

CA Workload Automation SE

Primer
r11.3



Second Edition

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CA Technologies Product References

This document references the following CA Technologies products:

- CA Workload Automation SE, formerly CA 7® Workload Automation
- CA Librarian®
- CA Panvalet® for z/OS
- CA Workload Automation Restart Option for z/OS Schedulers (CA WA Restart Option), formerly CA 11™ Workload Automation Restart and Tracking

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Chapter 1: Introduction

This Primer teaches new CA Workload Automation SE users how to use CA Workload Automation SE to perform basic scheduling functions. The Primer is designed to be used either offline or online.

This section contains the following topics:

[Getting Started](#) (see page 9)

[Using This Book](#) (see page 10)

[Logging On](#) (see page 11)

[Accessing the Database](#) (see page 13)

[Displaying Command Output](#) (see page 19)

[Logging Off](#) (see page 21)

Getting Started

This section explains the following:

- Using the Primer.
- Logging on and off.
- Using screens to define the CA Workload Automation SE database.
- Displaying command output.

Using This Book

This CA Workload Automation SE Primer introduces you to the basic CA Workload Automation SE tasks and shows you how to perform those tasks online. We recommend that you perform the tasks on your CA Workload Automation SE system as you go through the book. The tasks sometimes require you to perform functions that you do not perform as part of your job. Ask the CA Workload Automation SE security administrator at your installation for temporary authorization (or for the use of a training ID) to let you perform these functions.

In case you cannot perform the tasks in this book online, we have included pictures of all the screens you would see online. You can still use this book to learn CA Workload Automation SE. If you do perform the tasks online, the data you see on your screens can be different from the data you see in this book. This difference is especially true for either of the following situations:

- A number of jobs in your shop are already under CA Workload Automation SE control.
- Your shop has defined defaults that are different from the defaults supplied with CA Workload Automation SE.

Ignore these differences. They do not prevent you from completing the exercises in this book.

If CA Workload Automation SE does not seem to be working the way the book describes, look at your screen for error messages. Look them up in the *Message Reference Guide*, and follow the actions suggested there. If no error message appears on your screen, check with your CA Workload Automation SE administrator or systems programmer. They can determine whether user exits or security restrictions that are in effect at your shop cause the problem. If the problem persists, contact CA Technologies for technical support.

You can skip the chapters in this book that do not apply to your job. Do not skip the last chapter, which tells you how to delete the entries you have made in the database. You can also stop reading this book at any point and continue another time. Follow the directions for logging off, and then when you are ready to start again, follow the directions for logging on again.

More information:

[Logging Off](#) (see page 21)

[Logging On](#) (see page 11)

Logging On

Use this logon screen to log on to CA Workload Automation SE:

```
----- customer id -----
PLEASE ENTER LOGON DATA OR PRESS PF3 TO DISCONNECT

USERID      :          TERMINAL NAME : TRM001      DATE   : yy.131
PASSWORD    :          VTAM APPLID  : CAW        TIME   : 09:01:24
NEW PASSWORD :          LUNAME       : A99L100     LEVEL  : r11.3(nnnn)
UID RESOURCE :
PARMS       :
```

C A W O R K L O A D A U T O M A T I O N

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Ask your CA Workload Automation SE administrator or systems programmer how to display this screen on your terminal. When it is displayed, enter your USERID and a PASSWORD, when one is required. Press Enter. (If you do not know what your USERID and PASSWORD are, ask your CA Workload Automation SE administrator.)

If your shop uses CA Workload Automation SE under ISPF, follow these instructions to log on to CA Workload Automation SE:

1. Select CA Workload Automation SE from your ISPF menu.
2. When the CA-7 Primary Option Menu is displayed, select the ONLINE option.
3. You see a message telling you that you are automatically logged on to CA Workload Automation SE. If your TSO ID has not been defined to CA Workload Automation SE, you see a message telling you that your ID is unauthorized. Ask your CA Workload Automation SE security administrator to authorize your ID or give you an ID that you can use to complete the exercises in this Primer.

If CA Workload Automation SE is not an option on your ISPF menu, ask your systems programmer how to select the CA Workload Automation SE application under ISPF.

Note: At any point, you can log off.

The CA Workload Automation SE logon screen appears. Notice MENU in the upper-left corner of the screen. MENU is the top line command to take you to the menu for CA Workload Automation SE formatted screens.

```
MENU ----- customer id
-----

CA-7.023 LOGON ACCEPTED, PRESS ENTER FOR MENU OR ENTER COMMAND

USERID      :          TERMINAL NAME : TRM001      DATE   : yy.131
              :          VTAM APPLID  : CAW          TIME   : 09:01:24
NEW PASSWORD :          LUNAME       : A99L100     LEVEL  : r11.3(nnnn)

                C A   W O R K L O A D   A U T O M A T I O N

                                Copyright (c) 2009 CA.
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```

Press Enter to get to the next screen, which displays the CA Workload Automation SE function menu. At any time, you can enter the top line command MENU to transfer to this screen.

```
----- CA-7 FUNCTION MENU -----
FUNCTION ==>

  APA - AUTOMATED PERFORMANCE ANALYSIS
  AR  - AUTOMATED RECOVERY FACILITY
  DB  - DATA BASE MAINTENANCE
  QM  - QUEUE MAINTENANCE
  RM  - VIRTUAL RESOURCE MANAGEMENT
  UT  - UTILITIES
  PS  - PERSONAL SCHEDULING

  HELP - TUTORIAL

PROGRAM: MNU0  MSG-INDX: 00  -- MENU      --  yy.ddd / hh:mm:ss
MESSAGE: SPECIFY DESIRED FUNCTION OR ENTER A COMMAND ON THE TOP LINE
```

More information:

[Logging Off](#) (see page 21)

Accessing the Database

All of the screens you use to add information to the CA Workload Automation SE database can be accessed from the Data Base Maintenance Menu. Display this menu now by typing this command on the top line of your screen (above the message telling you that your logon was accepted):

DB

When you press Enter, this screen is displayed:

```
----- CA-7 DATA BASE MAINTENANCE MENU -----  
FUNCTION ==>  
  
DATA BASE DEFINITION FOR:  
  
