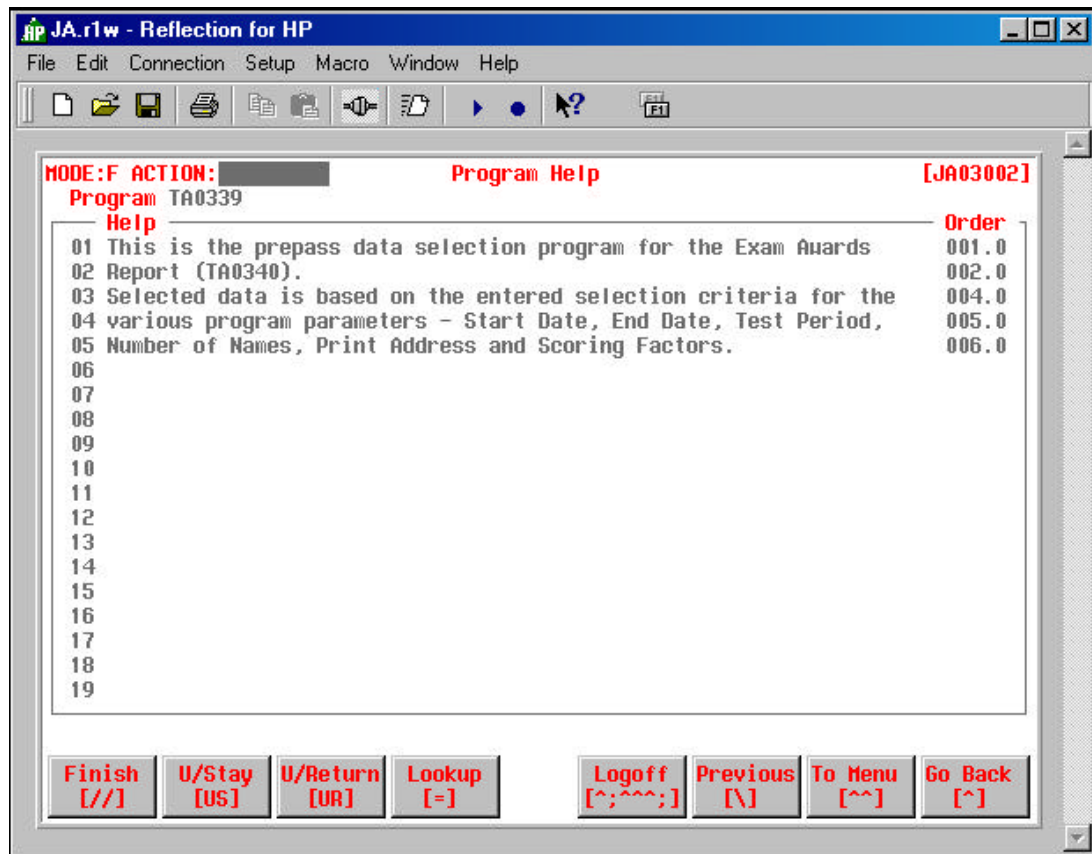
- Figure 3.12 – Program Help screen [JA03002]

Field Descriptions

(01 – 19)

Help

- ◻ Text providing help information for the program.

Parameter Help [JA03003]

How to get here: JA Main Menu ? 2 (Programs) ? Option 'PARH-'

The Parameter Help screen (Figure 3.13) allows you to view, enter and maintain help information for the selected program parameter.
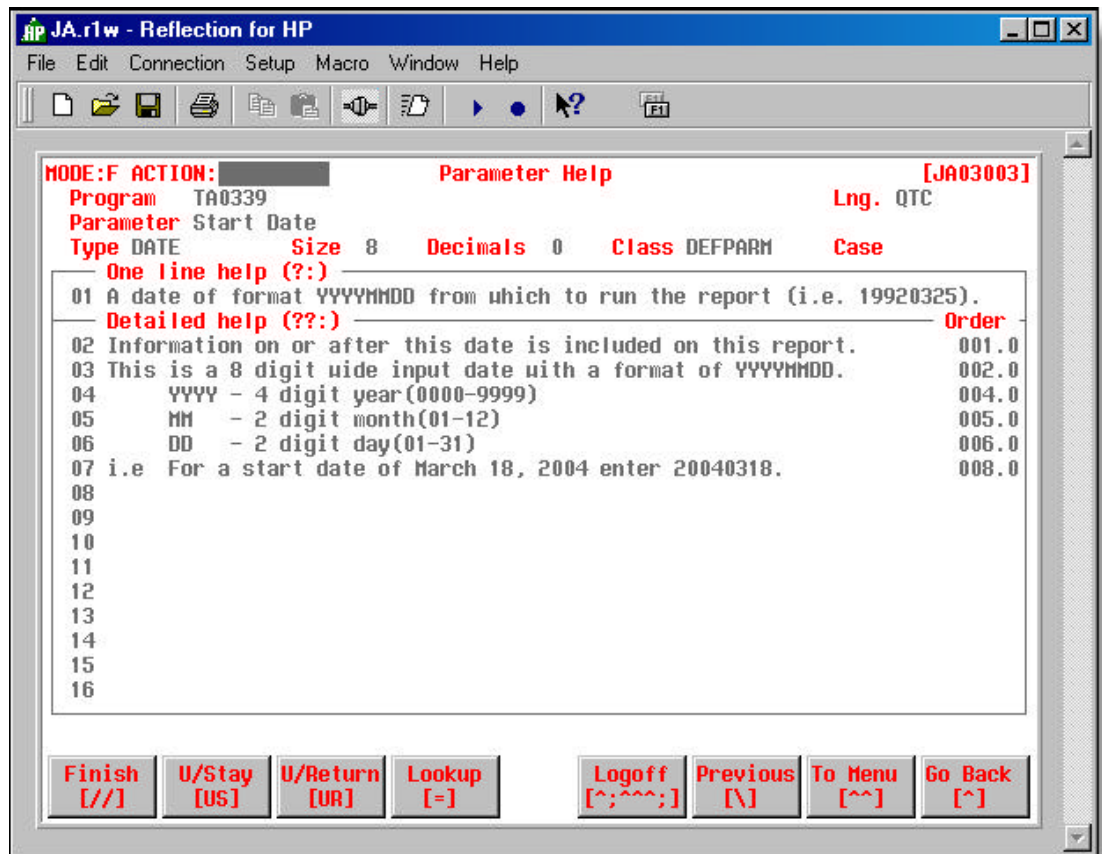
- Figure 3.13 – Parameter Help screen [JA03003]

Field Descriptions

01 One line help (?:)

- ▫ A one-line help message that appears at the bottom of the Job Execution screen when the user enters parameter information.

(02 to 16)

Detailed help (??:)

- ▫ An expanded help message offering more detailed help.

◘ When you enter **??:** in the parameter field on the Job Execution screen [JA04005], the Parameter Help screen [JA04007] is displayed showing the detailed help message and the parameter definition.

Report Sample

How to get here: JA Main Menu ? 2 (Programs) ? Option 'SAM'

Figure 3.14 provides an example of a report sample that is accessed using the 'SAM' option of the Programs screen.

• Figure 3.14 – A Report Sample (SAM Option)

In the above example, the report sample (ta0340.QZC) is maintained in the '/ja/prd/sample/' sub-directory.

💡 Instructions

These instructions take you through the steps of updating the Jobs screen and defining a job in JA.

Updating the Jobs Screen [JA03013]

Update Job ID
Copy a Job to a Different Job Group
Update the Privileged Job Flag

Defining a Job in JA

Define Programs for a New Job
Create a Queue
Create a Job Group
Create a Job in the Job Group
Create Job Details for the Job

Updating the Jobs Screen [JA03013]

Update Job ID

On the Jobs screen [JA03013] with the cursor in the Action field,

- ◻ type **id-#** ↵ (where # is the line number of the specified job)

- ◻ type the *id number* ↵

- ◻ **<F2>** to save the changes on the screen

Copy a Job to a Different Job Group

On the Jobs screen [JA03013] with the cursor in the Action field,

- ◻ type **copy-#** ↵ (where # is the line number of the specified job)

- ◻ type the *group name* ↵

- ◻ **<F2>** to save the changes on the screen

Update the Privileged Job Flag

The PJ- option allows you to switch the value of the Privileged Job flag for a selected job – from 'Y' (Yes) to 'N' (No) or from 'N' to 'Y'.

On the Jobs screen [JA03013] with the cursor in the Action field,

- ◻ type **pj-#** ↵ (where # is the line number of the specified job)

- ◻ **<F2>** to save the changes on the screen

Defining a Job In JA

Now that we have reviewed the functions and field details of each of the Job Definitions screens, creating a job in JA is the next step. If you have access to JA in your business application TEST environment, you can create a new TEST job.

Before creating the new job, you may want to review the JA data entry instructions, if you are unfamiliar with working in JA (See: **Appendix 'A'** – JA Keying Instructions).

Define Programs for a New Job

On the JA Main Menu screen [JA01001] with the cursor in the Action field,

- ◻ type **2** (Programs) ↵

On the Programs screen [JA03001] with the cursor in the Action field,

- ◻ type **e** ↵

- ◻ enter Programs screen field information

- ◻ **<F2>** to save the changes on the screen

It will not always be necessary for you to create a Queue or Job Group when you create a job in JA. Queues and Job Groups may already exist that match your setting requirements (Concurrent Job Limit, Job Fence, Job Time Limit), schedule and need for grouping of common jobs. However, for the purpose of this exercise, instructions are provided to create both.

Create a Queue

On the JA Main Menu screen [JA01001] with the cursor in the Action field,

- ◻ type **26** (Queues) ↵ ↵

On the Queue screen [JA02008] with the cursor in the Action field,

- ◻ type **e** ↵

- ◻ enter Queue screen field information

- ◻ **<F2>** to save the changes on the screen

Create a Job Group

On the JA Main Menu screen [JA01001] with the cursor in the Action field,

- ◘ type **1** (Groupings) ↵

On the Groupings screen [JA03005] with the cursor in the Action field,

- ◘ type **e** ↵

- ◘ enter Grouping screen field information

- ◘ **<F2>** to save the changes on the screen

Create a Job in the Job Group

On the Groupings screen [JA03005] with the cursor in the Action field,

- ◘ type **jobs** (Job Listings) ↵

- ◘ if no jobs exist for the Job Group, the screen will be in 'E' (Entry) mode

  otherwise

  type **e** ↵

  to go into Entry mode.

- ◘ enter Jobs screen [JA03013] field information

- ◘ **<F1>** to move the cursor back to the Action field

- ◘ **<F2>** to save the changes on the screen

Create Job Details for the Job

On the Jobs screen [JA03013] with the cursor in the Action field,

- ◘ type **det-#** ↵ (where # is the line number of your job)

- ◘ enter Job Details screen [JA03010] field information

- ◘ **<F1>** to move the cursor back to the Action field

- ◘ **<F2>** to save the changes on the screen

Summary

This chapter reviewed the functions and field definitions of each of the JA screens used to define Job Groups, Jobs and Programs.

Step by step instructions were also provided to define Queues, Job Groups, Jobs and Programs in JA. If you are a business application developer, wanting to become more proficient in creating jobs to run in JA, take the time to review the instructions and actually create jobs to run the TEST environment.

Once business application jobs are defined in JA, they can be issued (submitted) and viewed on-line. The following chapter takes you through this process.

Chapter 4

Issuing and Reviewing Jobs

Once your Jobs and related programs are defined to JA and the programs compiled to the $binloc sub-directory in the appropriate environments (Test, Production), the jobs can be issued, executed and reviewed.

In this chapter, the following topics are covered:

■ **Getting to the Job Selection Screen from the JA Main Menu**

    Job Issuing Group Selection [JA04008]

    Instructions

        Displaying and Selecting Job Groups

■ **Getting to the Job Selection Screen from the Business Application**

■ **Issuing Jobs from JA**

    Job Selection [JA04004] and Subordinate Screens

        Job Help (JHLP-)

        User Job Status [JA04005]

        Job Execution [JA04005]

    Instructions

        Selecting, Updating and Issuing Jobs

■ **Custom Job Issuing**

    The Business Application Screen

    JA Code Inserted in the Business Application

        Job Execution [JA04005] – Custom Job Issue

    Defining the Custom Job in JA

■ **Reviewing Jobs**

    Job Review [JA06001] and Subordinate Screens

        Job Info Review [JA06005]

        Job Output Review [JA06002]

        Job Data Review [JA06003]

    Job Error Review [JA06004]

    Instructions

        Filtering, Viewing, Printing, Deleting Jobs

        Job Management (Miscellaneous Instructions)

Getting to the Job Selection Screen from the JA Main Menu

Jobs are issued from JA using the Job Issuing option (Option 11) on the JA Main Menu.

```
┌──────── Job Execution ────────┐
│ 11  Job Issuing               │
│ 12  Job Review                │
│ 13  Job Error Review          │
│                               │
└───────────────────────────────┘
```
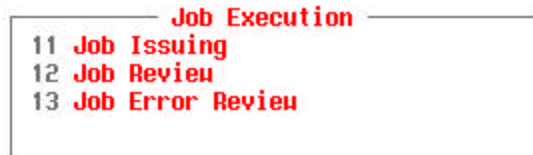
- Figure 4.1 – Job Execution (JA Main Menu)

This section describes how to find the job you want to issue and the procedures for issuing the job.

Job Issuing Group Selection [JA04008]

How to get here: JA Main Menu ? 11 (Job Issuing)

The Job Issuing Group Selection screen (Figure 4.2) allows you to display one or more Job Groups for issuing jobs. The screen below is as it appears when you first enter the screen.
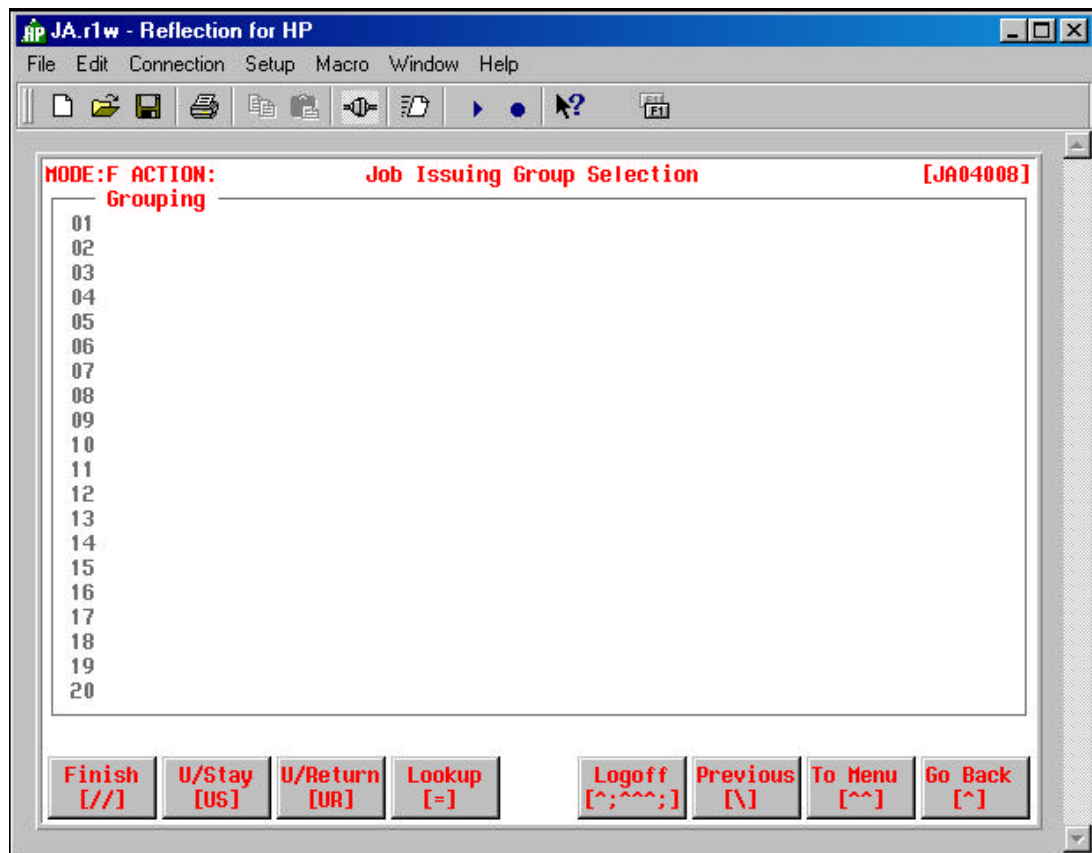
- Figure 4.2 – Job Issuing Group Selection screen [JA04008]

On this screen, you have several options for displaying and selecting Job Groups in order to issue a job for execution.

Instructions

These instructions take you through the steps of displaying and selecting Job Groups on the Job Issuing Group Selection screen [JA04008].

Displaying and Selecting Job Groups

> Display Job Groups
> Select a Job Group

Displaying and Selecting Job Groups

Display Job Groups

The Job Issuing Group Selection screen [JA04008] is in "F" (Find) mode. You have three options to select Job Groups:

Option 1 – Display all Job Groups

On the Job Issuing Group Selection screen [JA04008] with the cursor in Line 01,

- ↵ (to display all Job Groups, or the first 20 Job Groups if more than 20 of them exist)

- ↵ (to proceed to the next 20 Job Groups)

Option 2 – Display Job Groups Based on a Name Pattern

You may not know the full name of the Job Group you are looking for – just the first one or two characters of the name. You can enter a portion of the name and do a find based on that as well.

On the Job Issuing Group Selection screen [JA04008] with the cursor in Line 01,

- type *cc@* ↵ (where *cc* represents the first few characters of a Job Group name)

  all Job Groups starting with the characters entered are displayed
    e.g. – **ba@** ↵ (displays all Job Groups starting with characters **ba**)

- ↵ (as many times as required to scroll through the Job Group list until you find the Job Group you want to select)

Option 3 – Type the Job Group Name

On the Job Issuing Group Selection screen [JA04008] with the cursor in Line 01,

- type *group* ↵ (where *group* is the name of the Job Group you want to select)

Figure 4.3 is a sample of the Job Issuing Group Selection screen [JA04008] displaying all Job Groups starting with **ba**. The display was created using Option 2.
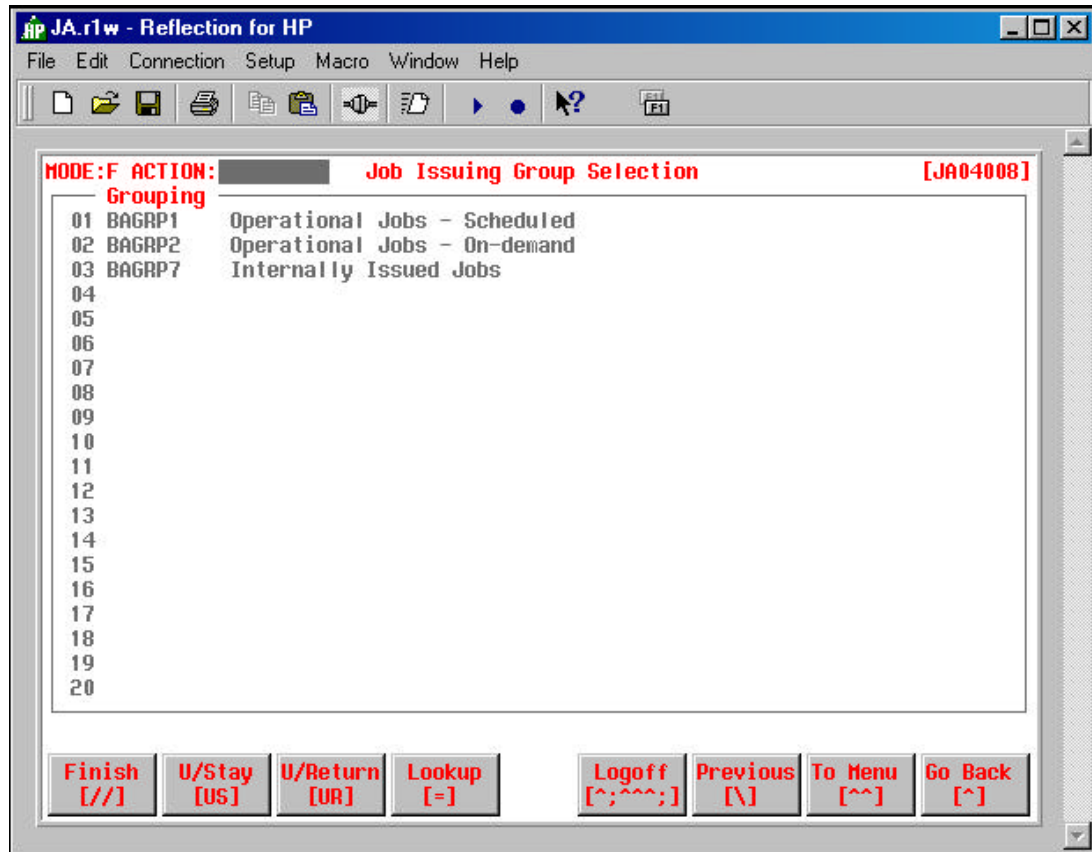
- Figure 4.3 – Job Issuing Group Selection screen [JA04008] – all ba@ Job Groups

Once you have found the Job Group you are looking for, you can then select it to find the job you wish to issue.

Select a Job Group

With the cursor in the Action field on the Job Issuing Group Selection screen [JA04008],

◻   type # ↵ (where # is the line number of the Job Group you want to select)

e.g. – **2** ↵ (takes you to the Job Selection screen [JA04001]displaying all jobs defined to the **BAGRP2** Job Group)

Getting to the Job Selection Screen from the Business Application

Many business application users do not have direct access to the JA Main Menu. The issuing of jobs must be done through options defined in business application interface screens.