  1 - CPU JOB  
    A - CROSS PLATFORM (XPS) JOB DEFINITION  
  2 - SCHEDULING  
  3 - JOB PREDECESSOR/SUCCESSOR  
  4 - WORKLOAD DOCUMENTATION  
  5 - INPUT/OUTPUT NETWORK  
  6 - DATA SET  
  
OTHER FUNCTIONS AVAILABLE:  
  7 - JCL LIBRARY MAINTENANCE  
  8 - TEXT EDITOR  
  9 - CLEAR THE TEXT EDITOR ACTIVE AREA  
      ACTIVE AREA NOW CONTAINS 0000 LINES OF TEXT  
  
PROGRAM: SDM0  MSG-INDX: 00  -- DB      --  yy.ddd / hh:mm:ss  
MESSAGE: SPECIFY DESIRED OPTION OR ENTER A COMMAND ON THE TOP LINE
```

The menu lets you select nine different functions. Four of the functions take you directly to formatted screens which you use for various database maintenance tasks, like defining jobs or networks. Display the screen that defines jobs now by typing **1** in the FUNCTION field.

When you press Enter, this screen is displayed:

```
----- CA-7 CPU JOB DEFINITION -----
FUNCTION:          (ADD,DELETE,DD,PURGE,DELPRRN,FORMAT,LIST,UPD)
JOB:
GENERAL:          SYSTEM:          JOBNET:          OWNER:          UID:

JCL:              ID:              MEMBER:          RELOAD:          EXEC:          RETAIN-JCL:
LIB:

REQUIREMENTS:    HOLD:              JCL-OVRD:          USE-OVRD-LIB:    VERIFY:          MAINT:
SATISFACTION LEAD-TIME:  JOB:              DSN:              ARFSET:

EXECUTION:        MAINID:          INSERT-RMS:        COND-CODE:        RO:
DONT SCHEDULE -- BEFORE:          AFTER:

MESSAGES:         LTERM:          REQUIREMENT-LIST:  PROMPTS:
ERROR MSGS -- RQMTS NOT USED:      DSN NOT FOUND:

RESOURCES:        REGION:          CLOCK-TIME:        CPU-TIME:
CLASS:           PRTY:          MSGCLASS:          DRCLASS:
TAPE DRIVES...TYPE1:  M    C    TYPE2:  M    C

PROGRAM: SM20  MSG-INDX: 00  -- DB.1  -- yy.ddd / hh:mm:ss
MESSAGE: ENTER FUNCTION, TRANSFER OR ENTER A COMMAND ON THE TOP LINE
```

This screen contains the following information:

- The top line is blank. You can use it to issue CA Workload Automation SE commands. We see how this line works when we display command output. (A command entered here overrides any other entries on the screen.)
- The next line gives the name of the screen.
- The next line contains the FUNCTION field. This field is where you tell CA Workload Automation SE what you want to do with the information in the rest of the screen. For example, you would enter ADD to add a new job to the database.
- The body of the screen contains information that is stored in the CA Workload Automation SE database.
- The third line from the bottom of the screen contains CA Workload Automation SE program data, the screen ID, and the date and time. Each screen has a unique ID. The ID is DB.1 on this screen. You can enter this ID on any other screen to *transfer* directly to this screen. This process is illustrated when we copy job records.

- The last two lines can contain messages. **Be sure to read them.** They tell you if there is some action you have to take next or if there was an error in the action you took. Messages are described in the *Message Reference Guide*. The message number consists of the contents of the PROGRAM field in the preceding line, followed by the contents of the MSG-INDX field. For example, the number of the message shown on this screen is SM20-00.

To return to the menu now, enter **DB** in the FUNCTION field and press Enter. (Instead of typing DB, you can press PF3 to return to the menu, unless you are using CA Workload Automation SE under ISPF and have defined PF3 for another function.)

You are returned to the menu:

```
----- CA-7 DATA BASE MAINTENANCE MENU -----  
FUNCTION ==>  
  
DATA BASE DEFINITION FOR:  
  
  1 - CPU JOB  
    A - CROSS PLATFORM (XPS) JOB DEFINITION  
  2 - SCHEDULING  
  3 - JOB PREDECESSOR/SUCCESSOR  
  4 - WORKLOAD DOCUMENTATION  
  5 - INPUT/OUTPUT NETWORK  
  6 - DATA SET  
  
OTHER FUNCTIONS AVAILABLE:  
  7 - JCL LIBRARY MAINTENANCE  
  8 - TEXT EDITOR  
  9 - CLEAR THE TEXT EDITOR ACTIVE AREA  
      ACTIVE AREA NOW CONTAINS 0000 LINES OF TEXT  
  
PROGRAM: SDM0  MSG-INDX: 00  -- DB      -- yy.ddd / hh:mm:ss  
MESSAGE: SPECIFY DESIRED OPTION OR ENTER A COMMAND ON THE TOP LINE
```

Continuing down the menu, functions 2, 3, and 4 take you to submenus. You can use submenus to select formatted scheduling, predecessor/successor, or workload documentation screens. Display the scheduling submenu now by typing **2** in the FUNCTION field.

When you press Enter, this screen is displayed:

```
----- CA-7 SCHEDULING MENU -----  
FUNCTION ==>  
  
DATE/TIME SCHEDULING FOR:  
  1 - CPU JOB  
  2 - INPUT NETWORK  
  3 - OUTPUT NETWORK  
  
TRIGGER SCHEDULING FOR:  
  4 - JOB TRIGGERING OTHER CPU JOB(S)  
  5 - INPUT NETWORK TRIGGERING CPU JOB(S)  
  6 - DATA SET TRIGGERING CPU JOB(S)  
  
OTHER FUNCTIONS AVAILABLE:  
  7 - MODIFICATION TO RESOLVED SCHEDULE DATES  
  8 - BASE CALENDAR MAINTENANCE  
  
PROGRAM: SM70  MSG-INDX: 00  -- DB.2  --  yy.ddd / hh:mm:ss  
MESSAGE: ENTER OPTION, TRANSFER OR ENTER A COMMAND ON THE TOP LINE
```

This screen contains the following information:

- The top line is blank, like on the CPU Job Definition screen, so you can use it to enter commands.
- The next line gives the name of the screen.
- The next line contains the FUNCTION field. This field is where you select the scheduling screen that you want to display.
- The body of the screen lists the scheduling screens and the function codes that select them.
- The three lines at the bottom contain program data and messages, the same as the CPU Job Definition screen. The ID of this screen is DB.2.

Now select the first formatted scheduling screen by typing **1** in the FUNCTION field.

When you press Enter, the CPU Job Scheduling screen is displayed:

```
----- CA-7 CPU JOB SCHEDULING -----  
FUNCTION:          (CLEAR,DELETE,EDIT,FE,FETCH,REPL,RESOLV,SAVE)  
JOB:  
  
SCAL:             (DEFAULT SCAL ID FOR ADDS)  
  
SCHID-COUNT: 000  
  
  
PROGRAM: SM71  MSG-INDX: 00  -- DB.2.1  --  yy.ddd / hh:mm:ss  
MESSAGE: ENTER FUNCTION, TRANSFER OR ENTER A COMMAND ON THE TOP LINE
```

This screen is the screen you use to schedule CPU jobs after you add them to the database. We learn how to schedule in Chapter 3. Enter **DB** in the FUNCTION field and press Enter to return to the main menu (or press PF3 twice):

```
----- CA-7 DATA BASE MAINTENANCE MENU -----  
FUNCTION ==>  
  
DATA BASE DEFINITION FOR:  
  
  1 - CPU JOB  
    A - CROSS PLATFORM (XPS) JOB DEFINITION  
  2 - SCHEDULING  
  3 - JOB PREDECESSOR/SUCCESSOR  
  4 - WORKLOAD DOCUMENTATION  
  5 - INPUT/OUTPUT NETWORK  
  6 - DATA SET  
  
OTHER FUNCTIONS AVAILABLE:  
  7 - JCL LIBRARY MAINTENANCE  
  8 - TEXT EDITOR  
  9 - CLEAR THE TEXT EDITOR ACTIVE AREA  
      ACTIVE AREA NOW CONTAINS 0000 LINES OF TEXT  
  
PROGRAM: SDM0  MSG-INDX: 00  -- DB      --  yy.ddd / hh:mm:ss  
MESSAGE: SPECIFY DESIRED OPTION OR ENTER A COMMAND ON THE TOP LINE
```

This time, enter **7** to display the JCL screen.

When you press Enter, this screen is displayed:

```

----- CA-7 JCL LIBRARY MAINTENANCE -----
FUNCTION:          (APPEND,CLEAR,DELETE,EDIT,FE,FETCH,
                  RENAME,REPL,RUN,RUNH,SAVE)

MEMBER:           NEWNAME/OPTION:

DSN:              JCL-ID:
VOLSER:           JCLLIB:

ACTIVE SIZE: 0000

PROGRAM: SM50  MSG-INDX: 00  -- DB.7  --  yy.ddd / hh:mm:ss
MESSAGE: ENTER FUNCTION, TRANSFER OR ENTER A COMMAND ON THE TOP LINE
  
```

You can use this screen to display the JCL for any of your jobs. Provide is the member name of the JCL (usually the same as the job name) and the number of the library (if other than 0) where the JCL is stored. When you press Enter, the JCL is displayed and you can edit it.

Note: For more information about this screen or other screens, see the *Database Maintenance Guide*.

Displaying Command Output

The formatted screens let you edit JCL and add information to the CA Workload Automation SE database. Also, you can get information from CA Workload Automation SE by typing various commands on the top line of any screen. The command that you enter usually stays on the top line of the screen. The information that you request is displayed below it. Try this process now. Move the cursor to the top line of the JCL Library Maintenance screen (above the FUNCTION field and the screen name). Type the following command:

/DISPLAY,ST=KEY

Press Enter. You see a screen that lists the PF and PA keys. The screen also tells you the commands that are executed by pressing those keys:

```
/DISPLAY,ST=KEY  
  
*** KEY DISPLAY *** (SD1001 )                PAGE 0001  
KEY      FUNCTION  
  
      --- INITIALIZATION ---  
PF12  VTAM LOGOFF KEY  
      --- DEFAULT ---  
PF01  /PURGPG  
PF02  /COPY  
PF03  /NXTMSG (FORMATTED SCREENS USE PF3 TO RETURN TO MENU)  
PA01  /PAGE+1 (FORMATTED SCREENS USE PF8 FOR /PAGE+1)  
PA02  /PAGE-1 (FORMATTED SCREENS USE PF7 FOR /PAGE-1)
```

The screen that you see can vary, depending on the way PF and PA keys were defined in your shop.

If the output from this command cannot all fit on one screen, press Enter to scroll to the next screen.

When you are finished looking at the output, you have three choices:

- You can repeat your command by simply retyping the first character. This command shows any data that has changed after you first entered the command.
- You can enter another command by typing the new command directly over the old command on the top line of the screen. This command can be either a request for different output or DB to return to the Data Base Maintenance Menu. (If your new command is shorter than the old command, use the Erase EOF key to erase the characters you do not need.)
- Sometimes your new command is similar to the old command. In this case, you can modify the parts of the command that are different.

Try the third choice now by typing **JCL** over **KEY**. When you press Enter, the output on your screen changes to look like the following example:

```
/DISPLAY,ST=JCL
*** JCL DISPLAY ***                                PAGE 0001
      DATASET NAME                                INDEX ALT  DSORG  VOLSER  LTERM
CAI . CA7 . CAIHELP                                255  N/A  PDS    M80008  MASTER
CAI . L200 . OVERRIDE                              254  N/A  PDS    M80008  MASTER
CAI . L200 . JCLLIB                                200  N/A  PDS    M80008  MASTER
CAI . L200 . PDSLIB                                000  N/A  PDS    M80008  MASTER
```

This screen lists the JCL libraries that have been defined to CA Workload Automation SE. The list that you see is different, depending on the JCL libraries that are used in your shop. Each library has an index number in addition to its name. This number is the number that you use to tell CA Workload Automation SE where JCL is stored.

Return to the Data Base Maintenance Menu now. Type **DB** over the **/DISPLAY** command. Use your Erase EOF key to blank out the characters at the end of the **/DISPLAY** command. Then press Enter to display the menu.

Logging Off

To log out from CA Workload Automation SE, enter this command on the top line of any CA Workload Automation SE screen:

```
/LOGOFF
```

To return to VTAM or the CA-7 Primary Option menu under ISPF, enter this command:

```
/CLOSE
```


Chapter 2: Defining Jobs

This section tells you how to define computer jobs to CA Workload Automation SE.

This section contains the following topics:

[Displaying the CPU Job Definition Screen](#) (see page 23)

[Adding a Job](#) (see page 24)

[Adding Another Job](#) (see page 27)

[Displaying Job Records](#) (see page 28)

[Copying Job Records](#) (see page 29)

Displaying the CPU Job Definition Screen

The CPU jobs are defined to CA Workload Automation SE on the CPU Job Definition screen. To display the CPU Job Definition screen again, enter **1** in the FUNCTION field of the Data Base Maintenance Menu like the following example:

```
----- CA-7 DATA BASE MAINTENANCE MENU -----  
FUNCTION ==>  
  
DATA BASE DEFINITION FOR:  
  
  1 - CPU JOB  
    A - CROSS PLATFORM (XPS) JOB DEFINITION  
  2 - SCHEDULING  
  3 - JOB PREDECESSOR/SUCCESSOR  
  4 - WORKLOAD DOCUMENTATION  
  5 - INPUT/OUTPUT NETWORK  
  6 - DATA SET  
  
OTHER FUNCTIONS AVAILABLE:  
  7 - JCL LIBRARY MAINTENANCE  
  8 - TEXT EDITOR  
  9 - CLEAR THE TEXT EDITOR ACTIVE AREA  
      ACTIVE AREA NOW CONTAINS 0000 LINES OF TEXT  
  
PROGRAM: SDMO  MSG-INDX: 00  -- DB      --  yy.ddd / hh:mm:ss  
MESSAGE: SPECIFY DESIRED OPTION OR ENTER A COMMAND ON THE TOP LINE
```

When you press Enter, the CPU Job Definition screen is displayed:

```
----- CA-7 CPU JOB DEFINITION -----
FUNCTION:          (ADD,DELETE,DD,PURGE,DELPRRN,FORMAT,LIST,UPD)
JOB:
GENERAL:          SYSTEM:          JOBNET:          OWNER:          UID:
JCL:              ID:              MEMBER:          RELOAD:          EXEC:          RETAIN-JCL:
LIB:
REQUIREMENTS:    HOLD:              JCL-OVRD:          USE-OVRD-LIB:    VERIFY:          MAINT:
SATISFACTION LEAD-TIME:  JOB:          DSN:          ARFSET:
EXECUTION:        MAINID:          INSERT-RMS:        COND-CODE:        RO:
DONT SCHEDULE -- BEFORE:          AFTER:
MESSAGES:         LTERM:          REQUIREMENT-LIST:  PROMPTS:
ERROR MSGS -- RQMTS NOT USED:    DSN NOT FOUND:
RESOURCES:        REGION:          CLOCK-TIME:        CPU-TIME:
CLASS:           PRTY:          MSGCLASS:          DRCLASS:
TAPE DRIVES...TYPE1:    M    C    TYPE2:    M    C
PROGRAM: SM20  MSG-INDX: 00  -- DB.1  -- yy.ddd / hh:mm:ss
MESSAGE: ENTER FUNCTION, TRANSFER OR ENTER A COMMAND ON THE TOP LINE
```

The panel lets you enter all of the information about a job, although not all of this information is required to define every job. We practice defining jobs by supplying a minimum of information.

Note: For more information about the fields on the CPU Job Definition screen, see the *Database Maintenance Guide*.

Adding a Job

We start by defining a job with the following characteristics:

- The job name is your name followed by the letter A.
- The job is assigned to a system named PRIMER.
- The job is not submitted or executed on the CPU.
- The job does not send prompting messages to the operator when it is going to be late.

Use the following fields on the CPU Job Definition screen for defining this information to CA Workload Automation SE:

FUNCTION:

Enter **ADD**.

JOB:

Give the name of the job. Use the first seven letters of your name followed by the letter A. We use the job name NAMEA in the rest of this book, but it is important to use your own name instead of the letters NAME. This method lets everyone who performs the exercises in this book have a unique set of jobs. If two people in your shop have the same name, add an initial so that each name is unique.

SYSTEM:

Enter **PRIMER**.

EXEC:

Enter **N** to indicate that this job should not execute. If you leave this field blank, it defaults to Y.

PROMPTS:

Enter **N** to indicate that prompting messages are not sent if the job is late. If you leave this field blank, it defaults to Y.

Leave the rest of the fields blank.

When you have entered this information in your screen, press Enter. Your screen now looks like the following example, with the ADD SUCCESSFUL message at the bottom of the screen.

```
----- CA-7 CPU JOB DEFINITION -----
FUNCTION:          (ADD,DELETE,DD,PURGE,DELPRRN,FORMAT,LIST,UPD)
JOB: NAMEA
GENERAL:          SYSTEM: PRIMER   JOBNET:          OWNER:          UID: 0

JCL:              ID: 0    MEMBER: NAMEA    RELOAD: N  EXEC: N  RETAIN-JCL: N
LIB:
REQUIREMENTS:   HOLD: N  JCL-OVRD: N  USE-OVRD-LIB: N  VERIFY: N  MAINT: N
SATISFACTION LEAD-TIME:  JOB: 0  DSN: 0  ARFSET:

EXECUTION:       MAINID: ALL  INSERT-RMS: N  COND-CODE: 0  RO: 0
DONT SCHEDULE -- BEFORE: 00000 0000  AFTER: 99999 0000

MESSAGES:        LTERM:          REQUIREMENT-LIST: Y  PROMPTS: N
ERROR MSGS -- RQMTS NOT USED: Y  DSN NOT FOUND: Y

RESOURCES:       REGION: 0    CLOCK-TIME: 0000  CPU-TIME: 00000
CLASS:          PRTY: 000  MSGCLASS:          DRCLASS:
TAPE DRIVES...TYPE1: 000 M 000 C  TYPE2: 000 M 000 C