Figure 4.4 provides an example of access to the JA Job Selection screen [JA04001] through a business application. The number of screens required to navigate to the Job Selection screen may vary depending on the business application and the JA client site setup.
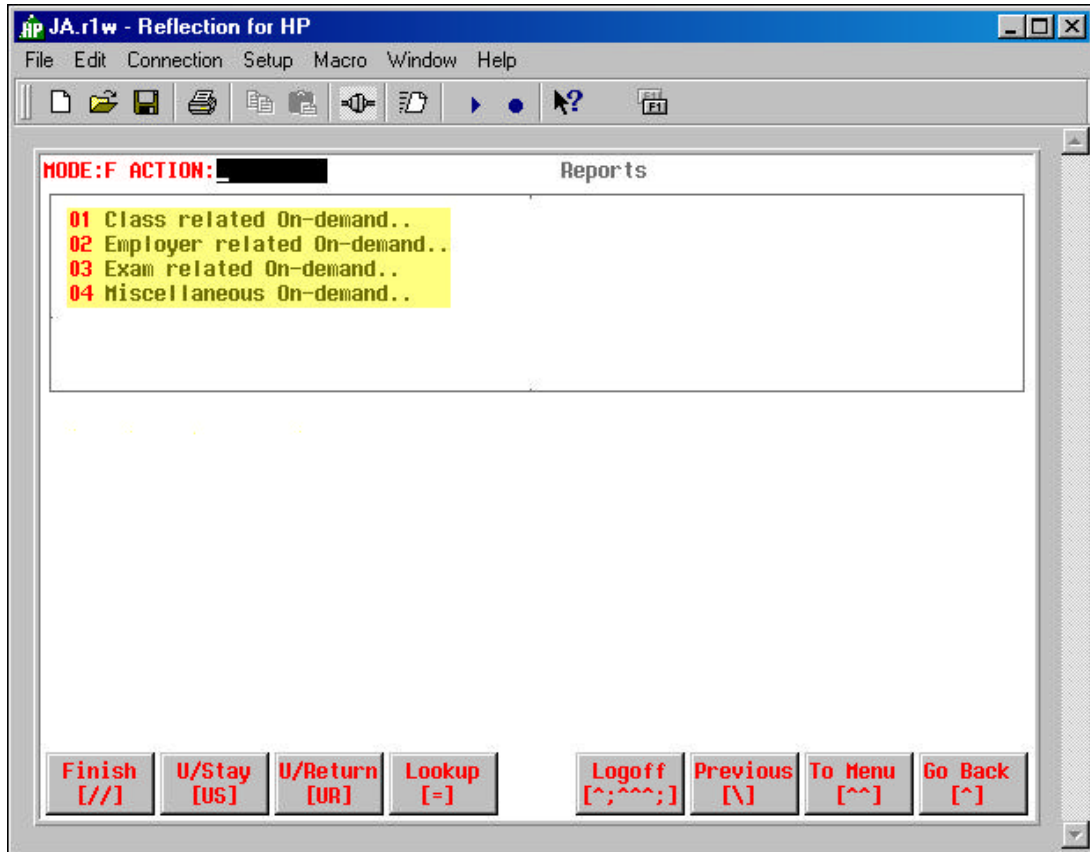
- Figure 4.4 – Business Application screen

In above screen example, business application users can enter 1, 2, 3 or 4 to access the JA Job Selection screen [JA04001] for various Job Groups.

The code required to create this type of interface to the JA Job Selection screen is described in **Chapter 2 – JA Setup** – How to Access JA?

The following section describes the Job Selection screen and the procedures for issuing a job.

Issuing Jobs from JA

Once you have reached the Job Selection screen – either through the JA Main Menu or via the business application, issuing of a job is a three-step process:

- ❑ Selecting the job from the Job Selection screen [JA04001].

- ❑ Entering parameters and updating 'Send To' information (if required) on the Job Execution screen [JA04005].

- ❑ And finally, entering the "iss" command on the Job Execution screen.

The remainder of this section describes this three-step process in more detail.

Job Selection [JA04001] and Subordinate Screens

How to get here:

JA Main Menu ? 11 (Job Issuing) ? enter line # of Job Group (Job Issuing Selection Screen)

OR

Business Application Main Menu ? one or more interface screens

The Job Selection screen displays all of the jobs for a selected Job Group. Figure 4.5 displays the jobs from the BAGRP2 Job Group. From this screen you are able to select a job to issue.
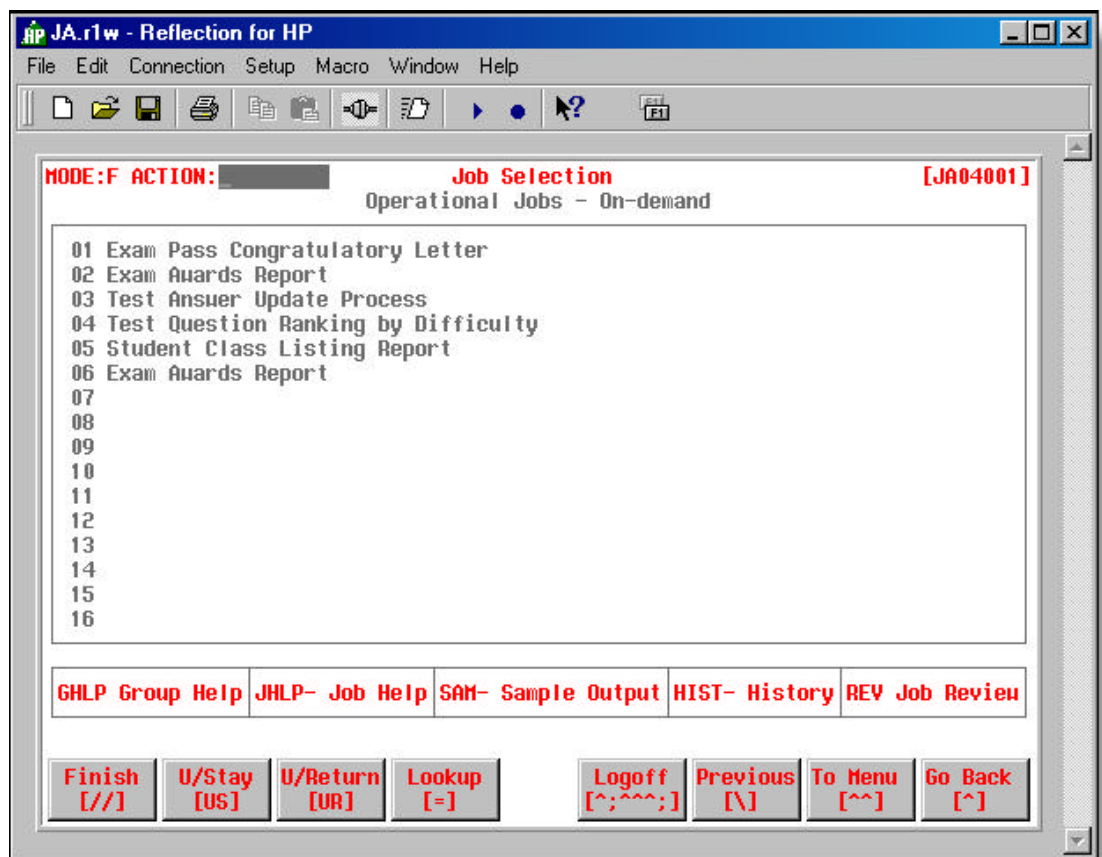
- Figure 4.5 – Job Selection screen [JA04001] – BAGRP2 Job Group

Options

GHLP	Group Help [JA04002]
JHLP-	Job Help for the selected job
SAM-	Sample output for the selected job

HIST-   User Job Status [JA04004] for the selected job

REV   Job Review [JA06001]

Job Help (JHLP-)

How to get here: Job Selection screen ? Option 'JHLP-#'

Figure 4.6 provides an example of the 'JHLP-' option. This option allows you to view parameter help information for the job you wish to select on the Job Selection screen.
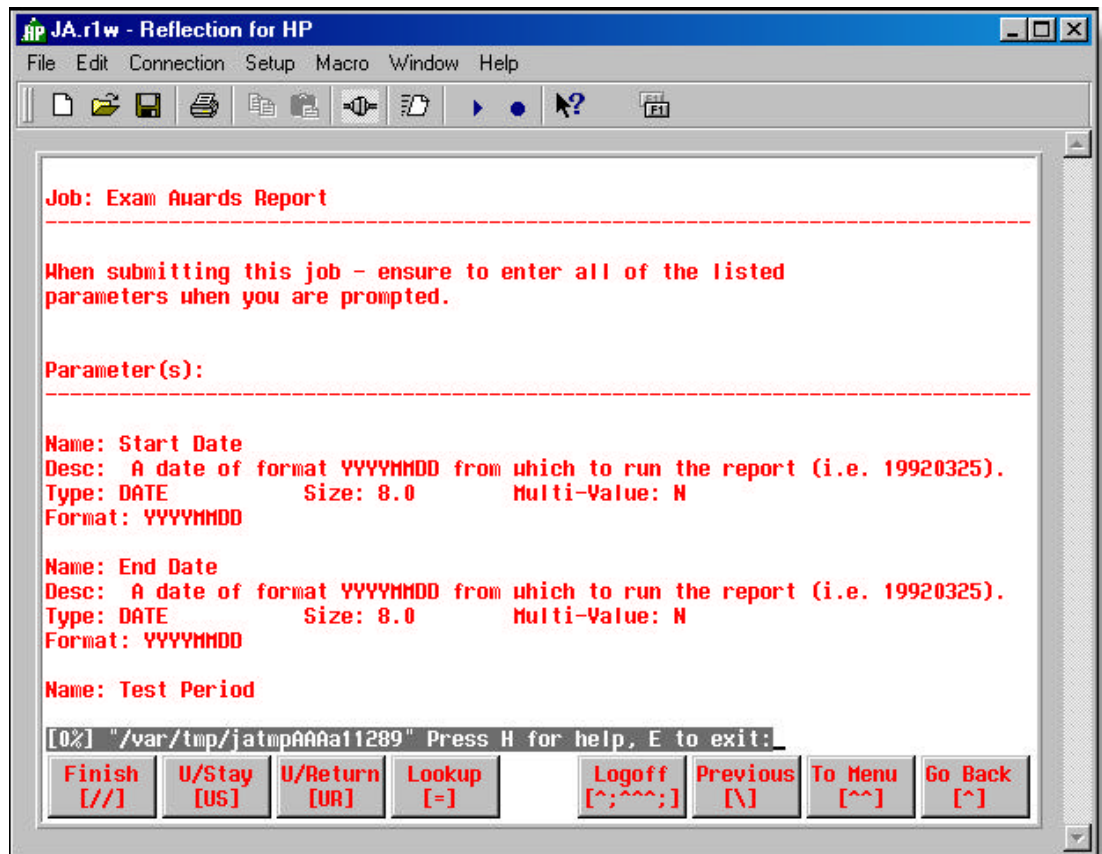
- Figure 4.6 – Job Help (from Job Selection screen)

To exit this screen, enter '**e**' on the command line.

User Job Status [JA04004]

How to get here: **Job Selection screen ?** **Option 'HIST-#'**

The User Job Status screen (Figure 4.7) displays the date and time the selected job was last issued and the number of times the job has been issued.
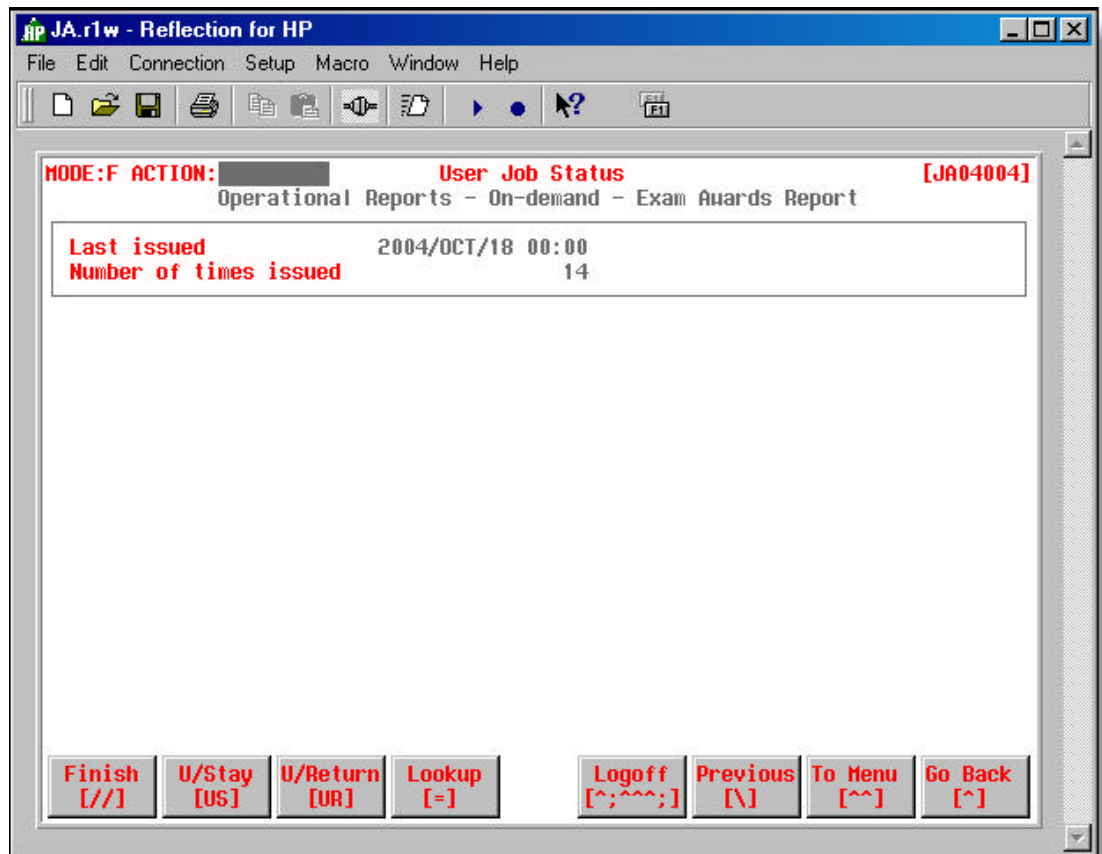
- Figure 4.7 – User Job Status screen [JA04004]

Job Execution [JA04005]

How to get here: Job Selection screen ? enter line # of Job you want to select

The Job Execution screen (Figure 4.8) allows you to issue the job you selected from the Job Selection screen.
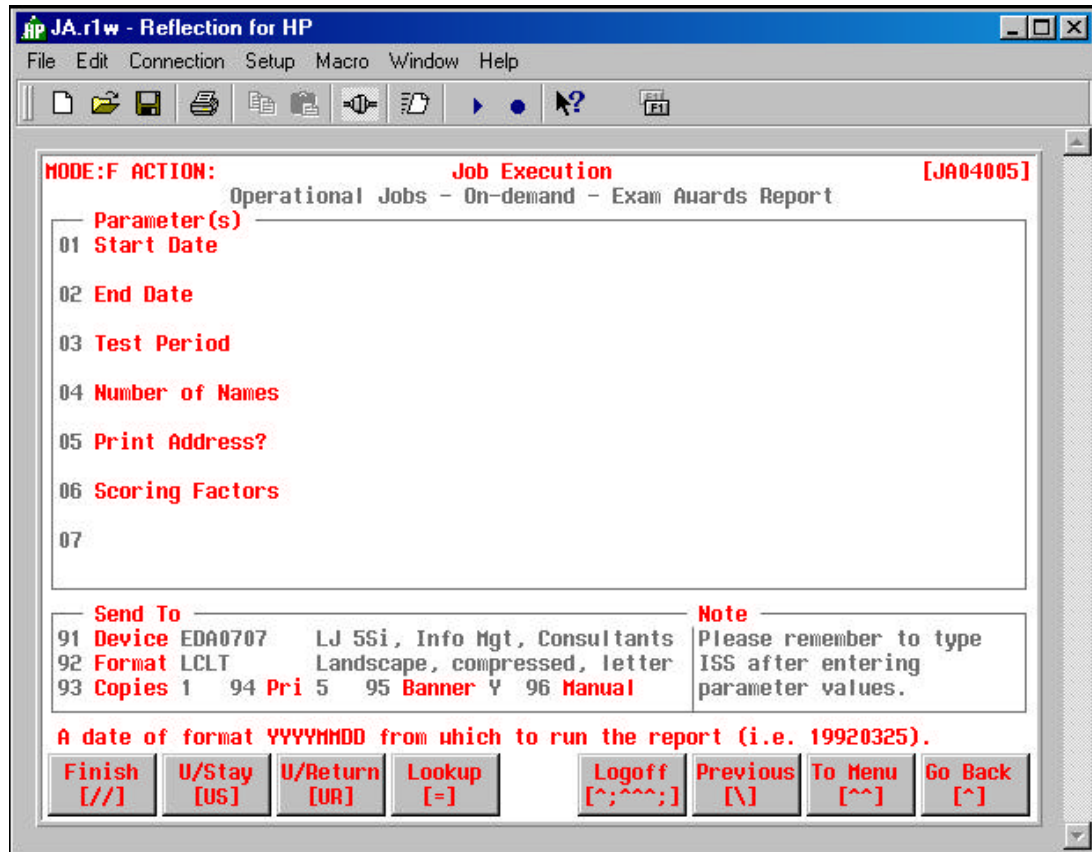
• Figure 4.8 – Job Execution screen [JA04005]

The Job Execution screen is divided into a Parameter section and a 'Send To' section.

The Parameters that appear on this screen are defined on the Programs screen [JA03001]. The program (and job) selects data and creates output based on the selection criteria entered in the parameter fields.

Not all jobs will require you to enter parameter information.

The 'Send To' section of the screen defines the job output destination (device), output format and various other job output fields described below.

Field Descriptions

(01 to 07)

Parameters

- One or more selection parameters.

Send To Information

91 Device

- Identifies the device on which the output will be printed. The default device is the device assigned to the user on the User screen [JA02005].

*Use the 'VIEWER' device when the job output results may be in question or when you just want to view the output on-line. If you later wish to send the output to a printer or some other device, the device option can be updated on the **Job Review** screen [JA06001] or the **Job Output Review** screen [JA06002] before sending the output.*

92 Format

- Describes the layout of the output (report), including the paper size.

- The format must be defined on the Formats screen [JA02006].

93 Copies

- Indicates the number of copies of the output that will be printed.

94 Priority

- The priority with which the output is sent to the output device.

95 Banner

- Flag that determines if a banner page is printed with output ("Y" or "N" or blank). The setting here overrides all other banner settings, if it is changed before issuing the job.

- The banner setting on the Job Outputs screen [JA03009] is used as the default.

- See: **Appendix 'K'** – Banner Page Sample

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- Flag that determines if output must be manually printed from the Job Review screen ("Y" or "N")

- The default is blank or "N".

Instructions

These instructions take you through the steps of selecting and executing a job, once you arrive at the Job Selection screen [JA04001] – either through the JA Main Menu or a business application interface screen.

Selecting, Updating and Issuing a Job

Selecting, Updating and Issuing a Job

Select a Job for Execution

Enter Parameter Information

Find Detailed Parameter Help

Update 'Send To' Information

Issue the Job

Select a Job for Execution

On the Job Selection screen [JA04001] with the cursor in the ACTION field,

◻   type # ↵   (where # is the line number of the Job you want to select)

Once a job is selected, the Job Execution screen [JA04005] is displayed ready for you to enter the necessary parameters, if any, and then issue the job.

Enter Parameter Information

If required, enter the necessary selection parameter information for the job on the Job Execution screen [JA04005].

◻   type information as prompted on the screen ↵   (see Figure 4.9 below)
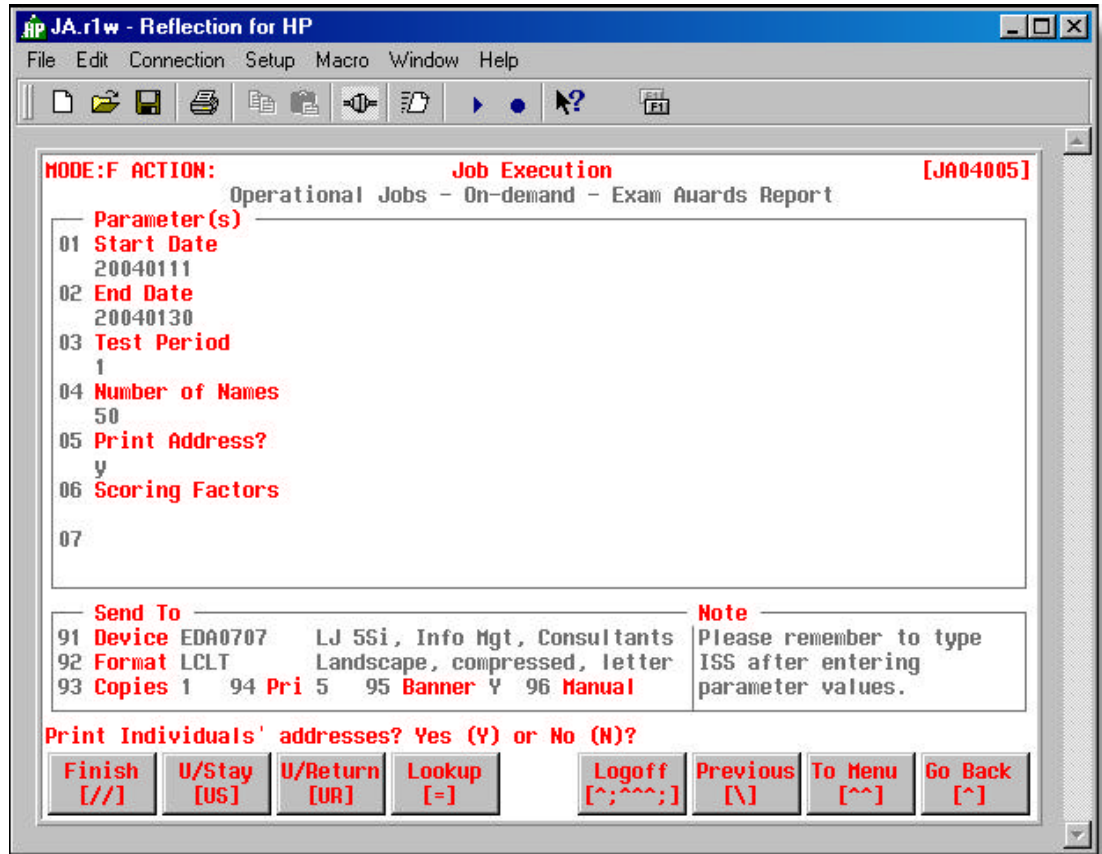
- Figure 4.9 – Job Execution screen [JA04005] – Entering Parameters

In the above sample, parameter information has been entered for the first five parameters. For the last parameter, 'Scoring Factors' – field 06, multiple values can be entered. In such cases, you are sometimes presented with the **Multiple Value Prompting screen [JA04006]** (Figure 4.9 below) to enter values.

◘   type information as prompted on the screen ↵ (enter as many values as required)

◘   **<F1>** to return to the Job Execution screen
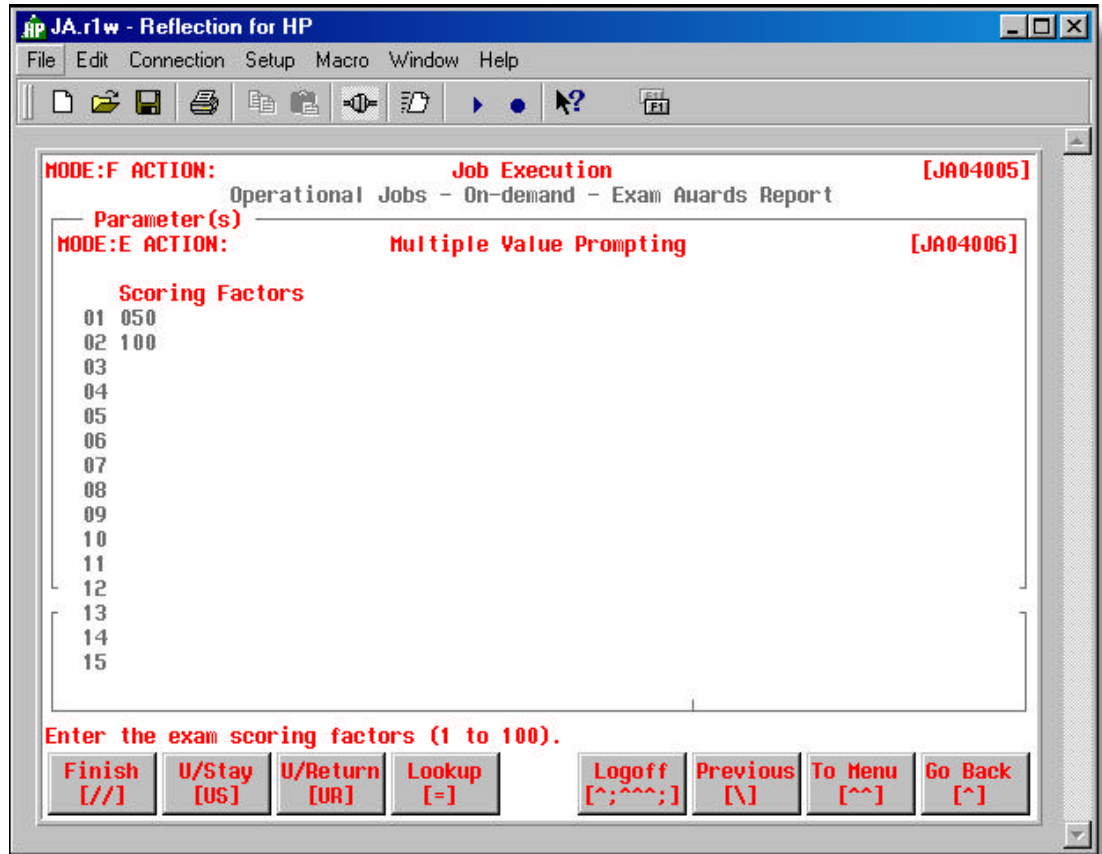
- Figure 4.10 – Multiple Value Prompting screen [JA04006]

Find Detailed Parameter Help Information

When you are entering parameter information, you may require more detailed information than the default one line help message provides.

On the Job Execution screen [JA04005] with the cursor in the appropriate parameter field

- type **??:** ↵

   the detailed help information for the parameter entered on the Parameter Help screen [JA03003] will be displayed

Update 'Send To' Information

Before you issue the job, update any of the 'Send to' output fields, if required.

On the Job Execution screen [JA04005] with the cursor in the Action field

- type **#** ↵   (where # is the line number of the field you wish to update)

◘   type Job Execution screen field information ↵

Issue the Job

Once you have entered the job parameters and updated the 'Send to' information, you are then ready to issue (submit) the job. Figure 4.11 provides an example.

On the Job Execution screen [JA04005] with the cursor in the Action field

◘   type **iss** ↵
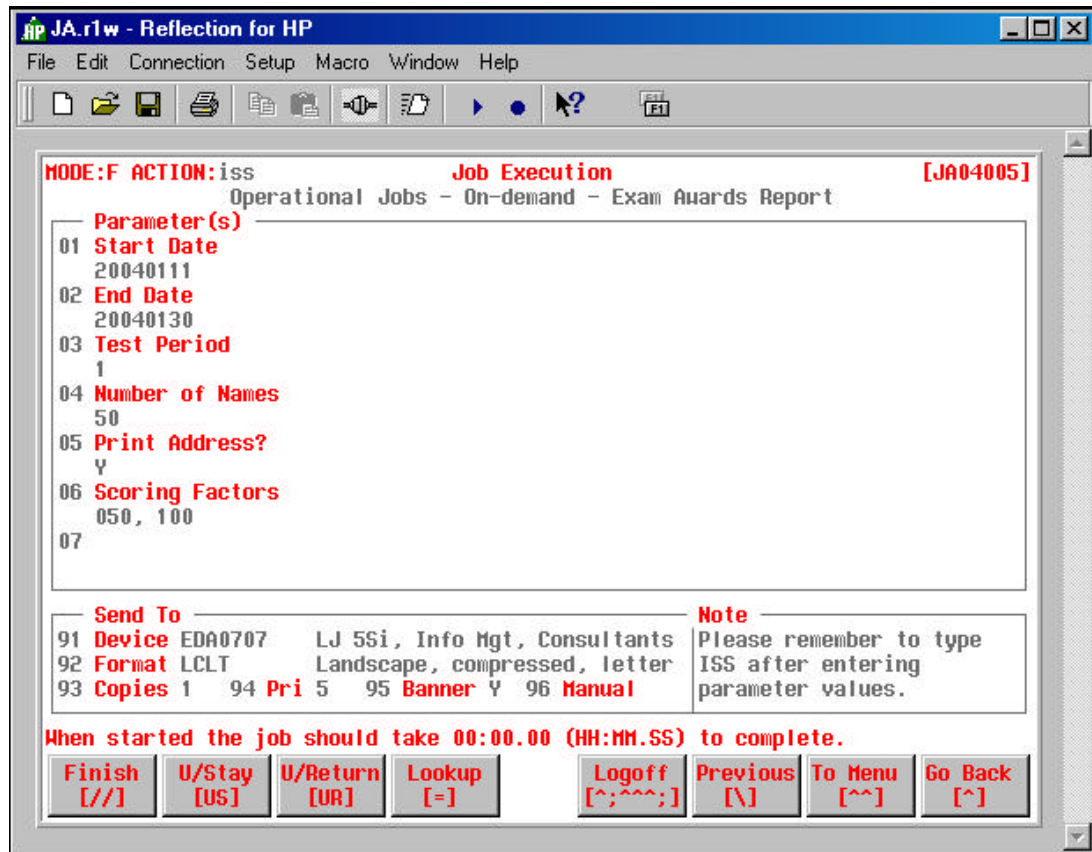
• Figure 4.11 – Job Execution screen [JA04005] – Issuing the Job

This section provided information and instructions on issuing jobs directly from JA. In many cases, it may be necessary to issue jobs directly from the business application to update or process information based on various business rules or procedures. JA offers this flexibility by allowing application developers to add JA code to the business application to directly issue jobs through the JA Job Execution screen [JA04005].

The following section provides an example of the custom issuing of jobs from a business application. If this information is not applicable to your current use of JA, it is possible to skip that section and proceed directly to the Reviewing Jobs section at the end of this chapter.

Custom Issuing of Jobs

Jobs can be directly issued from a business application through the Job Execution screen based on a set of business processing rules. This is depicted in process box **1D** of Figure 1.2.

The "custom issuing of jobs" requires special JA code to be added to the business application to issue a job through the Job Execution screen. The remainder of this section provides you with an example of a custom job issued from a business application and the JA code required to issue such a job.

The Business Application Screen

Figure 4.12 is a typical business application screen. On this screen, business users can update a field called "Exam Category".
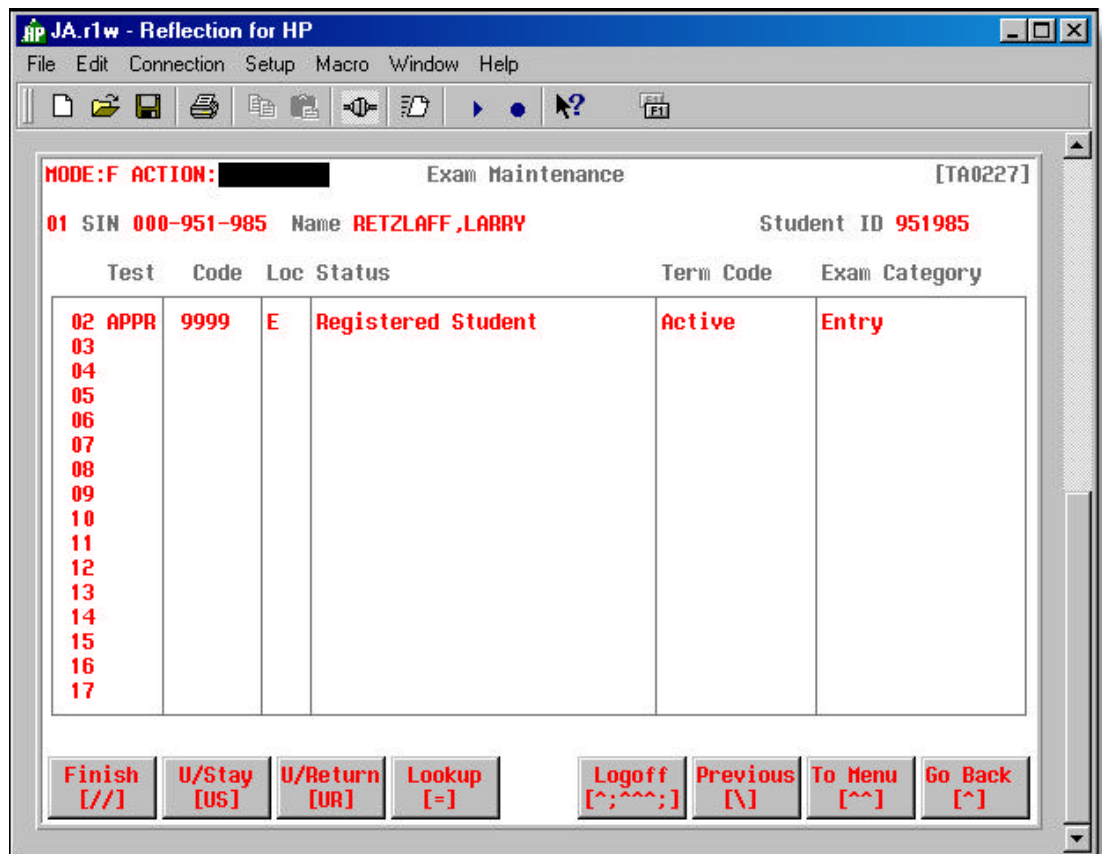
- **Figure 4.12 – Typical Business Application screen – Update of 'Exam Category'**

When the "Exam Category" field is updated — changed from ENTRY to LEVEL 1, for example — special JA code inserted in the program [TA0227] is executed to issue a custom job to perform additional processing.

JA Code Inserted in the Business Application

Figure 4.13 displays the JA code inserted in program TA0227 to display the Job Execution screen for the 'Exam Category Change' custom job when the "Exam Category" field is updated.

```
use $jasrcloc/jadiss.ink nolist

use $jasrcloc/japiss.ink nolist

procedure update
begin
  for ta_examcat
  begin
    if t_examcat_change = "Y"
    then do internal setup_ja_examcat_change
    end
end

procedure internal setup_ja_examcat_change
begin

; Setup ja header ... Define the Job Group and Job
  let t-jagroupid = "BAGRP7"
  let t-jajobid = 3
  do internal japaramheader

; Pass in parameters for qtp run ..Define Programs and Parameters
  let t-japrogram  = "ta0473"
  let t-japaramnum = 010
  let t-japaramval = ascii(examapp_id of ta_examapp, 10)
  do internal japaramdetail
  let t-japaramnum = 020
  let t-japaramval = t_examcat_key
  do internal japaramdetail

; ja cleanup ...Display Job Execution screen and File Cleanup
  run command "$jacmdloc/jaissnun" clear all refresh all
  do internal japaramreset
end
```

• Figure 4.13 – JA Code to Issue Custom Job

When the "Exam Category" field is updated, program TA0227 executes an internal procedure called '**setup_ja_examcat_change**'. This procedure sets the necessary JA parameters to run the '**Exam Category Change**' job (ID 3) in the '**BAGRP7**' Job Group.

The 'Exam Category Change' job executes program **ta0473**. The JA code sets the parameter values (examapp_id and examcat_key) ta0473 requires and then does an external routine (`do external japaramdetail`) to pass each of the parameters to the job.

See: **Appendix 'M' – API Calls** for more details.

Job Execution [JA04012] – Custom Job Issue

The last part of the JA code (**run command "$jacmdloc/jaissnun"**) displays the Job Execution screen (Figure 4.14) so that the business user can issue the job to perform additional business application processing.
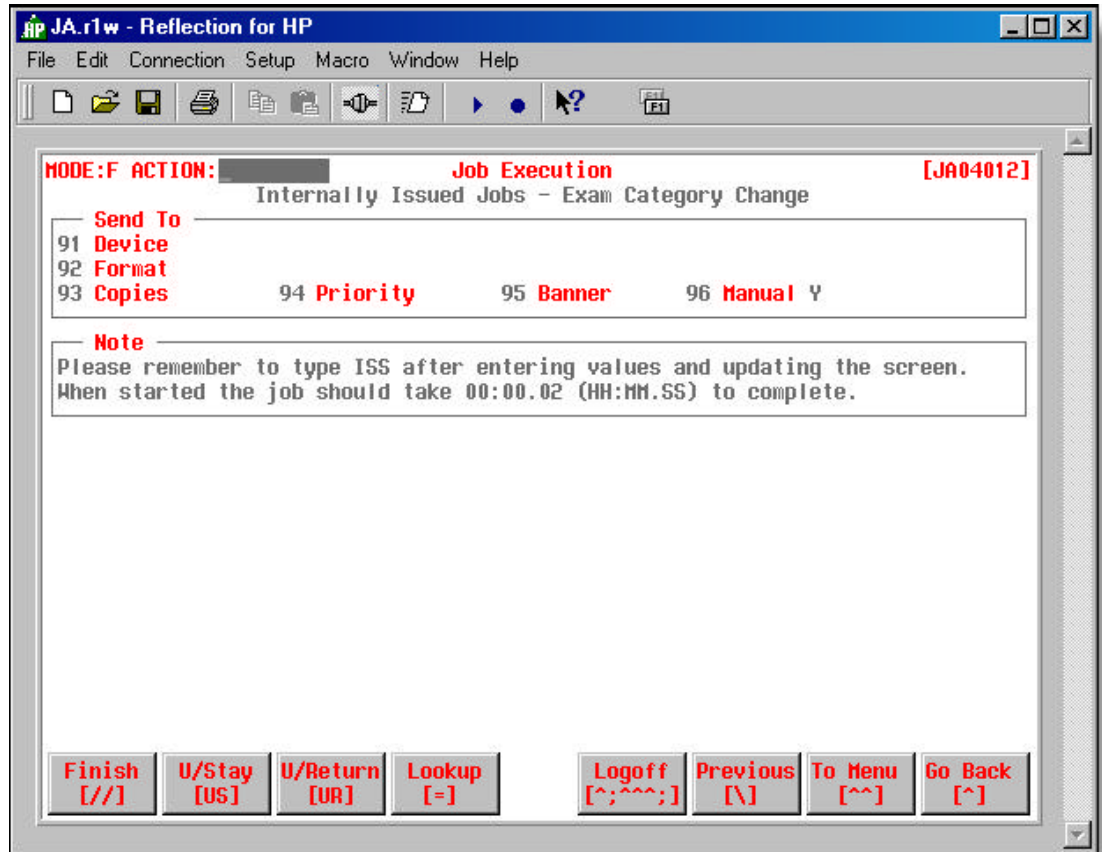
- Figure 4.14 – Job Execution screen [JA04012] – Exam Category Change – Custom Job

Defining the Custom Job In JA

The remaining screen samples in this section are the JA job and program definitions required to make the JA code in program TA0227 work. The screen samples provide a cross reference to the JA code displayed in Figure 4.13. Viewing the screen samples and then referring back to the JA code will help to reinforce how Jobs defined to JA may be custom issued from a business application.

Jobs [JA03013] – BAGRP7 Job Group

Job Details [JA03010] – 'Exam Category Change' Job

Programs [JA03001] – ta0473

Jobs [JA03013] – BAGRP7 Job Group
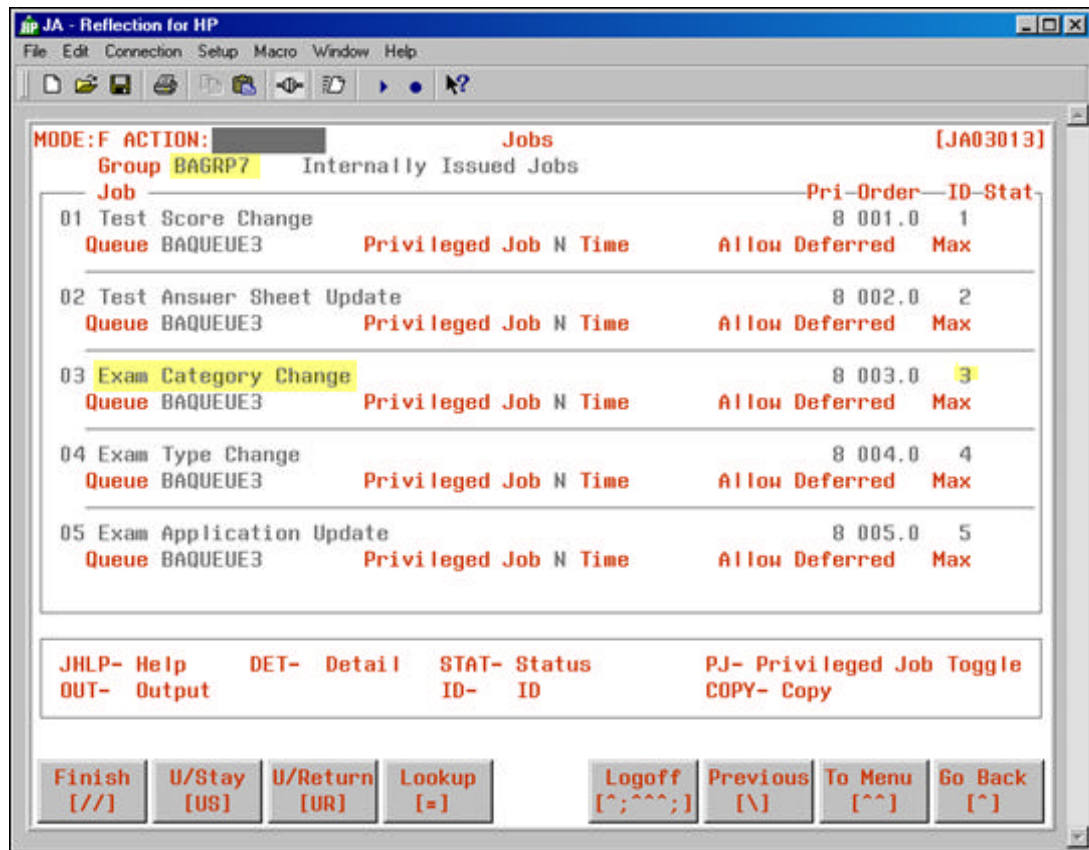
- Figure 4.15 – Jobs Screen [JA03013] – BAGRP7 Job Group

JA Code Relating to this Screen

```
; Setup ja header ... Define the Job Group and Job
  let t-jagroupid = "BAGRP7"
  let t-jajobid = 3
  do internal japaramheader
```

The first step in issuing a custom job is to identify the job that is to be executed.

The '**japaramheader**' function performs three tasks:

◻ creates a parameter file called **$HOME/japaram**

◻ places the Job Group Id ('**t-jagroupid**' assigned 'BAGRP7') and Job Id ('**t-jajobid**' assigned '3') in the created parameter file

◻ and then closes the file with the appropriate return code ('**t-jarc**').

Referring to the Jobs screen in Figure 4.15, Job Id 3 in the BAGRP7 Job Group is the '**Exam Category Change**' job that will be executed.

Job Details [JA03010] – 'Exam Category Change' Job
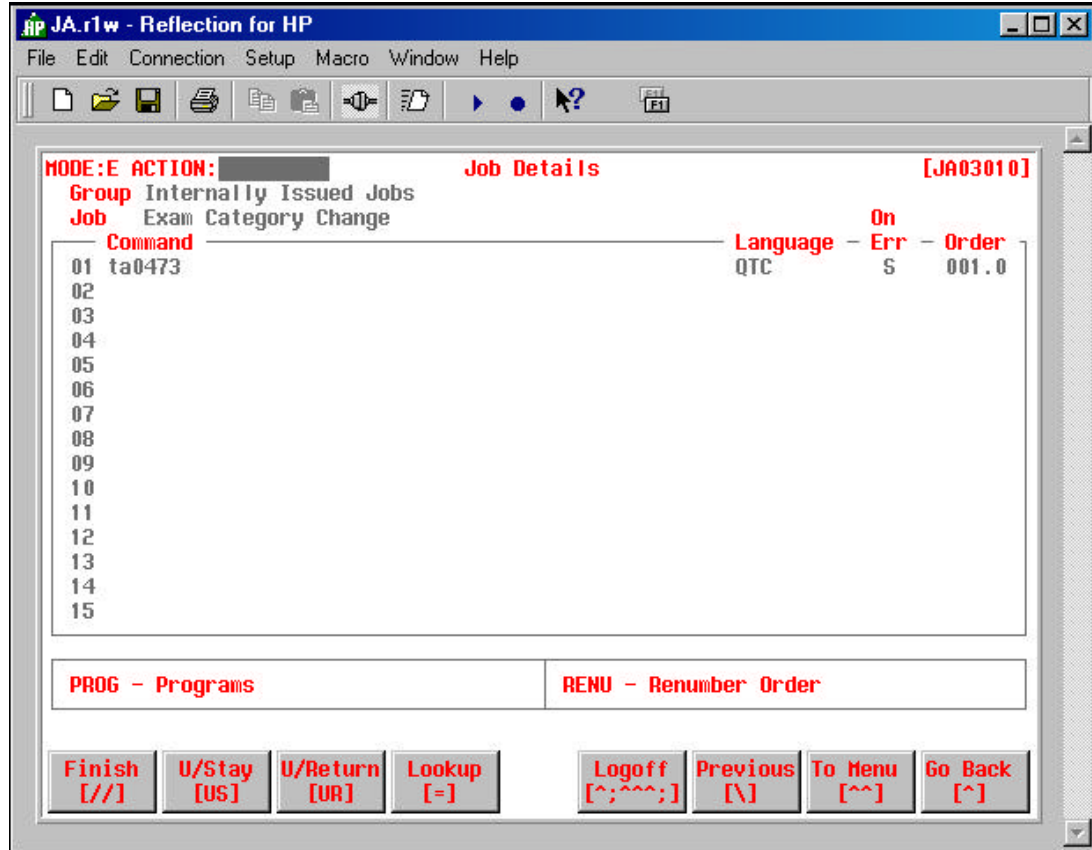
• Figure 4.16 – Job Details [JA03010] – 'Exam Category Change' Job

JA Code Relating to this Screen

```
; Pass in parameters for qtp run .. Define Programs and Parameters
  let t-japrogram = "ta0473"
```

The second step in issuing Custom Jobs is to identify the programs and associated program parameters.