PROGRAM: SM20  MSG-INDX: 00  -- DB.1  -- yy.ddd / hh:mm:ss
MESSAGE: ADD SUCCESSFUL
```

Compare your screen with this picture to verify that you have filled in the values correctly (especially N in the EXEC field).

CA Workload Automation SE automatically fills in many of the other fields for you with default values. Defaults are the values that the product assumes that you want unless you specify something different. For example, it assumes that the member name of the JCL is the same as the job name and automatically fills in the MEMBER field with the job name. For more information about these default values, see the description of the CPU Job Definition screen in the *Database Maintenance Guide*.

Note: The default values filled in on your screen are different from the default values shown here if a default job record has been customized at your shop. These differences do not affect the exercises in this book.

Adding Another Job

With NAMEA still displayed on your terminal, we can easily add another job with similar characteristics. Type the following values on your screen, right over the values that are there:

FUNCTION:

Enter the **A** in ADD again.

JOB:

Change the job name to **NAMEB**.

Assume that you want to leave all the other values the same and press Enter:

```

----- CA-7 CPU JOB DEFINITION -----
FUNCTION:          (ADD,DELETE,DD,PURGE,DELPRRN,FORMAT,LIST,UPD)
JOB: NAMEB
GENERAL:          SYSTEM: PRIMER   JOBNET:          OWNER:          UID: 0

JCL:             ID: 0    MEMBER: NAMEA    RELOAD: N EXEC: N RETAIN-JCL: N
LIB:
REQUIREMENTS:  HOLD: N  JCL-OVRD: N  USE-OVRD-LIB: N  VERIFY: N  MAINT: N
SATISFACTION LEAD-TIME:  JOB: 0  DSN: 0  ARFSET:

EXECUTION:      MAINID: ALL  INSERT-RMS: N  COND-CODE: 0    RO: 0
DONT SCHEDULE -- BEFORE: 00000 0000  AFTER: 99999 0000

MESSAGES:       LTERM:          REQUIREMENT-LIST: Y  PROMPTS: N
ERROR MSGS -- RQMTS NOT USED: Y  DSN NOT FOUND: Y

RESOURCES:      REGION: 0    CLOCK-TIME: 0000  CPU-TIME: 00000
CLASS:          PRTY: 000  MSGCLASS:      DRCLASS:
TAPE DRIVES...TYPE1: 000 M 000 C  TYPE2: 000 M 000 C

PROGRAM: SM20  MSG-INDX: 00  -- DB.1  -- yy.ddd / hh:mm:ss
MESSAGE: ADD SUCCESSFUL

```

The ADD SUCCESSFUL message is displayed at the bottom of the screen again. The message indicates that NAMEB has been added to the database with the same values as NAMEA. The only exception is MEMBER, which automatically changes to match the job name.

Displaying Job Records

To ensure that NAMEA and NAMEB are both added to the database, move the cursor to the top line of your screen and enter this command:

LJOB,JOB=NAME*

When you press Enter, this output screen is displayed:

LJOB, JOB=NAME*										DATE=yy.ddd		PAGE 0001	
JOB=NAME*													
JOB	----	JCL----	SYSTEM	USR	MAIN	PROSE	SCHED	--NUMBER OF--			LAST-RUN		
NAME	ID	MEMBER	-NAME-	-ID	-ID-	DSNBR	DSNBR	STP	DDS	RUNS	DATE/TIME		
NAMEA	000	NAMEA	PRIMER	000	ALL	*NONE*	*NONE*	000	000	0000	00000/0000		
NAMEB	000	NAMEB	PRIMER	000	ALL	*NONE*	*NONE*	000	000	0000	00000/0000		
SLIA-00 REQUEST COMPLETED AT hh:mm:ss ON yy.ddd													

The screen gives the basic information for NAMEA followed by the basic information for NAMEB. If any other jobs in your database start with the letters NAME, they are listed too.

Copying Job Records

You can decide to add similar jobs later. To do so, copy a job like NAMEA that has already been defined. To copy a job, list the NAMEA record on your screen, make your changes, and then add the new job to the database. To illustrate this process, enter **DB.1** on the top line of your screen and press Enter. A blank CPU Job Definition screen is displayed:

```

----- CA-7 CPU JOB DEFINITION -----
FUNCTION:          (ADD,DELETE,DD,PURGE,DELPRRN,FORMAT,LIST,UPD)
JOB:
GENERAL:          SYSTEM:          JOBNET:          OWNER:          UID:

JCL:              ID:              MEMBER:          RELOAD:         EXEC:           RETAIN-JCL:
LIB:

REQUIREMENTS:   HOLD:              JCL-OVRD:       USE-OVRD-LIB:   VERIFY:         MAINT:
SATISFACTION LEAD-TIME:  JOB:              DSN:           ARFSET:

EXECUTION:       MAINID:          INSERT-RMS:     COND-CODE:      RO:
DONT SCHEDULE -- BEFORE:          AFTER:

MESSAGES:        LTERM:          REQUIREMENT-LIST:  PROMPTS:
ERROR MSGS -- RQMTS NOT USED:    DSN NOT FOUND:

RESOURCES:       REGION:         CLOCK-TIME:     CPU-TIME:
CLASS:          PRTY:         MSGCLASS:       DRCLASS:
TAPE DRIVES...TYPE1:      M      C  TYPE2:      M      C

PROGRAM: SM20  MSG-INDX: 00  -- DB.1  -- yy.ddd / hh:mm:ss
MESSAGE: ENTER FUNCTION, TRANSFER OR ENTER A COMMAND ON THE TOP LINE

```

To display NAMEA, enter values in two fields:

FUNCTION:

Enter **LIST**.

JOB:

Enter the name of a job you have already defined, in this case **NAMEA**.

When you press Enter, the screen displays the NAMEA record:

```
----- CA-7 CPU JOB DEFINITION -----
FUNCTION:          (ADD,DELETE,DD,PURGE,DELPRRN,FORMAT,LIST,UPD)
JOB: NAMEA
GENERAL:          SYSTEM: PRIMER   JOBNET:          OWNER:          UID: 0