The '**t-japrogram**' parameter identifies program ta0473 to be executed.

The Job Details screen in Figure 4.16 shows that program ta0473 has been assigned to the 'Exam Category Change' job.

Programs [JA03001] – ta0473
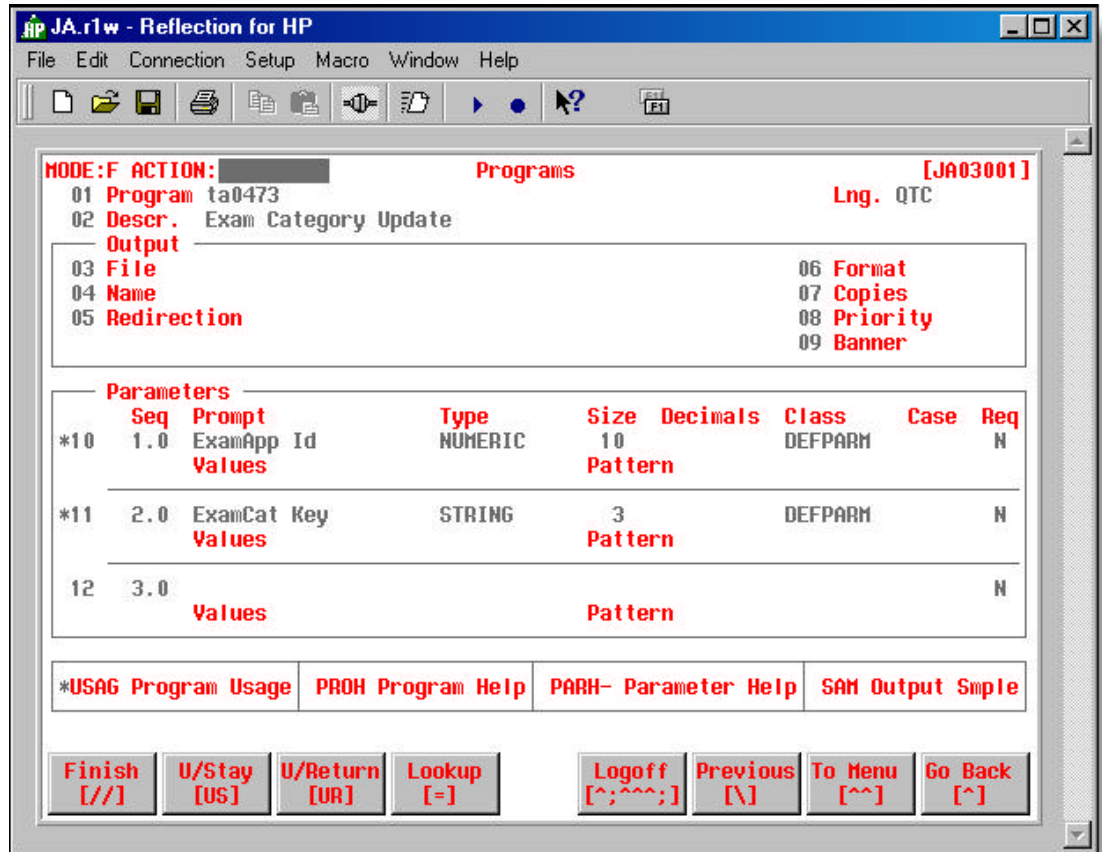
- Figure 4.17 – Program Definition [JA03010] – ta0473

JA Code Relating to this Screen

```
; Pass in parameters for qtp run ..Define Programs and Parameters
let t-japrogram  = "ta0473" ; identified on previous page
let t-japaramnum = 010
let t-japaramval = ascii(examapp_id of ta_examapp, 10)
do internal japaramdetail

let t-japaramnum = 020
let t-japaramval = t_examcat_key
do internal japaramdetail
```

Program ta0473 uses two input parameters – examapp_id and examcat_key as identified on the Programs screen, Figure 4.17.

JA parameter '**t_japaramnum**' uses an integer to identify the order of the program parameters – examapp_id is assigned 10 as the first parameter defined on the Programs screen; examcat_key is assigned 20 as the second defined program parameter.

JA parameter '**t-japaramval**' is assigned the appropriate value for each of the parameters.

The '**japaramdetail**' function performs three tasks:

- ◻ takes in the three parameters (t-japrogram, t-japaramnum, t-japaramval) and opens the file created by the 'japarmheader' function call ($HOME/japaram)

- ◻ creates a record in the file containing the program name, the parameter number and parameter value

- ◻ and then closes the files with the appropriate return code ('t-jarc').

The function is executed once for each program parameter.

The Last Part of the Custom Job JA Code

```
; ja cleanup ...Display Job Execution screen and File Cleanup
  run command "$jacmdloc/jaissnun" clear all refresh all
  do internal japaramreset
  end
```

Once the job, program and related program parameters have been defined to JA, the last task is to allow the user to issue the job.

The '**run command "$jacmdloc/jaissnun"**' code displays the Job Execution screen [JA04012] allowing the user to issue the 'Exam Category Change' job – see Figure 4.14.

The '**do internal japaramreset**' code retrieves and removes the parameter file at $HOME/japaram at returns the appropriate return code in t-jarc.

Once the job has been issued, you can go to the Job Review screen [JA06001] to review the status of the job and view the job output. The following section documents all the aspects of job review.

Reviewing Jobs

After issuing a job, you will want to view the job output and find out if the job ran successfully. To find out the status of issued jobs, you have to go to the Job Review screen.

Job Review [JA06001] and Subordinate Screens

How to get here:

JA Main Menu ? 12 (Job Review)

OR

Job Selection screen (or other business application screen) ? Option 'REV'

The Job Review by location screen (Figure 4.18) allows you to view the status and output of the job(s) you have issued. The screen user ID automatically defaults to your signon ID, so you only see the jobs that you have issued.
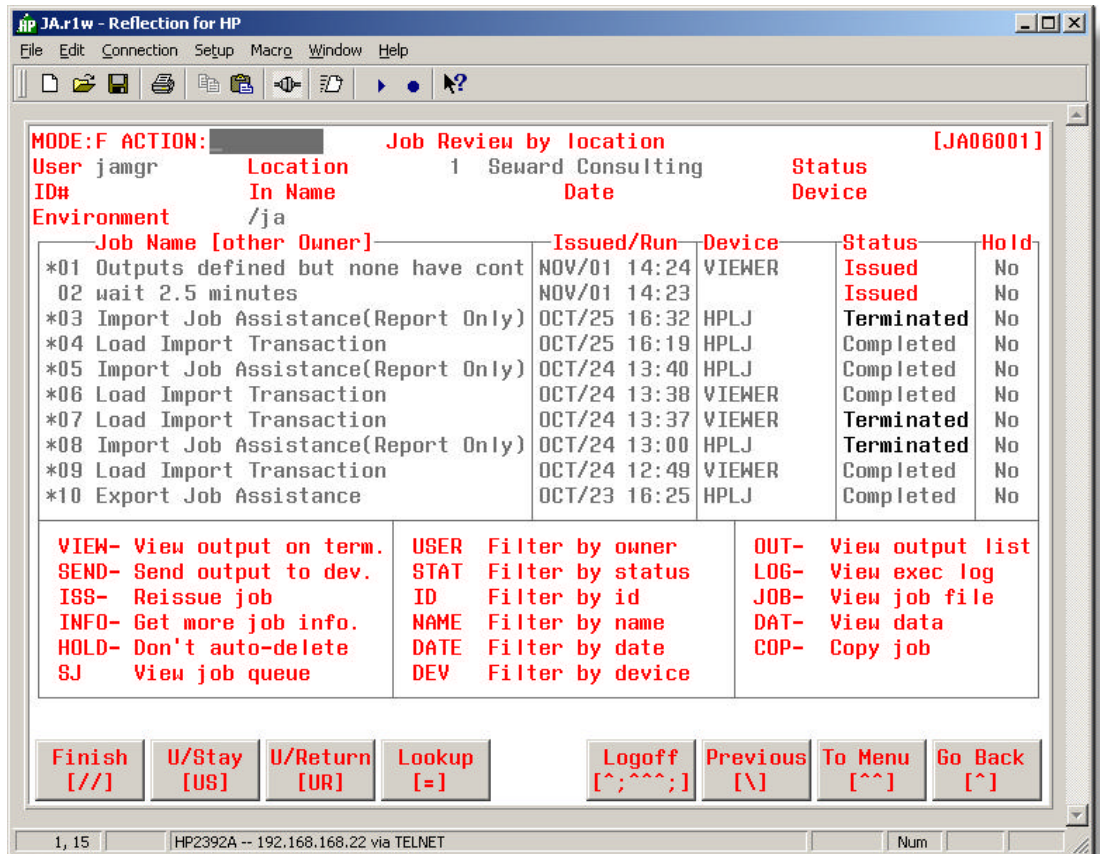
• Figure 4.18 – Job Review by Location screen [JA06001]

Field Descriptions

User

- The sign on ID of the owner of the jobs – i.e. the individual who issued the jobs (see: The Filter Options).

Location

- Identifies the environment in which the jobs are run.

Status

- Used to enter job status when filtering jobs by status (see: The Filter Options).

#ID

- Used to enter job ID number when filtering jobs by job ID (see: The Filter Options).

In Name

- Used to enter job name, or portion of a job name, when filtering jobs by job name (see: The Filter Options).

Date

- Used to enter date when filtering jobs by issue date (see: The Filter Options).

Device

- Used to enter device name when filtering jobs by device (see: The Filter Options).

(01 to 10)

Job Name [other Owner]

- Name of issued job.

- If you are viewing jobs not submitted by yourself, the owner's logon ID will be in brackets [ ] after the job name.

Issued/Run

- The date and time the job was issued.

Device

- The output device the output will be sent to unless changed.

- The device must be defined on the Devices screen [JA02004].

Status

- The job status.

Hold

◻ Indicates if the job will be held in the output queue after the scheduled deletion date ("Yes" or "No").

Options

Depending on the User Role that you are assigned, you may not have access to all of these Options.

VIEW-   View the job output for the selected job

SEND-   Send the output for the selected job to the specified device

ISS-   Reissue the selected job. It is sometimes desirable to re-issue a job that has already completed without going through the selection/issuing screens. The reissued job runs in the same output area as the original and the original job output is lost.

INFO-   Job Info Review [JA06005] for the selected job

HOLD-   Hold the output for the selected job. Jobs are automatically deleted from the system after a predetermined amount of time. Set the Hold indicator to "Yes" if you wish to keep the job output passed the scheduled deletion date.

SJ   View the status of jobs running in the various Queues and the JA status.

OUT-   Job Output Review [JA06002] for the selected job

LOG-   View the execution job log for the selected job

JOB-   View the job script for the selected job

DAT-   Job Data Review [JA06003] for the selected job

COP-   Copy the selected job. It is sometimes desirable to copy a job that has already completed without going through the selection/issuing screens. The copied job runs in a new output area and the original job output is kept.

The Filter Options

The filter options allow you to view jobs based on various criteria. The options are described below:

USER   View jobs issued by a different user

STAT   View jobs with a specified job status. Valid status values are:

IS	Issued
DE	Deferred
PE	Pending

BA   Batched
EX   Executing
KI   Killing
CO   Completed
WA   Warning(s)
SE   Selected
TE   Terminated
blank   All of the above

ID   View job with the specified ID

NAME   View jobs with the specified name or portion of name

DATE   View jobs issued on the specified date

DEV   View jobs with output on the specified device

Job Review by date [JA06006]

How to get here: JA Main Menu ? 13 (Job Review by date)

The Job Review by date screen (Figure 4.18) allows you to view the status and output of the job(s) you have issued. The screen user ID automatically defaults to your sign on ID, so you only see the jobs that you have issued.
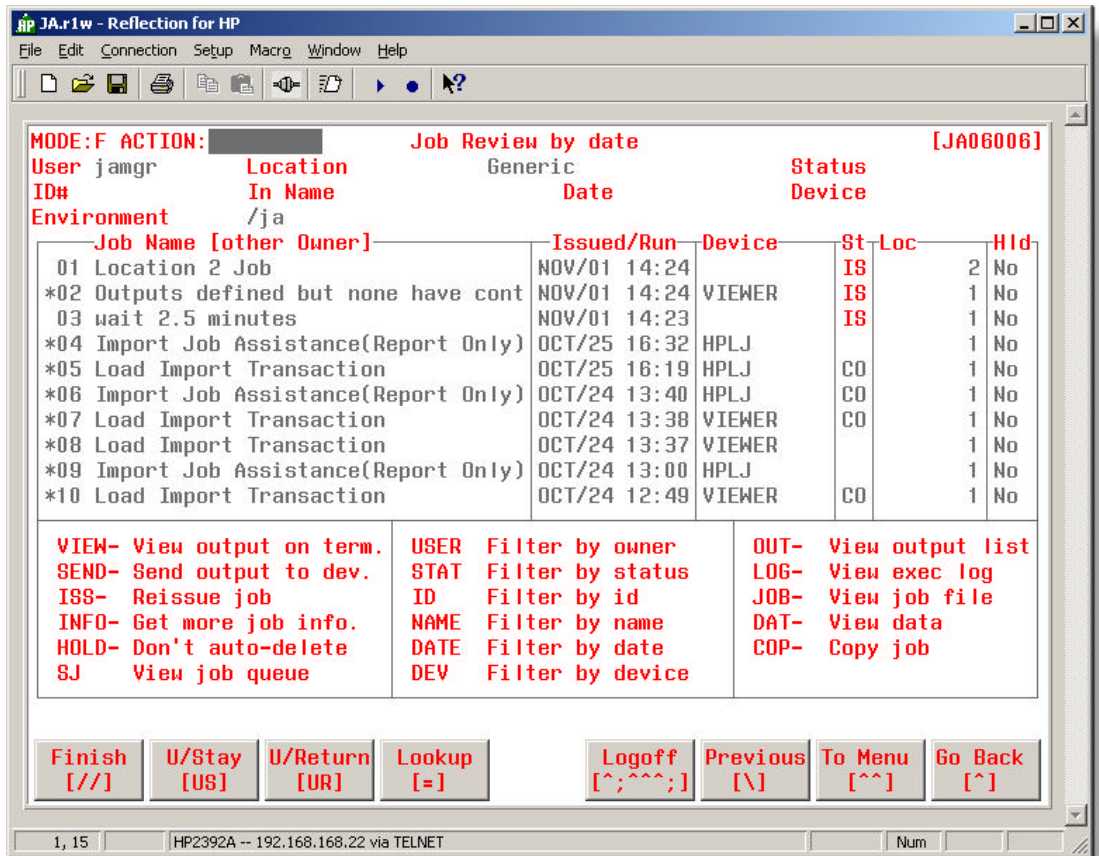
- Figure 4.18 – Job Review by Date screen [JA06006]

Field Descriptions

User

◻ The sign on ID of the owner of the jobs – i.e. the individual who issued the jobs (see: The Filter Options).

Location

◻ Identifies the environment in which the jobs are run.

Status

◻ Used to enter job status when filtering jobs by status (see: The Filter Options).

#ID

◻ Used to enter job ID number when filtering jobs by job ID (see: The Filter Options).

In Name

◻ Used to enter job name, or portion of a job name, when filtering jobs by job name (see: The Filter Options).

Date

◻ Used to enter date when filtering jobs by issue date (see: The Filter Options).

Device

◻ Used to enter device name when filtering jobs by device (see: The Filter Options).

(01 to 10)

Job Name [other Owner]

◻ Name of issued job.

◻ If you are viewing jobs not submitted by yourself, the owner's logon ID will be in brackets [ ] after the job name.

Issued/Run

◻ The date and time the job was issued.

Device

◻ The output device the output will be sent to unless changed.

◻ The device must be defined on the Devices screen [JA02004].

St

◻ The job status (see Filter Options below for the abbreviations).

Loc

◻ The number of the location at which the job is being run.

Hld

◻ Indicates if the job will be held in the output queue after the scheduled deletion date ("Yes" or "No").

Options

Depending on the User Role that you are assigned, you may not have access to all of these Options.

VIEW-	View the job output for the selected job
SEND-	Send the output for the selected job to the specified device
ISS-	Reissue the selected job. It is sometimes desirable to re-issue a job that has already completed without going through the selection/issuing screens. The reissued job runs in the same output area as the original and the original job output is lost.
INFO-	Job Info Review [JA06005] for the selected job
HOLD-	Hold the output for the selected job. Jobs are automatically deleted from the system after a predetermined amount of time. Set the Hold indicator to "Yes" if you wish to keep the job output passed the scheduled deletion date.
SJ	View the status of jobs running in the various Queues and the JA status.
OUT-	Job Output Review [JA06002] for the selected job
LOG-	View the execution job log for the selected job
JOB-	View the job script for the selected job
DAT-	Job Data Review [JA06003] for the selected job
COP-	Copy the selected job. It is sometimes desirable to copy a job that has already completed without going through the selection/issuing screens. The copied job runs in a new output area and the original job output is kept.

The Filter Options

The filter options allow you to view jobs based on various criteria. The options are described below:

USER	View jobs issued by a different user
STAT	View jobs with a specified job status. Valid status values are:

IS	Issued
DE	Deferred
PE	Pending
BA	Batched
EX	Executing
KI	Killing
CO	Completed
WA	Warning(s)

TE   Terminated
blank All of the above

ID   View job with the specified ID

NAME   View jobs with the specified name or portion of name

DATE   View jobs issued on the specified date

DEV   View jobs with output on the specified device

Job Info Review [JA06005]

How to get here: Job Review screen ? Option 'INFO-'

The Job Info Review screen (Figure 4.19) allows you to view a variety of scheduling and runtime information for the selected job.
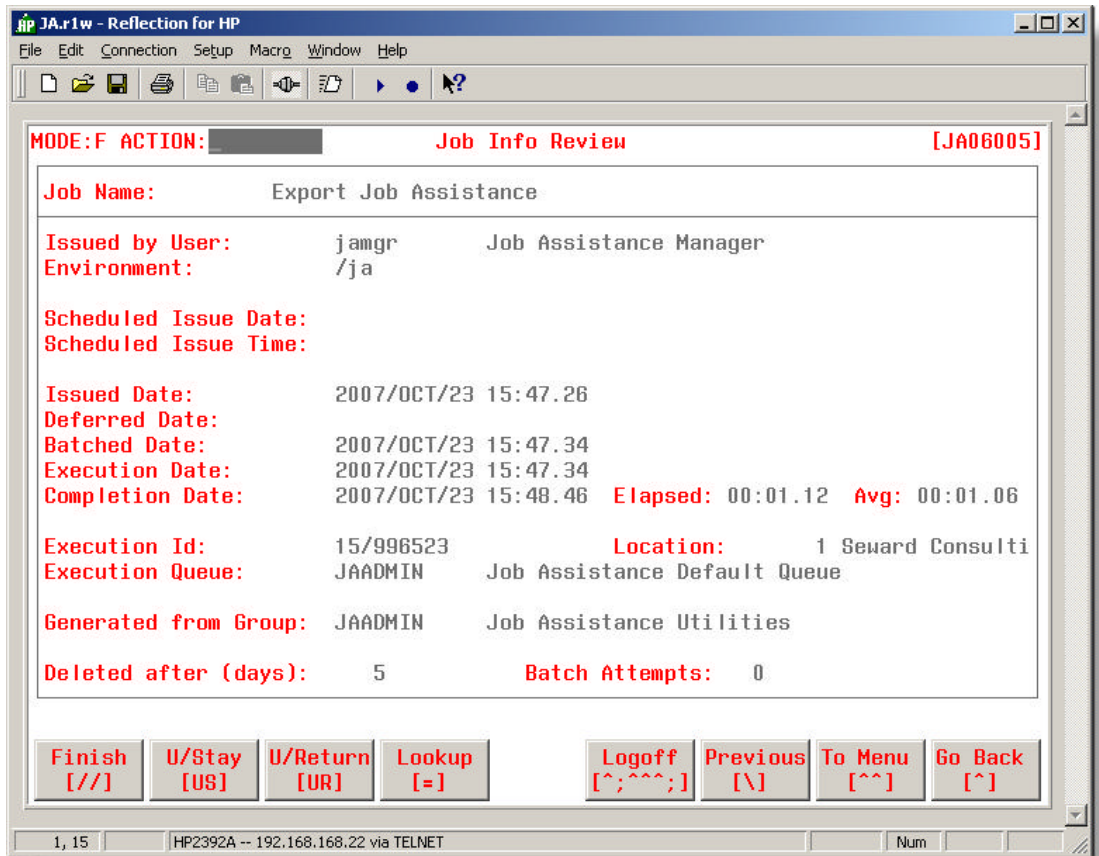
- Figure 4.19 – Job Info Review screen [JA06005]

Field Definitions

Job Name/Description

◻ Text description of the job.

Issued from Location

◻ The environment (test, production etc.) in which the job was issued.

Scheduled Issue Date

◻ Date the job is scheduled for issuing.

◘ No date is displayed if the job is on-demand.

Scheduled Issue Time

◘ Time the job is scheduled for issuing.

◘ No time is displayed if the job is on-demand.

Issue Date

◘ Date and time the job was issued.

Deferred Date

◘ Date and time job is scheduled if deferred from the scheduled issue date.

Batch Date

◘ Date and time JA batched the job for execution.

Execution Date

◘ Date and time the job was executed.

Completion Date

◘ Date and time the job completed.

Elapsed

◘ The amount of time it took for the job to execute.

Avg

◘ The average amount of time it takes for the job to execute.

Execution Id

◘ The clump number (cc) assigned to the job and the execution id assigned to the job (*nnnnnn)* (***cc/nnnnnn*** – where *cc* is the "clump" number and *nnnn* is the job execution id).

◘ See The Recommended JA Directory Structure and the Control screen [JA02001] for more information on job output.

Location

◘ The location associated with the job.

Execution Queue

◘ The Queue the job is assigned to.

Generated from Group

◘ The job group the job was issued from.

Deleted after (days)

◻ The number of days the job output remains in the output queue before the JA 'Job Deleter' background process deletes it.

Batch Attempts

◻ Displays the number of time the 'Job Batcher' background process attempted to the batch the job. If the count is greater than one, the job failed for some reason. An error message will be placed in the JA Error log and the job's status will be set to "TE" – Terminated. This will also remove it from the job queue to allow other jobs to execute.

Job Output Review [JA06002]

How to get here: Job Review screen ? Option 'OUT-#'

The Job Output Review screen (Figure 4.20) allows you to view and send output to the defined device. It is convenient to use this screen when the job has multiple outputs. You can view and send only those outputs that are of interest to you.
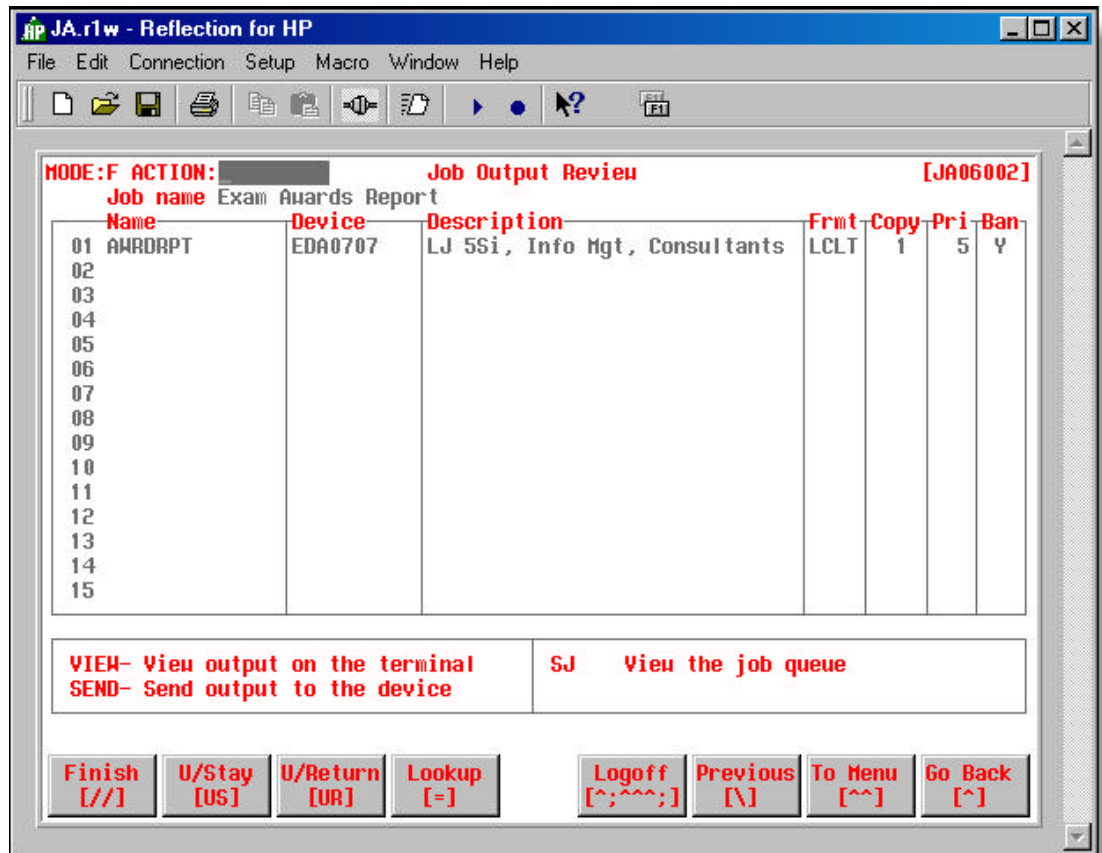
- Figure 4.20 – Job Output Review screen [JA06002]

Field Descriptions

(01 to 15)

Name

- ▫ The output name as defined in the Job Outputs screen [JA03009].

Device

- ▫ The device the output will be sent to, unless changed.

- ▫ The device must be defined on the Devices screen [JA02004].

Description

◻ Description of the output device.

Frmt

◻ The output format.

◻ The format must be defined on the Formats screen [JA02006].

Copy

◻ The number of copies of output that will be sent to the output device.

Pri

◻ The output priority.

◻ The priority must be above the device fence to be sent.

Ban

◻ Indicates if banner page will be sent ("Y" or "N" or blank) with the output.

◻ See: **Appendix 'K'** – Banner Page Sample

Options

VIEW-   View the job output for the selected job

SEND-   Send the output for the selected job to the specified device

SJ   View the status of jobs running in the various Queues and the JA status.

See the Job Review screen [JA06001} for instructions on viewing and sending output if you require a refresher.

Job Data Review [JA06003]

How to get here: Job Review screen ? Option 'DAT-#'

The Job Data Review screen (Figure 4.21) allows you to view the data that was entered for program selection parameters on the Job Execution screen [JA04005] prior to issuing the job.
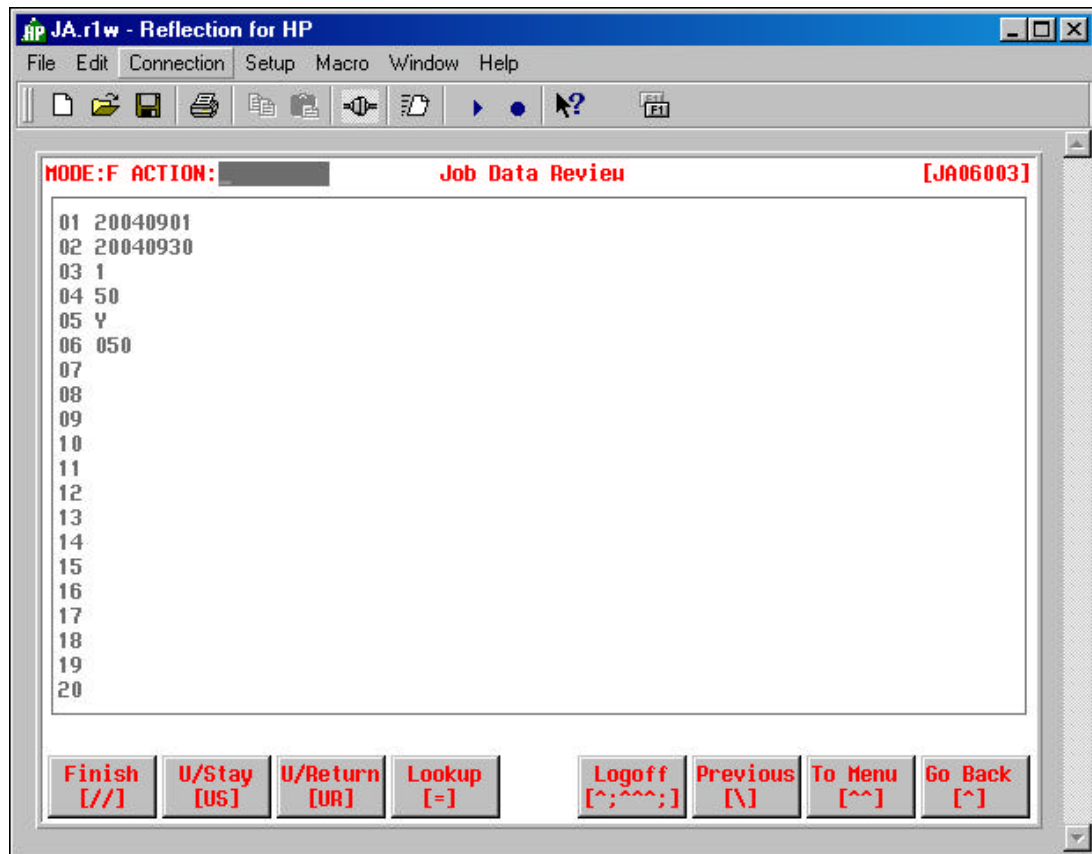
- Figure 4.21 – Job Data Review screen [JA06003]

The above sample displays the selection criteria entered for the various parameters associated with the "Exam Category Change" job. The screen does not display the parameter names – only the data that was entered for each of the parameters.

Job Error Review [JA06004]

How to get here: JA Main Menu ? 13 (Job Error Review)

The Job Error Review screen (Figure 4.22) allows you to view the job execution logs of any jobs that have terminated. This screen is valuable to individuals who support a business application. The screen can be viewed on a regular basis and corrective action can be taken for any jobs that have failed.
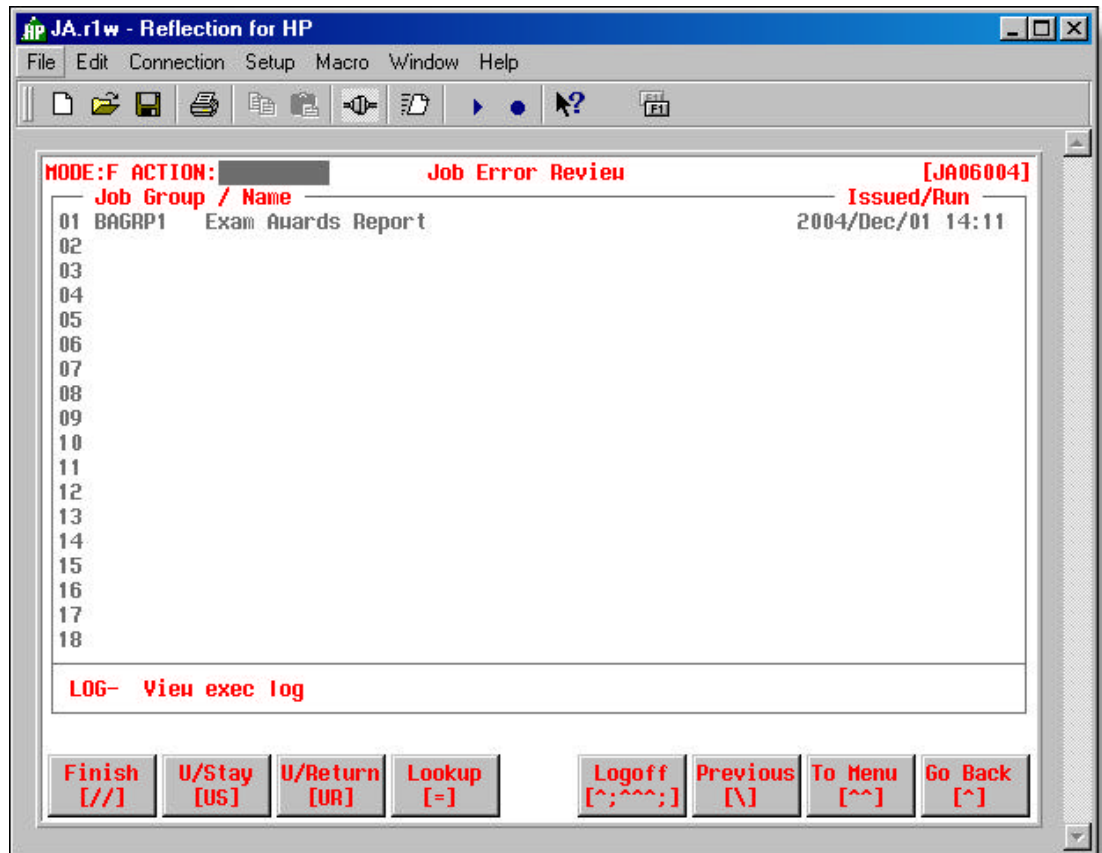
- Figure 4.22 – Job Error Review [JA06004]

Option

LOG-   View the job execution log for the selected terminated job

Instructions

These instructions take you through the steps of managing job output once the job you have issued has finished executing.

Filtering Job Output

Viewing Job Output

Printing Job Output

Deleting Jobs

Miscellaneous Instructions

Filtering Job Output

Filter Jobs by User, Status, ID, Name, Date or Device

Filtering jobs allows you to view issued jobs based on user, job status, job id, job name or issued date. You may apply multiple filters to filter the jobs you wish to view. For example, filtering by **User** and then by **Date** allows you to view all the jobs issued by the specified user on the specified date.

On the Job Review screen [JA06001] with the cursor in the ACTION field,

◘   type *filter* ↵   (where *filter* is the filter option)

If Filtering by User

◘   In the **User** field, type the *user logon id*, then ↵

◘   If you wish to view the jobs for all users, type **@** ↵ or **<SPACE>** ↵

The Job Review screen prompts you to enter the **Location.**

◘   type the *location*, then ↵
     or
     ↵ to browse jobs in the default location

If Filtering by Status

◘   In the **Status** field, type the *status*, then ↵

If Filtering by ID

◘   In the **ID** field, type the *job ID number*, then ↵ (*job ID number*: four digit number as displayed in the 'Execution ID' field on the Job Info Review screen [JA06005] – Option 'INFO')

If Filtering by NAME

◘   In the **In Name** field, type *job name* or or a portion of the job name, then ↵   (40 characters maximum)

If Filtering by DATE

◘   In the **Date** field, type *issued date*, then ↵

If Filtering by Device

In the Device field, type the *device name*, then ↵

Viewing Job Output

View the Output for a Selected Job

On the Job Review screen [JA06001] or the Job Output Review screen [JA06002] with the cursor in the ACTION field,

◘   type **view-#** ↵   (where # is the line number of the job)

The view option takes you to the VIEWER to view the selected job output. Figure 4.23 provides an example of the VIEWER.
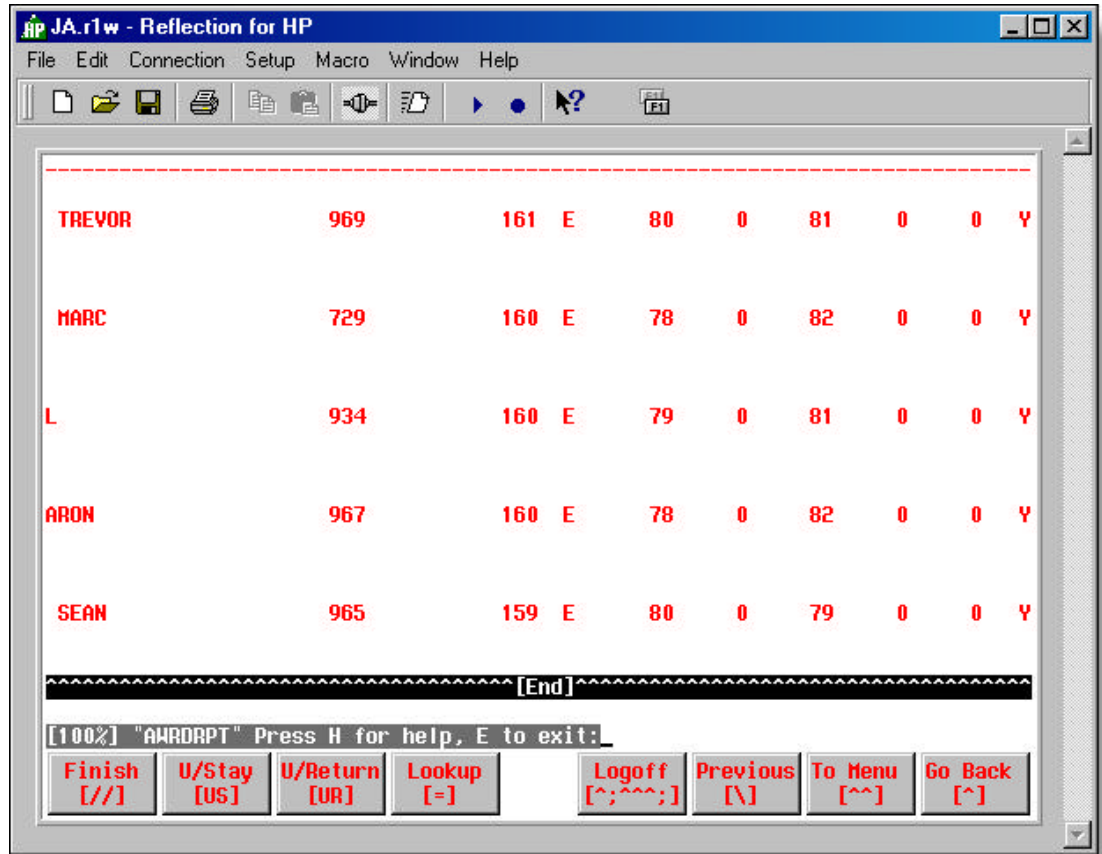
• Figure 4.23 – JA Viewer

Scroll through the Viewer

Once you are in the VIEWER, the following keystrokes will help you to page up, page down and move left and right:

◻ **<Page Down>** or ↵ or **<SPACE>** to move down one screen

◻ **<Page Up>** to move up one screen

◻ ↑ to move up one line

◻ ↓ to move down one line

◻ → to move to the right on the screen

◻ ← to move to the left on the screen

◻ **e** to exit

Printing Job Output

Print the Output for a Selected Job

On the Job Review screen [JA06001] or the Job Output Review screen [JA06002] with the cursor in the ACTION field,

- ◻ type **send-#** ↵ (where # is the line number of job or job output)

Print a Portion of the Output

Your job output – a report, for example – may be very large and you may wish to print only a small portion of the total output. The following instructions guide you through the process of printing one page or a range of pages.

On the Job Review screen [JA06001] or the Job Output Review screen [JA06002] with the cursor in the ACTION field,

- ◻ type **view-#** ↵ (where # is the line number of the job)

  This instruction can be replaced by log-# or job-# if you want to print the job execution or job information files.

- ◻ type **p**

- ◻ type **#** or **#-#** ↵ (# is the page or range of pages to be printed)

- ◻ type **e** (the Print Selection From Viewer screen [JA04015] is displayed
  – see Figure 4.24, below)

- ◻ if the 'Send to' field information needs to be changed – On the Print Selection From Viewer screen [JA04015] with the cursor in the Action field

  - ◻ type **#** ↵ (# is the field number to be changed)

  - ◻ type the appropriate information for the field ↵ (see: 'Send to' Information – Job Execution screen [JA04005])

- ◻ with the cursor in the Action field, type **send** ↵

```
MODE:F ACTION:VIEW              Job Output Review              [JA06002]
       Job name Exam Awards Report
       ┌Name─────────┬─Device──┬─Description────────────────┬─Frmt┬Copy┬Pri┬Ban┐
       *01 AWRDRPT     EDA0707   LJ 5Si, Info Mgt, Consultants LCLT   1    5   Y
        02
        03
        04
        05
        06
        07
        08
        09
        10
        11
        12
MODE:F ACTION:send          Print Selection From Viewer          [JA04015]
       Selected Output from AWRDRPT
       ┌─ Send To ──────────────────────────────────┬──── Note ──────────
       91 Device EDA0707    LJ 5Si, Info Mgt, Consultants │Please remember to SEND
       92 Format LCLT       Landscape, compressed, letter │after entering parameter
       93 Copies   1    94 Priority 13    95 Banner       │values.

   ┌Finish──┬─U/Stay─┬─U/Return─┬─Lookup─┐   ┌─Logoff──┬─Previous─┬─To Menu─┬─Go Back─┐
   │ [//]   │ [US]   │  [UR]    │  [=]   │   │[^;^^^;] │  [\]     │  [^^]   │  [^]    │
```

- Figure 4.24 – Print Selection From Viewer screen [JA04015]

Deleting Jobs

Delete a Selected Job

On the Job Review screen [JA06001] with the cursor in the ACTION field,

- type **d-#** ↵   (where # is the line number of the job)

Delete a Range of Jobs

On the Job Review screen [JA06001] with the cursor in the ACTION field,

- type **d-**pp/qq ↵   (where pp is the line number of the first job in the range and qq is the line number of the last job in the range)

Miscellaneous Instructions

Change the Output Device for a Selected Job

You may wish to print it or send the output to a different printer than the default printer assigned.

On the Job Review screen [JA06001] with the cursor in the ACTION field,

- ◻ type **#** ↵   (where # is the line number of job)

- ◻ type the device name ↵
  or
  <F4> to make the selection from the Device Selection screen [JA00003]

Place a Job on Hold

To prevent a job from being deleted from the output queue on its scheduled deletion day, it is necessary to place the job on HOLD (i.e. – the Hold flag must be set to "Yes").

On the Job Review screen [JA06001] with the cursor in the ACTION field,

- ◻ type **hold-#** ↵   (where # is the line number of the job)

- ◻ **<F2>** to save the screen changes

Reissue a Job

Once a job has been issued and executed, you can reissue it directly from the Job Review screen without having to go back to the Job Selection screen. The reissued job runs in the same output area as the original and the original job output is lost.

On the Job Review screen [JA06001] with the cursor in the ACTION field,

- ◻ type **iss-#** ↵   (where # is the line number of the job)

Update Job Output Parameters

It is possible to update the job output parameters (format, copies, priority and banner flag) before you print the output.

On the Job Output Review screen [JA06002] with the cursor in the ACTION field,

- ◻ type **#** ↵   (where # is the line number of the job output)

- ◘ type *new format* ↵
  or
  ↵ to retain the old output format

- ◘ type *number of copies* ↵
  or
  ↵ to retain the current number of copies

- ◘ type *new output priority* ↵
  or
  ↵ to retain the current output priority

- ◘ type **Y** or **N** ↵
  or
  ↵ to retain the current banner page setting

- ◘ **<F2>** to save the screen changes

Summary

So far in this manual:

◻ You have been provided with a high level introduction to JA processing – how JA fits and works with the business application to schedule jobs.

◻ You have reviewed JA setup considerations prior to the installation of JA at the client site.

◻ You have learned how to define programs, jobs and job groups.

◻ And in this chapter, you have learned how to issue jobs and manage job output.

For those who have the responsibility of maintaining JA once it is installed at a client site, the last chapter focuses on JA maintenance – the utilities and tasks used to update JA in various environments and monitor JA performance.

Chapter 5

Maintaining JA

JA provides several utilities for updating the various environments in which it runs. Background tasks are also provided to start, stop and monitor JA. Maintenance tasks are available to "kill" and defer jobs.

Access to this portion of JA is normally restricted to the JA administrator and business application developers.