JCL:             ID: 0    MEMBER: NAMEA   RELOAD: N  EXEC: N  RETAIN-JCL: N
LIB:
REQUIREMENTS:  HOLD: N  JCL-OVRD: N  USE-OVRD-LIB: N  VERIFY: N  MAINT: N
SATISFACTION LEAD-TIME:  JOB: 0    DSN: 0    ARFSET:

EXECUTION:      MAINID: ALL  INSERT-RMS: N  COND-CODE: 0    RO: 0
DONT SCHEDULE -- BEFORE: 00000 0000  AFTER: 99999 0000

MESSAGES:       LTERM:          REQUIREMENT-LIST: Y  PROMPTS: N
ERROR MSGS -- RQMTS NOT USED: Y  DSN NOT FOUND: Y

RESOURCES:      REGION: 0    CLOCK-TIME: 0000  CPU-TIME: 00000
CLASS:         PRTY: 000  MSGCLASS:    DRCLASS:
TAPE DRIVES...TYPE1: 000 M 000 C  TYPE2: 000 M 000 C

PROGRAM: SM20  MSG-INDX: 00  -- DB.1    -- yy.ddd / hh:mm:ss
MESSAGE: LIST SUCCESSFUL
```

To add a similar job to the database, fill in these fields:

FUNCTION:

Change LIST to **ADD**.

JOB:

Enter the name of the new job. In this case, call it **NAMEC**.

Then press Enter and wait for the ADD SUCCESSFUL message at the bottom of the screen.

Now add NAMED to the database by retyping the **A** in the FUNCTION field and changing the JOB field to **NAMED**. Repeat these steps for NAMEE. Now we can use these jobs to learn how to schedule jobs to run automatically.

Chapter 3: Scheduling Jobs

So far, we have defined some jobs to CA Workload Automation SE. The next step is to schedule them so they automatically run on the right day in the right order. One way to schedule a job to run is by telling CA Workload Automation SE when you want it to run. Next, let CA Workload Automation SE find it and submit it then. To do this scheduling, you must have one or more *calendars*.

This section contains the following topics:

[Selecting a Calendar](#) (see page 31)

[Scheduling a Job To Run On Certain Days](#) (see page 34)

[Scheduling a Job To Run After Another Job](#) (see page 43)

[Scheduling a Job Differently](#) (see page 46)

[Triggering Other Jobs](#) (see page 53)

[Other Scheduling Methods](#) (see page 55)

Selecting a Calendar

Calendars tell CA Workload Automation SE which days are normal processing days and which days are nonprocessing days (weekends or holidays). Your CA Workload Automation SE administrator or systems programmer define them to reflect the normal processing days and holidays in your shop. (Some sample calendars are also provided with CA Workload Automation SE.)

To see the calendars in your shop, enter this command on the top line of any CA Workload Automation SE screen:

```
/DISPLAY, FM=SCAL
```

When you press Enter, the screen lists all of your calendars:

```
/DISPLAY,FM=SCAL
*** FMTBLK DISPLAY ***                                PAGE 0001
  NAME      ENTRY POINT  TTR    USE  STRGE  FLAG  ----LOADS----
           POINT      TTR    CNT  REQRD   0    TOTAL  ACTUAL  STATUS
SCAL13PE  000000  E2C300  000  000000  21  000000  000000  RELINK,
SCAL13WD  000000  E2C300  000  000000  21  000000  000000  RELINK,
SCAL13WE  000000  E2C300  000  000000  21  000000  000000  RELINK,
SCAL1303  000000  E2C300  000  000000  21  000000  000000  RELINK,
SCAL135D  000000  E2C300  000  000000  21  000000  000000  RELINK,
SCAL135R  000000  E2C300  000  000000  21  000000  000000  RELINK,
SCAL137D  000000  E2C300  000  000000  21  000000  000000  RELINK,
SCAL137R  000000  E2C300  000  000000  21  000000  000000  RELINK,
SCAL14PE  000000  E2C300  000  000000  21  000000  000000  RELINK,
SCAL14WD  000000  E2C300  000  000000  21  000000  000000  RELINK,
SCAL14WE  000000  E2C300  000  000000  21  000000  000000  RELINK,
SCAL1403  000000  E2C300  000  000000  21  000000  000000  RELINK,
SCAL145D  000000  E2C300  000  000000  21  000000  000000  RELINK,
SCAL145R  000000  E2C300  000  000000  21  000000  000000  RELINK,
SCAL147D  000000  E2C300  000  000000  21  000000  000000  RELINK,
SCAL147R  000000  E2C300  000  000000  A1  000000  000000  RELINK,
```

To complete the exercises in this book, use a calendar that defines weekdays as normal processing days and has at least one holiday. To see the processing days and holidays that are defined on each of your calendars, enter this command on the top line of any screen:

PRINT, YEAR=yy, SCAL=xx

yy

Indicates the year that the fifth and sixth characters identify.

xx

Indicates the last two characters in the calendar name.

For example, we are going to use SCAL145D to schedule the jobs in this book. To see the way that this calendar is defined, enter this command on your screen:

PRINT, YEAR=14, SCAL=5D

Enter this command on your screen now. Substitute the year and name of one of your calendars for **14** and **5D**, if you do not have a calendar named SCAL145D.

When you press Enter, you see the first month of the calendar you specified. For example, here is January on the SCAL145D calendar:

```

PAGE NO. 0001
*****
*                CA-7 BASE CALENDAR      SCAL145D                *
*                YEAR 2014   GEN DATE yy.ddd                       *
*                SCHD DAY ONLY = N                                     *
*****
**                MONTH 01 JAN                                       **
**                SUN      MON      TUE      WED      THU      FRI      SAT      **
**                (B01)                                02      03      *
**                06      07      08      09      10      17      *
**                13      14      15      16      17      24      *
**                20      21      22      23      24      *
**                27      28      29      30      .E01.          *
*****

```

If the displayed year is a leap year, a note to that effect is shown in the flower box before listing the days.

Only the processing days (workdays) are displayed. In this case, they are every weekday except January 1 which was defined as a holiday on SCAL145D. In addition, the first and last days of January are identified:

- The characters B01 in place of 01 identify the first day of the first month. Because this day is a nonprocessing day, the characters are enclosed in parentheses.
- The characters E01 in place of 31 identify the last day of the first month. Because this day is a processing day, the characters are enclosed in periods.

To scroll forward to the next month, press Enter. The February SCAL145D calendar looks like the following example:

```

                                                                 PAGE NO. 0002
*****
*                CA-7 BASE CALENDAR      SCAL145D                *
*                YEAR 2014  GEN DATE yy.ddd                *
*                SCHD DAY ONLY = N                        *
*****
**                MONTH 02 FEB                                **
**                SUN    MON    TUE    WED    THU    FRI    SAT    **
**                (B02)                                     *
**                03     04     05     06     07           *
**                10     11     12     13     14           *
**                18     19     20     21           *
**                24     25     26     27     .E02.        *
*****
```

Because February 17 is a holiday on this calendar, it is not displayed.

Keep scrolling through as many months as you want to see. You can stop at any point and can go on to the next exercise.

Scheduling a Job To Run On Certain Days

You can schedule a job to run on certain days.

Displaying the CPU Job Scheduling Screen

Now we learn how to schedule a job to run. The job runs Tuesdays and Thursdays by 9 p.m. or the next available processing day when Tuesday or Thursday is a holiday.

Return to the Data Base Maintenance Menu by typing **DB** on the top line of your current screen. When you press Enter, the menu is displayed again:

```
----- CA-7 DATA BASE MAINTENANCE MENU -----  
FUNCTION ==>  
  
DATA BASE DEFINITION FOR:  
  
  1 - CPU JOB  
    A - CROSS PLATFORM (XPS) JOB DEFINITION  
  2 - SCHEDULING  
  3 - JOB PREDECESSOR/SUCCESSOR  
  4 - WORKLOAD DOCUMENTATION  
  5 - INPUT/OUTPUT NETWORK  
  6 - DATA SET  
  
OTHER FUNCTIONS AVAILABLE:  
  7 - JCL LIBRARY MAINTENANCE  
  8 - TEXT EDITOR  
  9 - CLEAR THE TEXT EDITOR ACTIVE AREA  
      ACTIVE AREA NOW CONTAINS 0000 LINES OF TEXT  
  
PROGRAM: SDMO  MSG-INDX: 00  -- DB      --  yy.ddd / hh:mm:ss  
MESSAGE: SPECIFY DESIRED OPTION OR ENTER A COMMAND ON THE TOP LINE
```

Now, we want to go to the scheduling screens. Enter **2** in the FUNCTION field, and press Enter.

The Scheduling Menu is displayed:

```
----- CA-7 SCHEDULING MENU -----  
FUNCTION ==>  
  
DATE/TIME SCHEDULING FOR:  
  1 - CPU JOB  
  2 - INPUT NETWORK  
  3 - OUTPUT NETWORK  
  
TRIGGER SCHEDULING FOR:  
  4 - JOB TRIGGERING OTHER CPU JOB(S)  
  5 - INPUT NETWORK TRIGGERING CPU JOB(S)  
  6 - DATA SET TRIGGERING CPU JOB(S)  
  
OTHER FUNCTIONS AVAILABLE:  
  7 - MODIFICATION TO RESOLVED SCHEDULE DATES  
  8 - BASE CALENDAR MAINTENANCE  
  
PROGRAM: SM70  MSG-INDX: 00  -- DB.2  --  yy.ddd / hh:mm:ss  
MESSAGE: ENTER OPTION, TRANSFER OR ENTER A COMMAND ON THE TOP LINE
```

To select scheduling for the CPU jobs, enter **1** in the FUNCTION field.

When you press Enter, the CPU Job Scheduling screen is displayed:

```
----- CA-7 CPU JOB SCHEDULING -----  
FUNCTION:          (CLEAR,DELETE,EDIT,FE,FETCH,REPL,RESOLV,SAVE)  
  
JOB:  
  
SCAL:          (DEFAULT SCAL ID FOR ADDS)  
  
SCHID-COUNT: 000  
  
PROGRAM: SM71  MSG-INDX: 00  -- DB.2.1  --  yy.ddd / hh:mm:ss  
MESSAGE: ENTER FUNCTION, TRANSFER OR ENTER A COMMAND ON THE TOP LINE
```

We use this screen to tell CA Workload Automation SE what job we are scheduling and what calendar it is based on. To provide this information, fill in the following fields on this screen:

FUNCTION:

Enter **EDIT** to define scheduling information.

JOB:

Enter **NAMEA** to identify the job.

SCAL:

Give the two-character name of a calendar that has been defined in your shop. The rest of the illustrations in this book are based on calendar 5D. If 5D is not defined in your shop for the current year, you can use another calendar. (You can get this information from the calendars you listed when you selected a calendar.)

More information:

[Selecting a Calendar](#) (see page 31)

Defining the Scheduling Criteria

When you press Enter, this edit screen is automatically displayed:

```
----- CA-7 CPU JOB SCHEDULING PARAMETER EDIT -----
FUNCTION: (ADD,DELETE,EXIT,FORMAT,LIST,REPL,SAVE,SR,SS)
JOB: NAMEA SCHID: SCAL: ROLL: INDEX:
      DOTM LDTM SBTM -----REPEAT-----
      INTERVAL: TYPE: COUNT: STOP:

___ ___ DAILY
___ ___ WEEKLY SUN: MON: TUE: WED: THU: FRI: SAT:
___ ___ MONTHLY JAN: FEB: MAR: APR: MAY: JUN:
      JUL: AUG: SEP: OCT: NOV: DEC:
      WEEK: DAY-OF-WEEK:
      RDAY:

___ ___ ANNUAL DAY:
___ ___ SYMETRIC START: SPAN:
                                     DEFAULT SCAL: 5D
                                     SCHID-COUNT: 000