In this chapter, the following topics are covered:

Maintenance Menu Options

The maintenance options (Figure 5.1) are options 41 (Reporting) and 42 (Utilities) under the Maintenance Menus heading on the JA Main Menu.

```
┌─── Maintenance Menus ───┐
│ 41 Reporting            │
│ 42 Utilities            │
└─────────────────────────┘
```

- Figure 5.1 – Maintenance Menus (JA Main Menu)

First, we will learn about the Utilities and the chapter will conclude by reviewing the Reporting option

Utility Menu [JA05000]

How to get here: JA Main Menu ? 42 (Utilities)

The Utility Menu (Figure 5.2) provides access to the array of utilities, tasks and view logs used in the maintenance of JA.
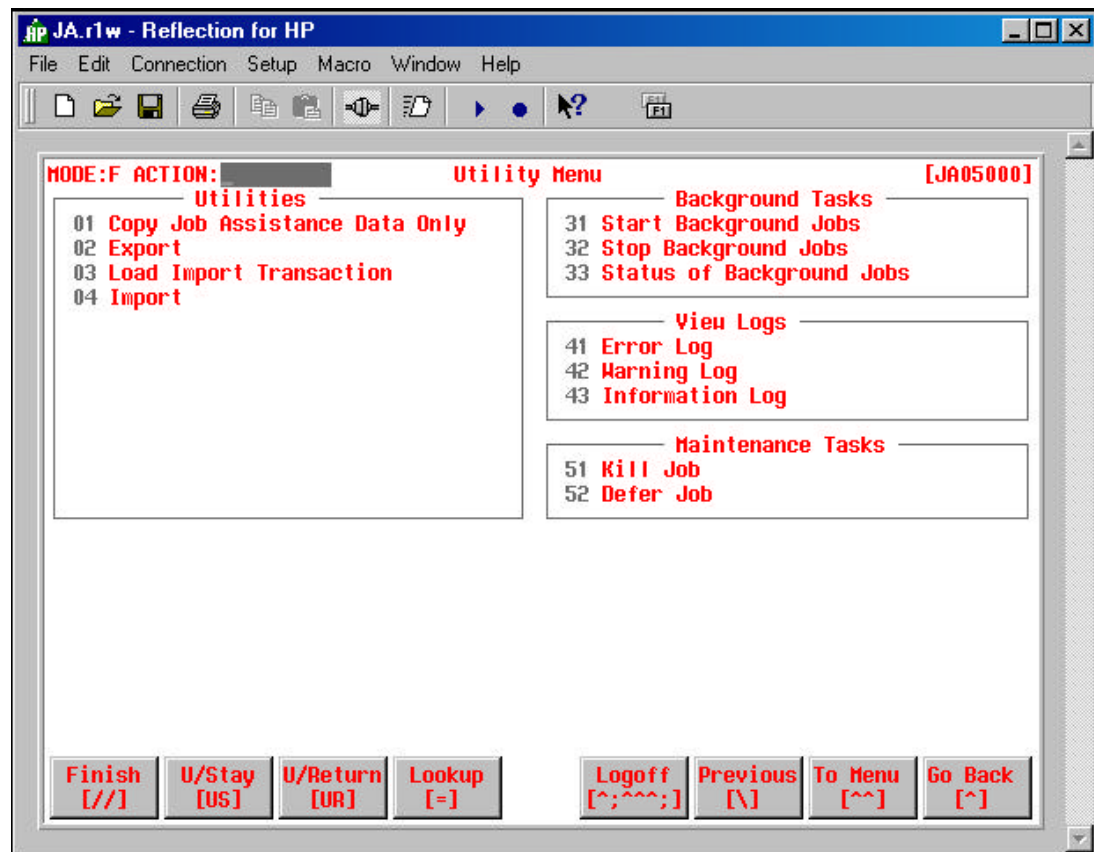
- Figure 5.2 – Utility Menu screen [JA05000]

Utilities

This section discusses the four JA utility functions.

Copy Job Assistance Data Only

Export Utility [JA05001]

Load Import Transaction

Import Utility [JA05002]

Copy Job Assistance Data Only

How to get here: JA Main Menu ?   42 (Utilities) ?   1

This option executes a job to create a copy of JA data excluding the JA output directories ($jaoutloc). The copy can be used to return JA to a previous state if major problems occur or to duplicate one system. Under normal circumstances, only Seward Consulting staff will use this process.

Export Utility [JA05001]

How to get here: **JA Main Menu ? 42 (Utilities) ? 2 (Export)**

The Export Utility screen (Figure 5.3) is used to create a copy (transaction file) of the user's data in a JA installation. All or a portion of the user's data may be copied based on the entered Action. A compressed file (jaexport.zip) is created that can be used to provide a copy of JA on a different system with the same setup, or part of the same setup, as the exporting copy of JA, or it can be used as a backup to restore user data at the same JA installation if it ever becomes necessary.
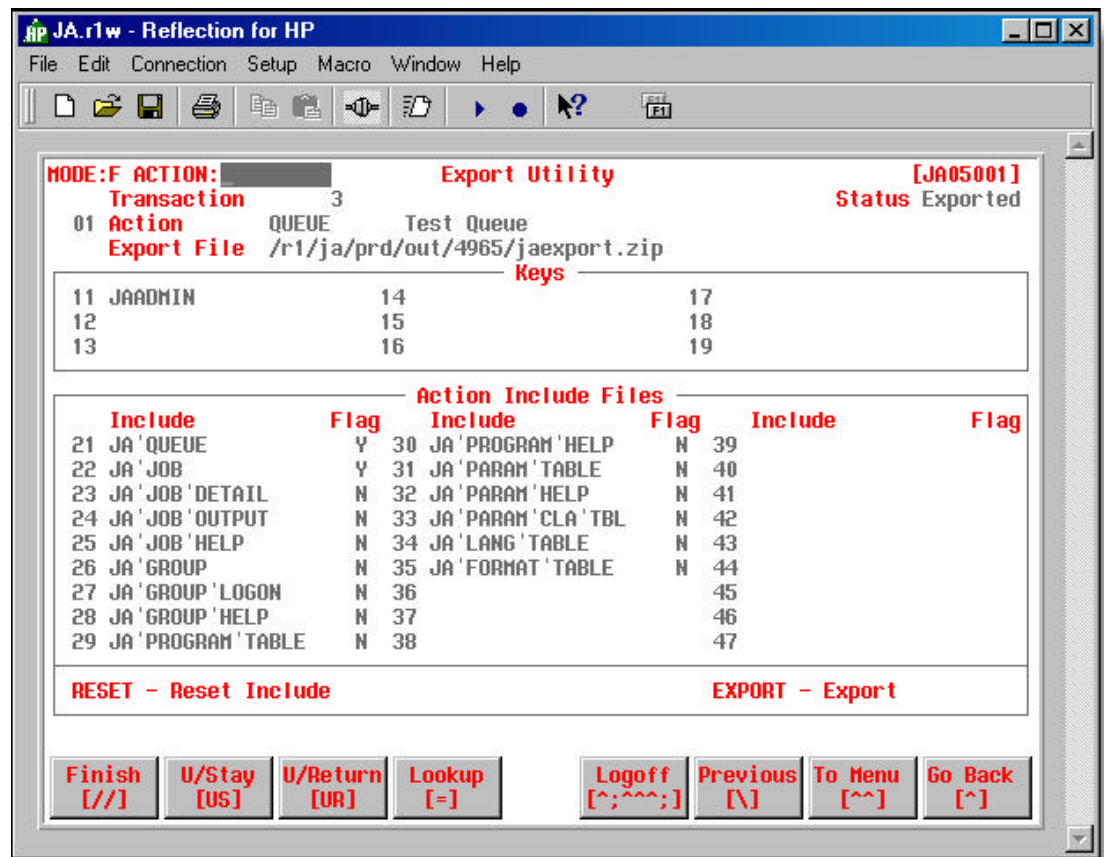
- Figure 5.3 – Export Utility screen [JA05001]

Field Descriptions

Transaction

- ▫ The export transaction number.

- ▫ JA automatically generates the number on entry mode.

Status

- ▫ Export status.

◘ JA automatically sets the status (e.g. – Pending or Exported).

01 Action

◘ A predefined type of export. The valid values are:

DEVICE	Selects all information related to a device
FORMAT	Selects all information related to an output format
GROUP	Selects all information related to a job group
JOB	Selects all information related to a job
LANGUAGE	Selects all information related to a language
PARAMETER	Selects all information related to a parameter class
PROGRAM	Selects all information related to a program
QUEUE	Selects all information related to a queue
USERROLE	Selects all information related to a user role
USER	Selects all information related to a user
CUSTOM	Select individual tables

(Unlabelled field)

◘ A free-form text field follows the action field. This will usually contain a short note giving the reason for the export; the contents of this field will be visible on the Import screen.

Export File

◘ The name and location of the export zip file.

◘ This field is updated when the Export is issued and executed.

(11 to 19)

Keys

◘ Identifies the key(s) used to select information associated with the specified action.

◘ Key formats or short cut selections:

DEVICE	**<F4>** to select from the Device Selection screen [JA00003]
FORMAT	**<F4>** to select from the Format Selection screen [JA00009]
GROUP	Type *job group name*
JOB	Type *job group name* (xxxxxxxx), *job id* (nnn) - xxxxxxxxnnn

LANGUAGE	**<F4>** to select from the Language Selection screen [JA00001]	
PARAMETER	**<F4>** to select from the Parameter Classification screen [JA00002]	
PROGRAM	**<F4>** to select from the Program Selection screen [JA00004]	
QUEUE	**<F4>** to select from the Queue Selection screen [JA00011]	
USERROLE	**<F4>** to select from the Role Selection screen [JA00010]	
USER	Enter user ID	
CUSTOM	No entry allowed – complete contents of selected tables are included.	

Action Include Files

(21 to 47)

Include

◻ Identifies the list of available files associated with the specified action.

◻ Files may be selected or deselected for export – see the "Switch the Include Flag" instruction below.

Flag

◻ Identifies if the file will be included in the action ("Y" or "N").

Options

Reset	Resets the current include flags to the defaults for the action
Export	Issues the export process

See also: **Appendix "N" –** Scripts for Moving Job Execution Details (Server to Server)

Load Import Transaction

How to get here: JA Main Menu ? 42 (Utilities) ? 3 (Load Import Transaction)

This is the intermediate step between the Export and Import processes. This process creates an import transaction, to be used by the Import process, based on a previously created Export transaction.

The Job Execution screen (Figure 5.4) prompts for the location of the previously created Export transaction. The location can be found on the Export screen [JA05001] for the specific transaction. Once the location has been entered, update and issue the job.
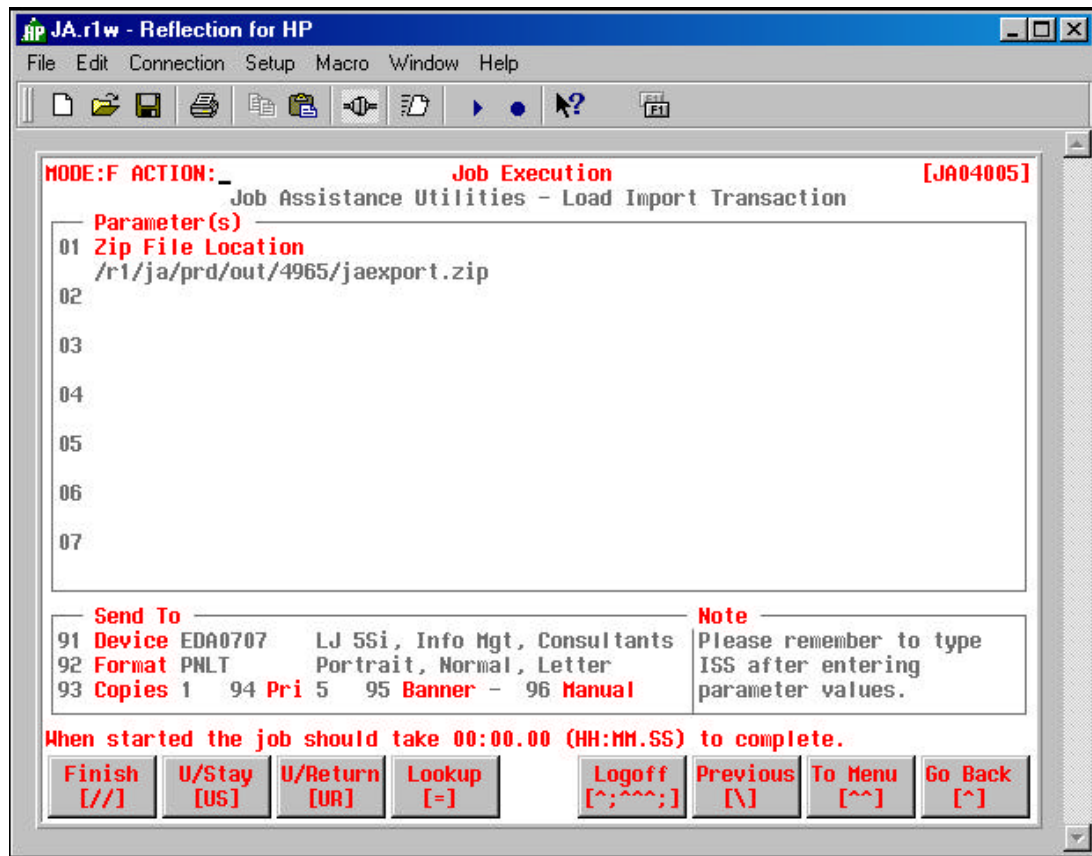
- Figure 5.4 – Job Execution screen [JA04005] – Load Import Transaction

Import Utility [JA05002]

How to get here: JA Main Menu ?   42 (Utilities) ?   4 (Import)

The Import Utility screen (Figure 5.5) is used to import transactions that have been loaded using the Load Import Transaction utility. These transactions are used to load JA data from one system to another.
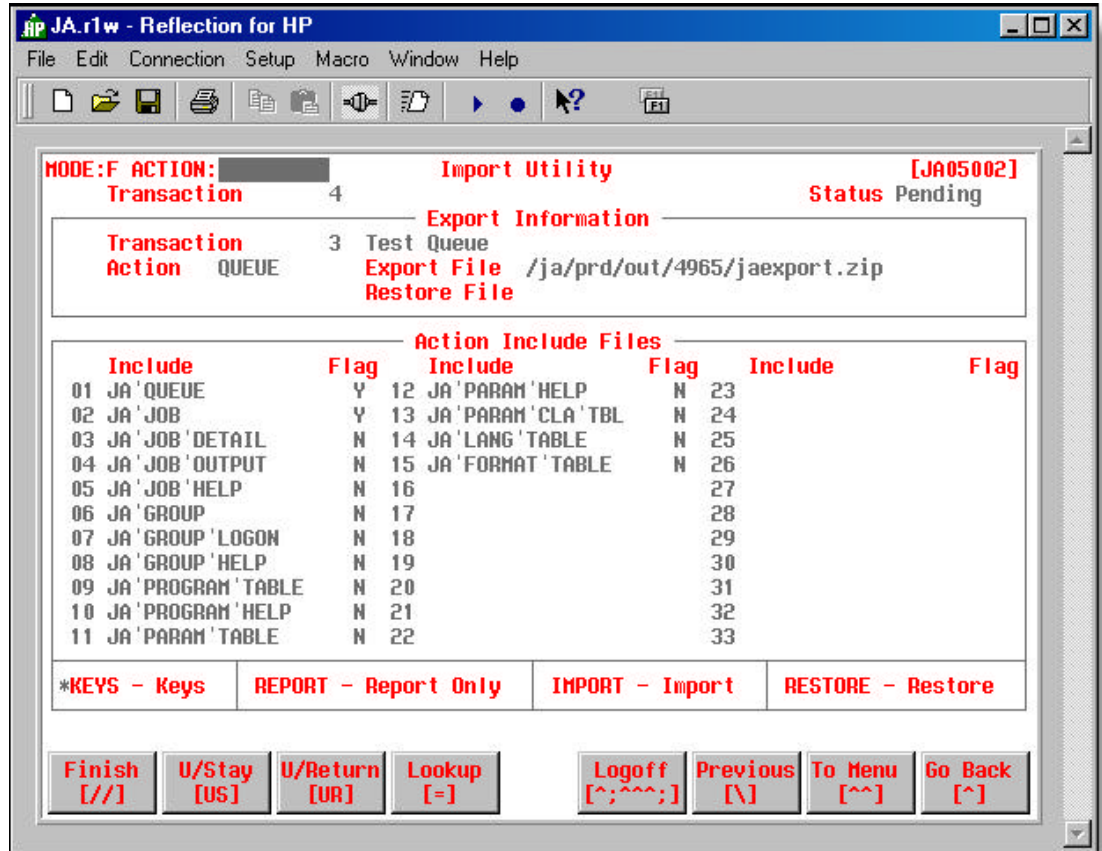
- Figure 5.5 – Import Utility screen [JA05002]

Field Descriptions

Transaction

- ◻   The import transaction number.

- ◻   JA automatically generates the number on entry mode.

Status

- ◻   The import status.

◻   JA automatically sets the status (e.g. – Pending or Imported).

Export Information

Transaction

◻   Transaction number and text description of exported data that is being imported.

Action

◻   Type of export being imported.

Export File

◻   File name of the export file being imported.

Restore File

◻   Location and name of the restore file (created through the 'Restore' option).

Action Include Files

(01 to 33)

Include

◻   Identifies the list of available files associated with the specified action.

Flag

◻   Identifies if the file will be included in the action ("Y" or "N").

Options

Keys	Transactions Keys [JA05003]. This screen identifies the keys used in the Export process.
Report	Issues the Import process. This process reports the changes, no update of data will occur.
Import	Issues the Import process. This process updates the data with the changes from the exported transaction.
Restore	Issues the Import process. This process restores the existing data to a state prior to the import. Once this transaction is restored, no further changes to this transaction are possible. To import this transaction again, use the Load Import Transaction.

Instructions

These instructions take you through the steps of creating and issuing the export process from the Export Utility screen [JA05001].

Creating and Issuing the Export Process

Creating and Issuing the Export Process

Creating the Export Process

Switch the Include Flag

Issue the Export Job

Create an Export Process

On the Export Utility screen [JA05001] with the cursor in the Action field,

- ◘ type **e** ↵ (you are now in entry mode)

- ◘ type the *action*, then ↵ (see the valid list in the action field description)

- ◘ type an action *description*, then ↵

- ◘ type the *key value*,.then ↵

  or, in most cases ..

  <F4> to select a value from the selection screen (see key field description)

- ◘ type as many key values as required

- ◘ **<F1>** to return the cursor to the ACTION field

  JA automatically enters the include files associated with the specified action

- ◘ **<F2>** to save the data entered on the screen

  JA automatically sets the Export Status to **Pending**

Switch the Include Flag

You may wish to include (change flag from "N" to "Y") or exclude (change flag from "Y" to "N") certain include files from the export process.

On the Export Utility screen [JA05001] with the cursor in the Action field,

□   type **#** ↵   (where # is the line number of the flag you wish to switch)

□   **<F2>** to save changes on the screen

Issue Export

On the Export Utility screen [JA05001] with the cursor in the Action field,

□   type **export** ↵

The "Export Job Assistance" job is issued. The job can be viewed through the Job Review screen. This job produces several reports.

Reports Created from the Export Job

The following verification reports are created when the "Export Job Assistance" job is executed.

```
2004/Apr/29            Job Assistance Transaction Report          Page: 001

-------------------------------------------------------------------------------

Transaction:          7                                          Status: E
Action:      DEVICE              test device
Export File: /r1/ja/prd/out/5944/jaexport.zip

-------------------------------- Keys ----------------------------------

EDA0707

------------------------ Action Include File -------------------------
JA'DEVICE'FOOTER       Y    JA'DEVICE'HEADER      Y    JA'DEVICE'TABLE       Y
JA'FORMAT'TABLE        Y    JA'LOCATION'TABLE     Y


                        *** End of Report ***
```

• Figure 5.6 – Job Assistance Transaction Report (JATransaction)

The Job Assistance Transaction report identifies the name and location of the export file and the keys and the include files used for the export transaction.

```
2004/Apr/29            Job Assistance Record Count Report         Page: 001

Export
Table                                                          Out Count
-------------------------------------------------------------------------------

JA_DEVICE_FOOTER                                                      1
JA_DEVICE_HEADER                                                      3
JA_DEVICE_TABLE                                                       1
```

```
JA_FORMAT_TABLE                                                          3
JA_LOCATION_TABLE                                                        0

Tables reported 5.


                            *** End of Report ***
```

- Figure 5.7 - Job Assistance Record Count Report (JASummary)

The Job Assistance Record Count report identifies the tables that were exported and the number of records in each table.

```
2004/Apr/29           Job Assistance Table Report           Page:  001

Table:  JA_DEVICE_HEADER

Field           Value
-----------------------------------------------------------------------

ja_dev_head_key  0392X10
ja_device_id     39
ja_output_format 2X10
ja_escape_codes  27,&l0S
ja_option_codes  -otl80 -olpi8
ja_update_date   20040315
ja_update_time   11403884
ja_user_id       crawford
ja_dev_head_key  039IDXX
ja_device_id     39
ja_output_format IDXX
ja_escape_codes  27,&l0S
```

- Figure 5.8 – Job Assistance Table Report (JADetail)

The Job Assistance Table report displays the fields and field values for each of the exported tables (include files).

Background Tasks

The JA Background Tasks are Options 31, 32 and 33 on the Utility Menu screen. These tasks review the status and control the starting and stopping of the JA background jobs.

Start Background Jobs

Stop Background Jobs

Status of Background Jobs

Start Background Jobs

How to get here: JA Main Menu ? 42 (Utilities) ? 31

This option starts the JA background jobs (see: **Chapter 1 – Introducing JA** – The Business Application / JA Relationship – Background Processing).

The alternative to using this option is to use the 'jastart' command at the UNIX command line prompt.

> e.g. - $ **jastart**

Stop Background Jobs

How to get here: JA Main Menu ? 42 (Utilities) ? 32

This option stops the background jobs (see: **Chapter 1 – Introducing JA** – The Business Application / JA Relationship – Background Processing).

The alternative to using this option is to use the 'jastop' command at the UNIX command line prompt.

> e.g. - $ **jastop**

Status of Background Jobs

How to get here: JA Main Menu ? 42 (Utilities) ? 33

This option checks the status of the background jobs (see: **Chapter 1 – Introducing JA** – The Business Application / JA Relationship – Background Processing).

The alternatives to using this option are:

Use the 'jastatus' command at the UNIX command line prompt.

> e.g. - $ **jastatus**

Use the 'SJ' option on the Job Review screen.

View Logs

The View Logs options allow you to view warning, error and other systems information. This information may be useful attempting to track down job or system problems.

Error Log

Warning Log

Information Log

Error Log

How to get here: JA Main Menu ?   42 (Utilities) ?   41

This option displays the error log located in the $jatmploc directory.

Warning Log

How to get here: JA Main Menu ?   42 (Utilities) ?   42

This option displays the warning log located in the $jatmploc directory.

Information Log

How to get here: JA Main Menu ?   42 (Utilities) ?   43

This option displays the information log located in the $jatmploc directory.

Maintenance Tasks

The maintenance tasks allow you to terminate (kill) or defer a job. The Kill and Defer jobs prompt you to enter the job execution id for the job that is displayed on Job Info Review screen [JA06005].

Kill Job

Defer Job

Kill Job

How to get here: JA Main Menu ?   42 (Utilities) ?   51

This process will attempt to terminate an executing job. Caution should be used as the process is stopped without any error checking and data may be left in an unknown state.

Defer Job

How to get here: JA Main Menu ？ 42 (Utilities) ？ 52

This process will change an issued job to run at a later time. The status of the job will be changed to 'DE' deferred and will not be selected until the time has been met. The process can also be used to change a deferred job to issued status.

Reporting

How to get here: JA Main Menu ？ 41 (Reporting)

The Reporting option takes you to the Job Selection screen (Figure 5.9).
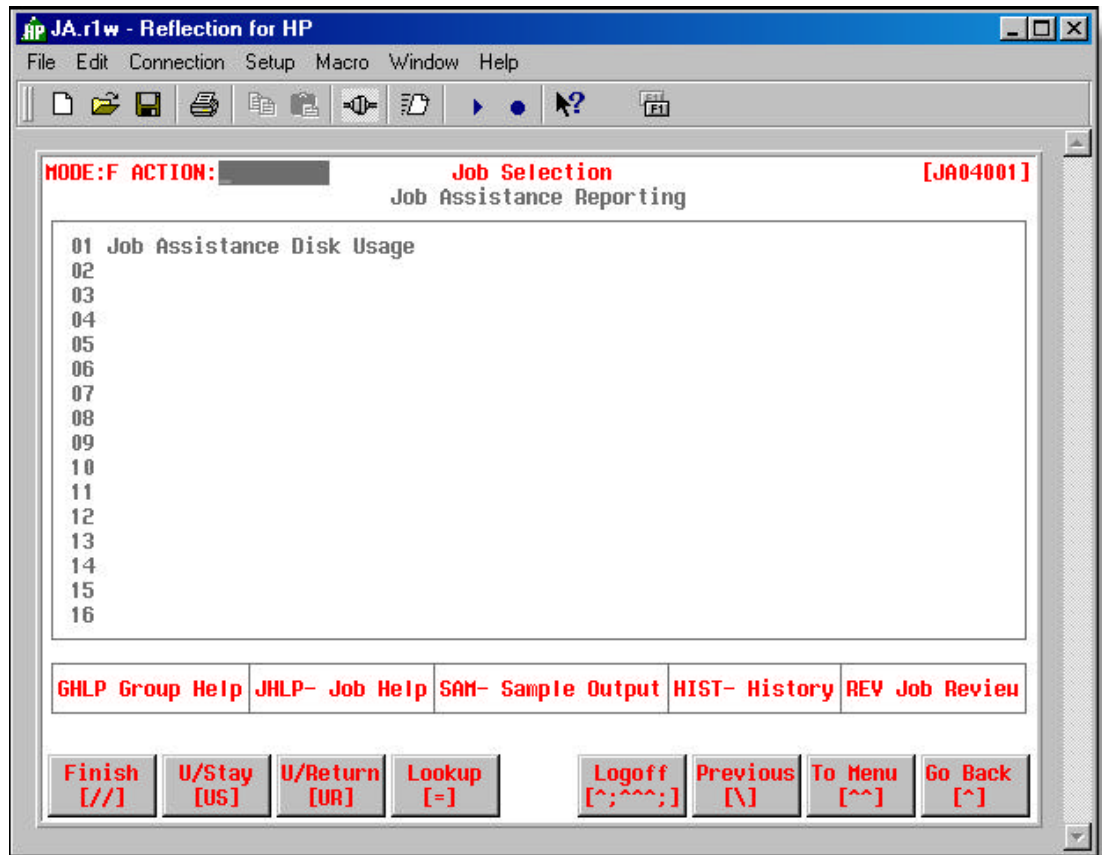
- Figure 5.9 – Job Selection screen [JA04001] – Job Assistance Reporting

Currently, only one job exists in the JAREPORT job group – 'Job Assistance Disk Usage'.

Job Assistance Disk Usage

How to get here: JA Main Menu ? 41 (Reporting) ? 1

This report job produces three reports:

```
2004/APR/29                    Job Assistance Reporting              Page   1
                               Disk Usage Summary                    [ja08013]


Total Directories Reported:      137                    1,015,947,264



                              *** END OF REPORT ***
```

- Figure 5.10 – Disk Usage Summary Report [JA08013]

The Disk Usage Summary report displays the total number of JA directories and the total number of bytes used.

```
2004/APR/29                    Job Assistance Reporting              Page   1
                               Disk Usage Detail by Size             [ja08014]

    ExecID           Job Description                         Disk Usage

    5738             SF Loader (1)                          701,644,800
    5936             lad_load                               211,050,496
    4788             Monthly/Quarterly Statist               15,958,016
    2799             Monthly/Quarterly Statist               15,056,896
    8812             Monthly/Quarterly Statist               15,048,704
    4971             Monthly/Quarterly Statist               14,180,352
```

- Figure 5.11 – Disk Usage Detail by Size Report [JA08014]

The Disk Usage Detail by Size report displays disk usage in bytes (highest usage to lowest usage) for each job with output.

```
2004/APR/29                    Job Assistance Reporting              Page   1
                               Disk Usage Detail by Date             [ja08015]

   ExecID  Job Description                 Execute Date      Disk Usage

   2655                                                        131,072
   2907                                                        122,880
   2752                                                        122,880
   2838   Comments Report - (SPR)          2001/SEP/14          40,960
   8358   Red Seal Export                  2002/AUG/24          57,344
```

- Figure 5.12 – Disk Usage Detail by Date Report [JA08015]

The Disk Usage Detail by Date report displays disk usage in bytes (earliest to most recent date) for each job with output.

Summary

This chapter provided details on the utilities and tasks used to maintain JA in various environments and to monitor JA performance.

As mentioned in the introduction to the chapter, access to these utilities and tasks is normally restricted to the JA administrator at the client site and high-level business application administrators and developers.

Appendices

The following appendices contain technical information required for a deeper understanding of JA processes, procedures and screens.

The appendices included are:

- **Appendix "A" – JA Keying Instructions**
- **Appendix "B" – Languages – Path Options**
- **Appendix "C" – Groupings – Date and Time Entry**
- **Appendix "D" – Job Details – Command Field Options**
- **Appendix "E" – Job Details – 'On Error' Options**
- **Appendix "F" – Programs – Output Redirection**
- **Appendix "G" – Programs – Parameter Values**
- **Appendix "H" – Programs – Parameter Patterns**
- **Appendix "I" – Viewer Commands**
- **Appendix "J" – JA UNIX Commands**
- **Appendix "K" – Banner Page Sample**
- **Appendix "L" – Privileged Job Business Rules**
- **Appendix "M" – API Calls**
- **Appendix "N" – Scripts for Moving Job Execution Details (Server to Server)**

Appendix "A" – JA Keying Instructions

This appendix discusses the difference between find (f), entry (e) and select (s) modes on JA screens and provides instructions for finding, updating or entering information. Instructions for entering screen options are also provided.

In most cases, when you access a JA screen, the default screen mode is FIND – 'MODE:F' appears in the top left hand corner of the screen.

Some screens (e.g. – the Programs screen [JA03001]) do not have a default screen mode and you are prompted to enter the mode you wish to use in the Action field when you access the screen.

Instructions for Keying in 'Find' Mode

Instructions for Keying in 'Entry' Mode

Instructions for Keying in 'Select' Mode

Instructions for Entering Screen Options

Finding Help in JA

Instructions for Keying in 'Find' Mode

To find or browse for information on the selected screen, ensure that the screen is in FIND mode (MODE:F). The search is based on search criteria entered in the screen **key** field(s).

Find / Browse Screen Information

If the screen **is not** in FIND mode:

With the cursor in the Action field for the selected screen,

- type **f** ↵

- the program places the cursor in the screen key field

With the cursor in the search field for the selected screen,

- type *xxxxx* ↵ (where *xxxxx* is the search value)

  or

  type *xxx@* ↵ (where all field values starting with *xxx* are retrieved)

  or

  ↵ (to bring back all values for the search field)

- ↵ (to scroll through screen information)

Update Field Information

Once you have found the specific screen information you are looking for, you are able to update the information, if required. For field updates, the screen remains in FIND mode.

With the cursor in the Action field for the selected screen,

- ❑ type **#** ↵ (where # is the field number of the field you wish to update)

- ❑ type the new field *information* ↵ (see field definitions for specified screen)

- ❑ **<F2>** to save the screen changes

Add Screen Information

You may wish to add a new record to a screen – for example, a new job for a Job Group on the Jobs screen [JA03013]. For additions, the screen remains in FIND mode.

With the cursor in the Action field for the selected screen,

- ❑ type **a** ↵

- ❑ type *information* for each field ↵ (see field definitions for specified screen)

- ❑ **<F2>** to save the screen changes

Delete Screen Information

Information that is no longer required can be deleted from a screen. For deletions, the screen remains in FIND mode.

With the cursor in the Action field for the selected screen,

- ❑ type **d-#** ↵ (where # is the field number of the field you wish to delete)

- ❑ **<F2>** to save the screen changes

Instructions for Keying in 'Entry' Mode

To create a new record on some screens (e.g. – a new job group on the Groupings screen [JA03005]), you must ensure that the screen is in ENTRY mode – 'MODE:E' appears in the top left hand corner of the screen.

Enter New Screen Information

With the cursor in the Action field for the selected screen,

- ◘ type **e** ↵ (where # is the field number of the field you wish to update)

- ◘ type *information* for each field ↵ (see field definitions for specified screen)

- ◘ **<F2>** to save the screen changes

Instructions for Keying in Select Mode

To find or browse for information on the selected screen, ensure that the screen is in SELECT mode (MODE:S). Select mode provides you the ability to search for screen information based on search criteria entered in screen **key** or **non-key** fields.

Find / Browse Screen Information

If the screen **is not** in SELECT mode:

With the cursor in the Action field for the selected screen,

- ◘ type **s** ↵

- ◘ ↵ until the cursor returns to the Action field

With the cursor in the Action field for the selected screen,

- ◘ type **#** ↵ (where # is the line number of the field you wish to search)

- ◘ type *xxxxx* ↵ (where *xxxxx* is the search value)

  or

  type *xxx@* ↵ (where all field values starting with *xxx* are retrieved)

  or

  ↵ (to bring back all values for the search field)

- ◘ ↵ to return the cursor to the Action field

- ◘ ↵ to begin the search

- ◘ ↵ (to scroll through screen information)

Instructions for Entering Screen Options

Many JA screens have options. Options are listed at the bottom of JA screens in capital letters with associated text. Figure A.1 provides an example of options for the Programs screen.

- Figure A.1 – Programs screen [JA03001] – Featuring Screen Options

The Options for the Programs screen in the above sample are: USAG, PROH, PARH-, and SAM.

Some options take you to another screen and other options are used to perform a specific function.

Options ending with a dash (e.g. – PARH- option in the Programs sample) require you to enter a field number with the option to select a specific field.

An asterisk (*) displayed in front of an option indicates that information exists for that option (e.g. – *USAG in the Programs sample indicates that "usage" information exists for the program).

Enter Screen Options

With the cursor in the Action field for the selected screen,

◻   type *xxxx* ↵   (where *xxxx* is the Option)

or

type *xxxx-#* ↵   (where *xxxx* is the Option and # is the selected field number)

Instructions for Finding Help in JA

In all screen modes, you have easy access to screen and field help information when finding, updating or entering information.

Find Help Information

With the cursor in the Action field or any screen field,

◻   type **?** ↵   (short help message is displayed)

or

type **??** ↵   (detailed help message is displayed)

Appendix "B" – Languages – Path Options

The information in this appendix discusses the information that can be entered in the Path field on the Languages screen [JA02002].

When entering and changing paths, remember that the path should also include a placeholder that identifies where to insert programs using the language. Use a **%p** to identify where program names should be placed within each path. When JA encounters the **%p** it will replace it with the program name associated with the language at the time of issue.

As an example consider the following:

QTP Program: updatejournals
Language: qtc
Path: nice –1 qtp auto=%p.qtc dict=$phdloc
Interpretation: nice –1 qtp auto=updatejournals.qtc dict=$phdloc

As shown above, the QTP program 'UPDATEJOUNALS' has been inserted into the path associated with language 'QTP'. "nice" is Unix-specific.

Appendix "C" – Groupings – Date and Time Entry

The Groupings screen [JA03005] date and time entries are required for setting the schedule for a job group. Formatting issues for these two fields are listed below.

Date

The Schedule Date pattern is restricted to 50 characters.

Consists of a date specified in yyyy/mm/dd format. The symbol '**#**', repeated the appropriate number of times to fill the desired subfield, may be used as a wildcard to indicate that every year, month, or day is a match. The '**|**' may be used as a logical OR operator within the year, month, or day values. Special keywords may be used to provide more flexible scheduling.

Examples:

####/##/##	Issue every day
####/##/FRI	Issue every Friday
####/##/MON|FRI	Issue every Monday or Friday
####/##/01	Issue on the first day of every month
####/##/LASTDAY	Issue on the last day of every month
####/01|03|06|09/01	Issue every quarter on the first day of the month
2015/01/01	Issue for January 1st, 2015

Time

The Schedule Time pattern is restricted to 50 characters.

Schedule Date pattern must also be set to use Time pattern.

Consists of a time specified in 2-digit hour (24 hour format):2-digit minute format. The '**|**' may be used as a logical 'OR' operator within the hour or minute values.

Examples:

08|12|16:30	Issue at 8:30, 12:30, and 16:30
10:00	Issue at 10:00 AM

When the character sequence '##' is used, instead of functioning as a wildcard to indicate that every hour or minute is a match, in the way that '##' or '####' serves with the date, here it indicates that a time interval is specified. If both the hour and minute are replaced, the default time interval applies; otherwise, the interval is in hours if hours are specified and minutes are replaced with '##', and in minutes if minutes are specified and hours are replaced with '##'.

The number of minutes must be at least two digits in length, but it can also be up to four digits long.

Examples:

##:##   Issue every default time interval. The length of the default time interval in minutes is a site-specific variable and can be set on the Control screen [JA02001].

##:30   Issue every 30 minutes.

01:##   Issue every hour.

##:150   Issue every 150 minutes (2 ½ hours).

Appendix "D" – Job Details – Command Field Options

The information in this appendix discusses the information that can be entered in the detail command field on the Job Details screen [JA03010].

The detail command line is an unrestricted text field that can contain **one** of the following types of values:

- ◘ A program defined in the JA Programs screen (which is accessible from the JA Main Menu). Only the name of the program is required here since the other information needed to run the program is provided on the Language and Group Logon screens.

- ◘ A native operating system or batch file command including any control (i.e. if...then...else) or looping (i.e. while ...) commands. JA will insert these commands directly into the generated job file.

- ◘ One or more of the following JA commands:
  (**NOTE:** Text surrounded by < > are placeholders for a required value. The | separates mutually exclusive values.)

\USER *user id*	Changes the issuer/owner of the job to the user identified by *user id*. It does this prior to the job being issued or seen on the Job Execution screen. e.g. - **\user crawford** (assigns crawford as the owner of the job)
\COPIES *number*	Changes the number of copies of output generated by the job to the number identified by *number*. It does this prior to the job being issued or seen on the Job Execution screen. e.g. - **\copies 3** (number of job output copies set to 3)
\DEVICE *device*	Changes the output device of the programs from this point forward to the JA Device identified by *device*. It does this prior to the job being issued or seen on the Job Execution screen. e.g. - **\device eda0707** (output device changed to eda0707)
\PARM &B *value*	Uses the *value* as the first parameter value for the next JA Program in the job. This command may be used many times to push several parameter values to the next program. e.g. - **\parm &B N** (uses the value 'N' as the first parameter value for the next program in the job)
\PARM &A *value*	Uses the *value* as the last parameter value for the next JA Program in the job. This command may be used many times to push several parameter values to the next program. e.g. - **\parm &A T** (uses the value 'T' as the last parameter value for the next program in the job)
\COMMAND &A *command*	Indicates that the Unix *command* should occur after the job executes. e.g. - **\command &A cat ./db02.dat >>/home/xfer/class**

(catalogues the 'db02.dat' file in the '/home/xfer/class' folder after the job executes.

\COMMAND &B *command* Indicates that the Unix *command* should occur before the job executes.
e.g. - **\command &B rm ./db02.dat >>/home/xfer/class**
(removes the 'db02.dat' file in the '/home/xfer/class' folder before the job executes.

\PROMPT <&ON|&OFF> Enables or disables the generation of user prompts on the Job Execution screens for all JA Programs after this point.
e.g. - **\PROMPT &OFF** (user prompts are disabled from this point forward in the job)

The following placeholders may be used at any time:

%USER Substitutes the name of the user who issued the job into the program line.
e.g. - **\parm &B %USER** (uses the name of the user who issued the job as the first parameter value for the next program in the job)

%DEVICE Substitutes the currently set JA device into the program line.
e.g. - **\device %DEVICE**

%YYMMDD Substitutes the issue date into the program where 'Y' indicates the year digits, and 'M' indicates the month digits and 'D' indicates the day digits.
e.g. - **\parm &B %YYMMDD** (uses the issue date in yymmdd format as the first parameter value for the next program in the job)

%YYMM Substitutes the issue date into the program where 'Y' indicates the year digits, and 'M' indicates the month digits.
e.g. - **\parm &B %YYMM** (uses the issue date in yymm format as the first parameter value for the next program in the job)

%YYYYMMDD Substitutes the issue date into the program where 'Y' indicates the year digits, and 'M' indicates the month digits and 'D' indicates the day digits.
e.g. - **\parm &B %YYYYMMDD** (uses the issue date in yyyymmdd format as the first parameter value for the next program in the job)

%YYYYMM Substitutes the issue date into the program where 'Y' indicates the year digits, and 'M' indicates the month digits.
e.g. - **\parm &B %YYYYMM** (uses the issue date in yyyymm format as the first parameter value for the next program in the job)

%POF Substitutes the current program output file name into the program line.
e.g. – **cp %POF t_temp** (copy the output from the program to a file called t_temp)

%JOF Substitutes the current JA job output file name into the program line.
e.g. – **cp %JOF n_error** (copy the output from the job to a file called n_error)

The options and placeholders are not case sensitive. They may be entered in upper or lower case.

Appendix "E" – Job Details – 'On Error' Options

The information in this appendix discusses the information that can be entered in the "On Error" field on the Job Details screen [JA03010].

The "on error' field indicates the action that should be taken if an error occurs in a particular line of the job. Depending on the error code associated with the line in the job, one of the following actions will occur:

I   Ignore the error and continue without telling anyone.

L   Log the error in the Error Review screen and continue without telling the user.

W   Warn the user (by setting the completion status of the job to "Warning(s)" instead of "Completed") and continue without logging the error on the Error Review screen.

N   Warn the user (as described when the code is set to W) and log the error in the Error Review screen then continue.

S   Stop the job, warn the user (by setting the completion status of the job to "Terminated" instead of "Completed") and log an error on the Error Review screen.

This parameter should be set to a value of **I** for loop, if...then...else, begin...end and similar statements.

Appendix "F" – Programs – Output Redirection

The information in this appendix discusses the information that can be entered in the "Redirection" field on the Programs screen [JA03001].

The output control specifies alternate shell commands for handling the output produced by a program. The command(s) contained in this field are added to the end of the job script for each program that produces output.

When left blank JA inserts commands that redirect the program output to a unique physical disk file maintained by JA. On the UNIX operating system, JA inserts the following commands for a program that creates an output file called quizlist.txt:

```
# --- Rename output ---
if [ -f quizlist.txt ]
  then
    mv quizlist.txt 348.001
    chmod 777 348.001
fi
```

Any operating system command may be entered here to override the assumptions made by JA. Two substitution strings are available to further support the use of this field. They are %POF (Program output file) and %JOF (JA output file). JA will substitute the appropriate values into the command where these substitution strings exist.

Entering "mv %pof %jof ; chmod 777 %jof" into this field would cause JA to replace the commands above with the following:

```
# --- Rename output ---
if [ -f quizlist.txt ]
  then
    mv quizlist.txt 348.001 ; chmod 777 348.001
fi
```

Appendix "G" – Programs – Parameter Values

The information in this appendix discusses the information that can be entered in the "Values" field on the Programs screen [JA03001].

The contents of the Values field for a parameter control the literal data values and ranges of data values that may be entered into that parameter on the Job Execution screens. The parameter values definition may contain either:

- ◻ literal characters (which represent themselves)

- ◻ or characters defined as having a special function. The characters with a special meaning in the Parameter Values field are:

  - **~** **RANGE CHARACTER (TILDE)** - Uses the characters on each side of this meta character to construct a range of allowable values. For example, "A~Z" would allow the entry of all uppercase characters from A through Z in the alphabet.

  - **,** **VALUE SEPARATOR** - Separates allowable values from each other. For example, "ABC" allows only the value ABC to be entered into this parameter. While "A,B,C" allows the values A, B or C to be entered into this parameter.

    For example, the following string forces the entry of a parameter value of 20 or a number in the range of 5 through 15:
    5~15,20

To allow the entry of a **blank space** use a parameter value that starts with a space + comma (e.g. " ,5~15,20"). However, the preferred approach to allowing a blank is to make the parameter "not required", not to place spaces in the Values field. In addition, avoid individual value entries that have spaces at either end since spaces are trimmed from the ends before comparison. For example, the 50 in "30,40, 50" will be treated as a literal 50 and not as a space+50. The only exception to this rule is a space on its own, which is treated as any number of spaces.

Always remember that ranges act differently depending on the data type of the parameter. During range checking the equivalent of an alphanumeric sort is performed to determine if the value is inside or outside the range. The sort will operate differently depending on whether the parameter type is NUMERIC, DATE or STRING and whether it is variable or fixed length. For example, in the following two examples we will assume that we are using a values pattern of 5~15 and comparison value of 11:

For a **NUMERIC** parameter, with a size of 4, the sort would result in:

0005
0011
0015

Notice that all the values were right justified and zero-padded during the sort. This is because numeric values are, by nature, fixed length and right justified. As a result the 11 is in the range.

For a **STRING** parameter the sort would result in:

11

15
5

Notice that the 11 is outside the range because strings are variable length and left justified. To make the 11 appear inside the range you would need to change the range value to 05~15. In addition, to ensure that the user enters two digit, you would need to make the parameter pattern ##. Parameter patterns are discussed in the next appendix.

A blank values field disables value matching and allows any value to be entered into the parameter.

NOTE: The "parameter values" feature is based on the Cognos Powerhouse VALUES clause of FIELD and EDIT statements. For more information on the use of values please refer to the Cognos manuals and the VALUES clause.

Appendix "H" – Programs – Parameter Patterns

The information in this appendix discusses the information that can be entered in the "Patterns" field on the Programs screen [JA03001].

The parameter pattern controls the data values that may be entered into each character position of this parameter on the Job Execution screens. The parameter pattern may contain either:

◻ literal characters (which represent themselves)

◻ or, character(s) with a defined special meaning, also called *metacharacters*, usually indicating the type of character that can be used in a given position. The characters defined to have special meanings are:

^   ALPHA CHARACTER – Matches any single uppercase or lowercase alphabetic character. For example, the pattern "^^##" matches values such as "aa22" and "ab23". The metacharacter ^ matches uppercase or lowercase alphabetic characters, so the pattern would match both "ab23" and AB23".

?   ANY CHARACTER – Matches any single character (alphabetic, numeric, or special). For example, in the pattern "a?b", the question mark is a meta character; it matches any single special, alphabetic, or numeric character. The pattern "a?b" matches the values "aAb", "aab", "a2b", and so on.

ANY DIGIT – Matches any single numeric digit.

!   LITERAL (also know as ESCAPE) – Indicates that the next character after this character is to be used as a literal. The "!" character should be used before a metacharacter when it is to be used literally. For example, the "#^^" pattern would normally force 1 digit and 2 alphabetic characters to be entered. However, the "!#^^" pattern would force a number sign and 2 alphabetic characters to be entered.

( )   LEFTP, RIGHTP – Indicates the precedence in which the characters in the pattern are interpreted.

****   NOT – Disallows the character that immediately follows. For example, the pattern "###\0" accepts any three-digit number followed by any character other than zero.

!0   NULL – Matches a null entry. Precede 0 with the current escape metacharacter, which is, by default, an exclamation mark (!).

<   OPTIONAL – Matches zero or one occurrence of the immediately preceding character (or pattern string in parentheses). This is the "optional" character. For example, the pattern "a<" accepts the null value or an "a".

*   OPTREP – Matches zero or more occurrences of the immediately preceding character (or pattern string in parentheses). This is the "optional repeating" character. For example, the pattern "a*" accepts the null value or any number of "a"s.

|	OR – Matches the character (or characters enclosed in parentheses) on either side of this metacharacter. Use this metacharacter to specify alternatives. PowerHouse accepts a value that matches any one alternative.
>	REPEAT – Matches one or more occurrences of the immediately preceding character (or pattern string in parentheses). This is the "repeating" character. For example, the pattern "a>" does not accept the null value but does accept any number of "a"s.
@	WILDCARD – Matches zero or more characters (alphabetic, numeric, or special). For example, the pattern "Th@" matches any value beginning with "Th". The pattern @th" matches any value ending with "th". The pattern "M@th" matches any value beginning with "M" and ending with "th" (including the value "Mth").
YY	SHORT YEAR – Matches a 2-digit year that excludes the century. For use with DATE type parameters only.
YYYY	LONG YEAR – Matches a 4-digit year that includes the century. For use with DATE type parameters only.
MM	MONTH – Matches a 2-digit month. For use with DATE type parameters only.
DD	DAY– Matches a 2-digit day. For use with DATE type parameters only.

For example, the following pattern forces the entry of a parameter value that looked like a postal code: ^#^#^#

Parameters of type DATE are a special case and must always start with and contain a pattern that identifies the date's format (e.g. YYYYMMDD). A DATE type parameter may also end with |!@ to indicate that an @ may be entered instead of the date value (e.g. YYYYMMDD|!@).

JA validates user-entered parameter values against the parameter type, parameter size, parameter pattern and parameter values. Only after passing all tests will the user-entered parameter value be accepted.

A blank pattern disables pattern matching and allows any value to be entered into the parameter.

NOTE: The "parameter pattern" feature is based on the Cognos Powerhouse MATCHPATTERN function. For more information on the use of patterns please refer to the Cognos manuals and the MATCHPATTERN function.

Appendix "I" – VIEWER Commands

This appendix summarizes the keystrokes or commands that allow you to navigate through the VIEWER and change the appearance of the VIEWER.

Navigation Commands	Action
U or <Page Up>	**Back** one page
<Up Arrow>	**Back** 1 line
-	**Back** *n* Lines
D or <Page Down>	**Forward** one page
<Down Arrow>	**Forward** 1 line
+	**Forward** *n* lines
V	**Set number of lines to scroll** for "U" and "D" commands
<Right Arrow>	**Right** 15 columns
R	**Right** one page
>	**Right** *n* columns
$	**Right** to last column
<Left Arrow>	**Left** 15 columns
L	**Left** one page
<	**Left** *n* columns
^	**Left** to first column
C	**Set number of columns to scroll** for left and right arrow keys
B	Go to **Bottom** (end)
T	Go to **Top** (start)
E or Q	**Exit** (quit)
H or ?	Takes you to **Help**
/	**Search** for text **forward**
\	**Search** for text **backward**
P	**Print** current page or range of pages

Appearance Commands	Action
G	Ruler (grid) on/off
S	Status display on/off
K	Page Break display on/off

Appearance Commands	Action
X	Set height and width of the screen
FR	Freeze top *n* lines
FC	Freeze left most *n* columns
#	Display position in Viewer (Line = *n*, Page = *n*, Byte = *n*)
*	Mark line ends ($) on/off
~	Show tab characters

Appendix "J" – JA UNIX Commands

This appendix provides a list of commands that can be entered at the UNIX command line ($) prompt to perform various functions.

Commands	Action
jastart	Start JA background jobs
jastop	Stop JA background jobs
jastatus	Provides status of JA background jobs
jakilljob <execid>	Kill the job with the specified execution id
jafence <level> <queue>	Set the fence for the specified queue
japri <execid> <priority>	Set the job priority for the job with the specified execution id
jaqueue <execid> <queue>	Move the job with the specified execution id to the new queue
jaadmin	Go to the JA Administration System (JA Main Menu)

Appendix "K" – Banner Page Sample

```
######
#     #   ####    #     #
#     #  #    #   ##    #
#     #  #    #   # #   #
#     #  #    #   #  #  #
#     #  #    #   #   # #
######    ####    #    #

 #####
#     #  #####    ##    #     #  ######   ####   #####   #####
#        #    #  #  #   #  #  #  #       #    #  #    #  #    #
#        #    #  #    # #  #  #  #####   #    #  #    #  #    #
#        #####  ###### # ## #  #        #       #####   #    #
#     #  #    # #    # ##  ## #  #       #    #  #    #  #    #
 #####   #    # #    # #    # #  #        ####   #    #  #####
```

User: crawford
Job : 9717 – Exam Awards Report
Env : Development - /apps/corp/devel
Date: December 01, 2004
Time: 14:11:34

The banner page, if requested, is the first page of printed job output. The page displays the users full name, user id, the job number and name, the environment in which the output was created and the date and time the output was printed.

Appendix "L"– Privileged Job Business Rules

A "privileged job" is one that requires a higher degree of security due to the information it processes or displays – e.g. – payroll reporting. Based on the setting of the "Issue Privileged Jobs" flag for user roles, only certain users have the authority to issue and review privileged jobs.

The remainder of this appendix discusses the business rules for privileged jobs.

Definitions

A Privileged Job has the "Privileged Job" flag set to 'Y' on the Jobs screen [JA03013].

A Privileged User is an individual assigned a role with the "Issue Privileged Job" flag set to 'Y' on the User Role screen [JA02007].

A JA Administrator is an individual assigned a role with the "Access Administration" flag set to 'Y' on the User Role screen [JA02007].

Rules

◻ Only Privileged Users are allowed to issue privileged jobs.

◻ Except for the JA Administrator, only Privileged Users can access the privileged jobs they issue.

◻ A JA Administrator is allowed to view, issue, re-issue and delete privileged jobs even if he/she is not a Privileged User — JA Administrator rights supercedes Privileged User rights.

◻ If at least one job in a Job Group (Groupings screen [JA03005]) is a privileged job, then all group owners must be Privileged Users.

◻ If at least one owner in a Job Group is not a Privileged User, then a privileged job may not be added to the Job Group. Also, an existing job in the Job Group is not allowed to have its "privileged job" flag set to 'Y'.

◻ If a Privileged User is an owner of a Job Group containing at least on privileged job, then the "Issue Privilege Job" flag for that user's role (User Role screen [JA02007]) cannot be changed to 'N'.

◻ Only JA Administrators can set or change the privilege flags on the User Role screen [JA02007] and the Jobs screen [JA03013] or anywhere else in the JA system.

Appendix "M" – API Calls

The table below provides usage examples and functional descriptions for the API commands and associated parameters. These commands are required in the business application to create Custom Issued Jobs, to create interface screens to access JA — or, to open, close, read and manipulate files.

The API commamd parmeters are defined in the 'API Command Parameter Definitions and Descriptions' section of this appendix.

File Manipulation Commands

Commands	Usage and Function
jafopen	***Usage:*** *let t_fopenname = full_path_and_file_name_to_open* *let t_fopen_mode = "w"* *do external jafopen(t_fopenname, t_fopen_mode, t_fid, t_jarc)* *In this usage example:* ***t_fopenname*** *= a string file name to open* ***t_fopen_mode*** *= a character string representing the mode in which to open the file* ***t_fid*** *= long integer file id to open. t_fid represents a script generated temporary variable that JA uses internally to maintain the value of the jobid. In JA, t_fid and jobid are synonymous.* ***t_jarc*** *= integer return code value* **Function:** - Uses the UNIX C function fopen( ) to open a sequential file with the specified mode and sets the appropriate return code (0 = Success, -1 = Failure). - The Open Modes are: **r** or **rb** open file for reading **w** or **wb** truncate to zero length or create file for writing) **a** or **ab** append; open file at end of file or create file for writing **r+, rb+** or **r+b** open file for update (reading and writing) **w+, wb+** or **w+b** truncate file to zero length or create file for update **a+, ab+** or **a+b** append; open or create file for update at end-of-file

jafclose	***Usage:*** *do external jafclose(t_fid, t_jarc)* *In this usage example:* ***t_fid*** *represents a script generated temporary variable that JA uses internally to maintain the value of the jobid. In JA, t_fid and jobid are synonymous.* ***t_jarc*** *= integer return code value* **Function:** • Closes the file indicated by *t_fid* and returns the appropriate return code (0 = Success, -1 = Failure).
jafread	***Usage:*** *do external jafread(t_fid, t_fopenname, t_output_rec_size, t_eol, t_jarc)* *In this usage example:* ***t_fid*** *= long integer file id to read. t_fid represents a script generated temporary variable that JA uses internally to maintain the value of the jobid. In JA, t_fid and jobid are synonymous.* ***t_fopenname*** *= string containing the record data* ***t_output_rec_size*** *= integer containing the record length* ***t_eol*** *= integer indicating which character is the end-of-line character; must be a postive number.* ***t_jarc*** *= integer return code value* **Function:** • Reads a record from the file into a string and returns it to the 't_fopenname' parameter until the record length specified is reached or EOL is reached. • Sets the return code to the number characters read into the string.

Parameter File Commands

Commands	Usage and Function
japtemp	***Usage:*** *do external japtemp(t_ japtemp)* **Function:** • Gets a random name for a parameter file.
japaramheader	***Usage:*** *let t-jagroupid = "BAGRP7"* *let t-jajobid = 3* *do external japtemp(t-japfname)* *if setsystemval("jaunqname", t-japfname) then* *do external japaramheader(t-jagroupid, t-jajobid, t-japfname, t-jarc)* ***or (recommended):*** *(requires* use japiss.ink*)* *let t-jagroupid = "BAGRP7"* *let t-jajobid = 3* *do internal japaramheader*

	Function: • Creates an empty parameter file in the /var/tmp, with the file name given in t-japfname, which should be of the form 'japm.*', if one does not exist. • Places the Job Group Id and Job Id in the created parameter file. • Closes the file with the appropriate return code (0 = Success, -1 = Failure).
japaramdetail	***Usage:*** *let t-japrogram = "ta0473"* *let t-japaramnum = 010* *let t-japarmaval = ascii (examapp_id of ta_examapp, 10)* *let t-japfname=getsystemval("jaunqname")* *do external japaramdetail(t-japrogram, t-japaramnum, t-japaramval, t-japfname, t-jarc)* ***or (recommended):*** (requires *use japiss.ink*) *let t-japrogram = "ta0473"* *let t-japaramnum = 010* *let t-japarmaval = ascii (examapp_id of ta_examapp, 10)* *do internal japaramdetail* **Function:** • Takes in the four parameters and opens the file named in t-japfname, which should be the file created by the 'japarmheader' function call. • Creates a record in the file containing the program name, the parameter number and parameter value. • Closes the files with the appropriate return code (0 = Success, -1 = Failure).
japaramline	***Usage:*** *let t_jaline = '\COMMAND &B export stheader="stlnosign"'* *let t_jalinewidth = 50* *t-japfname = getsystemval("jaunqname")* *do external japaramline(t-jaline, t-jalinewidth, t-japfname, t-jarc)* ***or (recommended):*** (requires *use japiss.ink*) *let t-jaline = '\COMMAND &B export stheader="stlnosign"'* *let t-jalinewidth = 50* *do internal japaramline* **Function:** • Normally used to pass commands to JA. • Gets the parameter file (the name of which is given in *t-japfname*) and writes the detail information (contents of *t-jaline*) to the file. • Closes the file and returns the appropriate return code (0 = Success, -1 = Failure).
japaramreset	***Usage:*** *t-japfname = getsystemval("jaunqname")* *do external japaramreset(t-japfname, t-jarc)* ***or (recommended):*** (requires *use japiss.ink*) *do internal japaramreset*

	Function:
	• Retrieves and removes the parameter file named in t-japfname (which should be in /var/tmp, with a name beginning with japm.) and returns the appropriate return code (0 = Success, -1 = Failure).

Group File Commands

Commands	Usage and Function
jagtemp	***Usage:*** *do external jagtemp(t_ jagtemp)* **Function:** • Gets a random name for a group identification file.
jagroupset	***Usage:*** *do external jagtemp(t_jagfname)* *if setsystemval("jaunqgrpname", t-jagfname) then* * do external jagroupset(t_jagfname, t_jagroupid, t_jarc)* **Function:** • Builds a sequential group identification file and places a header (group id) in the file. • Closes the file with the appropriate return code (0 = Success, -1 = Failure).
jagroupreset	***Usage:*** *do external jagroupreset(t_jagfname,t_jarc)* **Function:** Retrieves and removes the sequential group identification file and returns the appropriate return code (0 = Success, -1 = Failure).

API Command Parameter Definitions and Descriptions

The parameters for each API command are defined in the '**jadiss.ink** ' include file and are described in the table below.

The parameters must be entered in the order displayed in the API Command usage examples.

Description: Custom Issuing Screen Declaration Include file (**jadiss.ink**)

Purpose: Identifies constants, variables and files required to support Job Assistance Custom Issuing Screen.

Instructions: Include in the declaration section of any screen that calls Job Assistance Custom Issuing screen.
e.g. - use $jasrcloc/**jadiss.ink** nolist

Note: – **hyphenated names or names using an underscore as the word separator may be used, as the include file contains identical declarations for both forms of each name given below. For any given variable, one form of the name must be used consistently, however, as while** t-jarc **and** t_jarc**, for example, are both the same type of variable, each of them is a distinct variable the contents of which are independent of those of the version with the other spelling.**

Also, note that the wrapper internal procedures (the versions called with **do internal**) *japaramheader*, *japaramline*, *japaramdetail*, and *japaramreset* use the hyphenated forms specifically.

Parameter	Type	Description
t-jarc / t_jarc	integer size 2	Return Code
t-jagroupid / t_jagroupid	char*9	Group Id Name
t-jajobid / t_jajobid	integer size 2	Job Id Number
t-japrogram / t_japrogram	char*51 (50 useable)	Program Name
t-japaramnum / t_japaramnum	integer size 2	Parameter Number
t-japaramval / t_japaramval	char*256 (255 usable)	Parameter Value
t-jaline / t_jaline	char*133 (132 useable)	Text
t-jalinewidth / t_jalinewidth	integer size 2	Length of Text (initialized with the size of t-jaline, should not be changed)
t-jasessionnum / t_jasessionnum	char*256	Session Number

$jacmdloc Command Scripts

This table describes the commands issued from the $jacmdloc JA directory (see: **Chapter 2 – JA Setup** – The Recommended JA Directory Structure). These commands do not require parameters.

For examples of issuing $jacmdloc commands, see **Chapter 2 – JA Setup** – How to Access JA?

Commands	Usage / Function
jamnugun	**Usage:** *run command "$jacmdloc/jamnugun" clear all* **Function:** - Checks user issuing access rights. - Runs a user defined command pointed to by the '$jarunbeforentering" environmental variable. - Displays the Job Selection screen [JA04001] for the Job Group identified in the $HOME/jagroup file. - Runs a user defined command pointed to by the '$jarunafterexiting" environmental variable.
jarevjun	**Usage:** *run command "$jacmdloc/jarevjun" refresh all* **Function:** - Runs a user defined command pointed to by the '$jarunbeforentering" environmental variable. - Displays the Job Review screen [JA06001]. - Runs a user defined command pointed to by the '$jarunafterexiting" environmental variable.
Ja2revjun	**Usage:** *run command "$jacmdloc/ja2revjun" refresh all* **Function:** - Runs a user defined command pointed to by the '$jarunbeforentering" environmental variable. - Displays the Job Review screen [JA06006]. - Runs a user defined command pointed to by the '$jarunafterexiting" environmental variable.
jausrsun	**Usage:** *run command "$jacmdloc/jausrsun" refresh all* **Function:** - Checks to ensure that the user calling script has JA Administration rights. - Executes the qkgo file to display the User screen [JA02005].

jadevsun	**Usage:** *run command "$jacmdloc/jadevsun" refresh all* **Function:** • Checks to ensure that the user calling script has JA Administration rights. • Executes the qkgo file to display the Devices screen [JA02004].
jaissnun	**Usage:** *run command "$jacmdloc/jaissnun" refresh all* **Function:** • Checks to ensure that the user calling script has JA job issuing rights. • Sets the Powerhouse version for JA. • Displays a generated JA job issuing screen for the job identified in the file $HOME/japaram. • Runs a user defined command pointed to by the '$jarunafterexiting" environmental variable.
jaisspun	**Usage:** *run command "$jacmdloc/jaisspun" refresh all* **Function:** • Checks to ensure that the user calling script has JA job issuing rights. • Sets the Powerhouse version for JA. • Displays a generated JA parameter entry and job issuing screen for the job identified in the file $HOME/japaram. • Runs a user defined command pointed to by the '$jarunafterexiting" environmental variable.
jaissqun	**Usage:** *run command "$jacmdloc/jaissqun" refresh all* **Function:** • Checks to ensure that the user calling script has JA job issuing rights. • Sets the Powerhouse version for JA. • Runs the JA job issuing screen (without displaying the screen) for the job identified in the file $HOME/japaram. • Runs a user defined command pointed to by the '$jarunafterexiting" environmental variable.

Business Application Examples

Two sample source files, ja_autoiss.qks and jaexecscrc.qks, are supplied with Job Assistance to illustrate how a user application running under Cognos PowerHouse, built from screens written in the QDESIGN language, can interface with JA.

Appendix "N" – Scripts for Moving Job Execution Details (Server to Server)

This appendix identifies the scripts that have been developed to move the job exection details for a server upgrade. These scripts copy the most recent contents of $jaoutloc, $jatmploc and the job execution details subset of $jadatloc from one server to another.

The scripts enable JA support personnel at the client site to handle the $jadatloc changes prior to cutover.

The following steps are required for the execution of the **jaexecunload** and **jaexecreload** scripts:

- ◘ On the "from" server", sign on as 'jamgr'.

- ◘ Run **jastop** on the "from" server.

- ◘ Run **jaexecunload** on the "from" server.

- ◘ Run **jastart** on the "from" server.

- ◘ Copy the contents of $jadatloc/backup on the "from" server to $jadatloc/backup on the "to" server.

- ◘ Run **jastop** on the "to" server.

- ◘ Run **jaexecreload** on the "to" server.

- ◘ Run **jastart** on the "to" server.

jaexecunload Script

```
#This script will perform the following:
# 1) ensure $jadatloc/backup is validly present
# 2) cd $jadatloc/backup
# 3) execute jaunload for:
#          JA'EXEC'COMMAND
#          JA'EXEC'DATA
#          JA'EXEC'LIST
#          JA'EXEC'OUTPUT
#
if [ ! -d $jadatloc/backup -a ! -f $jadatloc/backup ]
  then mkdir $jadatloc/backup
  else if [ -f $jadatloc/backup ]
    then rm $jadatloc/backup; mkdir $jadatloc/backup
  fi
fi

cd $jadatloc/backup

#Now execute the unload statements.
$jacmdloc/jaunload "ja'exec'list" jaexeclist
$jacmdloc/jaunload "ja'exec'command" jaexeccommand
$jacmdloc/jaunload "ja'exec'data" jaexecdata
$jacmdloc/jaunload "ja'exec'output" jaexecoutput

chmod 777 $jadatloc/backup/*
```

jaexecreload Script

```
#This script will perform the following:
# 1) cd $jadatloc/backup
# 2) execute jareload for:
#             JA'EXEC'COMMAND
#             JA'EXEC'DATA
#             JA'EXEC'LIST
#             JA'EXEC'OUTPUT

cd $jadatloc/backup

#Now execute the reload statements.
$jacmdloc/jareload "ja'exec'list" jaexeclist
$jacmdloc/jareload "ja'exec'command" jaexeccommand
$jacmdloc/jareload "ja'exec'data" jaexecdata
$jacmdloc/jareload "ja'exec'output" jaexecoutput

#Ensure that the data files keep the correct permissions
cd $jadatloc
chmod 777 *
```

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