PROGRAM: SM72 MSG-INDX: 00 -- DB.2.1-E -- yy.ddd / hh:mm:ss
MESSAGE: ENTER FUNCTION, TRANSFER OR ENTER A COMMAND ON THE TOP LINE
```

Fill in the fields on this screen as follows:

FUNCTION:

Enter **ADD**.

SCHID:

Enter **1** to indicate that this schedule is the first schedule we have defined for NAMEA. (We learn more about this field when we schedule a job differently.)

ROLL:

Enter **F**. This value rolls the scheduling of NAMEA forward to the next day when Tuesday or Thursday happens to be a holiday on calendar 5D.

DOTM

Use your tab key to place the cursor under this heading. The value tells what time the job has to end (its due-out time). Specify **2100**.

LDTM

Use this field to tell how many minutes it typically takes to process the job (its lead time). Specify **30** to give the job a half hour to run. CA Workload Automation SE uses this number to figure out when it has to start the job to complete on time. In this case, it has to start the job by 2030 so it completes by 2100.

WEEKLY

Tab to this field and enter an **X** to the left of the word WEEKLY and more **Xs** to the right of TUE and THU.

Press Enter and watch for the ADD FUNCTION SUCCESSFUL message at the bottom of the screen:

```

----- CA-7 CPU JOB SCHEDULING PARAMETER EDIT -----
FUNCTION:          (ADD,DELETE,EXIT,FORMAT,LIST,REPL,SAVE,SR,SS)
JOB: NAMEA      SCHID: 1   SCAL:   ROLL: F   INDEX: 000
                DOTM LDTM SBTM -----REPEAT-----
                2100 0030          INTERVAL:   TYPE:   COUNT:   STOP:

___ ___ DAILY
___ X ___ WEEKLY   SUN:   MON:   TUE: X WED:   THU: X FRI:   SAT:
___ ___ MONTHLY   JAN:   FEB:   MAR:   APR:   MAY:   JUN:
                JUL:   AUG:   SEP:   OCT:   NOV:   DEC:
                WEEK:
                RDAY:
___ ___ ANNUAL   DAY:
___ ___ SYMETRIC START:   SPAN:
                                     DEFAULT SCAL: 5D
                                     SCHID-COUNT: 000
PROGRAM: SM72  MSG-INDX: 00  -- DB.2.1-E --  yy.ddd / hh:mm:ss
MESSAGE: ADD FUNCTION SUCCESSFUL
    
```

Now that you have defined the scheduling criteria for NAMEA, save it by typing **SS** after **FUNCTION** and pressing Enter. This command automatically returns you to the CPU Job Scheduling screen:

```
----- CA-7 CPU JOB SCHEDULING -----  
FUNCTION: SAVE      (CLEAR,DELETE,EDIT,FE,FETCH,REPL,RESOLV,SAVE)  
  
JOB: NAMEA  
  
SCAL:  5D  (DEFAULT SCAL ID FOR ADDS)  
  
SCHID-COUNT: 001  
  
PROGRAM: SM71  MSG-INDX: 00  -- DB.2.1  --  yy.ddd / hh:mm:ss  
MESSAGE: SAVE FUNCTION SUCCESSFUL FOR SJnnnnnn  
        SCHEDULE MUST BE RESOLVED
```

See the two messages at the bottom of the screen? They inform you that your schedule has been saved and that it must now be *resolved*.

Seeing When the Job Will Run

Resolving the schedule means telling CA Workload Automation SE to compare it to the calendar you specified and determine the exact days to process the job. To resolve the schedule, issue the RESOLV command. To issue the command, enter **RESOLV** in the FUNCTION field and press Enter. The next screen that you see has the RESOLV command on the top line. Move the cursor to the end of the RESOLV command and enter:

,YEAR=yy

where *yy* is the current year. Press Enter.

When you press Enter, the screen looks something like the following example:

```
RESOLV,TEST=NO,PRINT=YES,OLDYR=*,JOB=NAMEA,YEAR=13
                CA-7 SCHEDULE / BASE CALENDAR RESOLUTION
DATE yy.ddd          TIME hh:mm:ss          PAGE NO. 0001
OPTIONS: YEAR=13     SCAL=5D JOB=NAMEA
                OLDYR=* TEST=NO PRINT=YES DUPDATE=NO

0001 SCHEDULES SELECTED FOR RESOLUTION

*****SCHEDULE RESOLUTION STARTED FOR SJnnnnnn JOB=NAMEA
**SCHEDULE DATA :
  ID=001  ROLL=F  INDEX=+000
  SCAL=   DOTM=2100 LEADTM=0030 STARTM=2030
          WEEKLY  DAY=TUE,THU
**SCHEDULE DAYS ROLL STARTED : ROLL=F
SRC1-113 JAN 01 (DAY# 001) ROLLED FORWARD TO JAN 02 (DAY# 002)
SRC1-113 JUL 04 (DAY# 186) ROLLED FORWARD TO JUL 05 (DAY# 187)
**SCHEDULE DAYS ROLL COMPLETED
*****SCHEDULE RESOLUTION COMPLETED
                SCAL=135D JOB=NAMEA
```

The middle of the screen displays SCHEDULE DATA. You defined these values on the CPU Job Scheduling Parameter Edit screen.

The dates that are listed under SCHEDULE DAYS ROLL STARTED are different from the dates that are shown in this book unless you are also using SCAL135D with holidays defined on January 1 and July 4. These dates show you what happens to NAMEA when Tuesday or Thursday is a holiday. NAMEA is processed on the following day (because we specified F in the ROLL field).

Note: If you are resolving jobs during the July-December time frame and the next year calendar is not defined, you receive a message. The message is SCALxxyy not available (with the yy being the next year). If you receive this message, then move the cursor to the end of the command. The command remains at the top of the screen. Enter ,YEAR=yy where yy is the current year. Press Enter.

Press Enter to scroll forward to this screen:

```
RESOLV,TEST=NO,PRINT=YES,OLDYR=*,JOB=NAMEA,YEAR=13
          CA-7 SCHEDULE / BASE CALENDAR RESOLUTION
DATE yy.ddd          TIME hh:mm:ss          PAGE NO. 0002
OPTIONS: YEAR=13     SCAL=5D JOB=NAMEA
          OLDYR=* TEST=NO PRINT=YES DUPDATE=NO

*****
*          CA-7 SCHEDULE CALENDAR FOR          SJnnnnnn          *
*          DATE yyddd                          *
* BASE CALENDAR SCAL135D (DEFAULT)            *
*****
*          MONTH 01 JAN                          *
*          SUN    MON    TUE    WED    THU    FRI    SAT          *
*          *      *      *      *      *      *      *          *
*          *      *      *      *      *      *      *          *
*          *      *      *      *      *      *      *          *
*          *      *      *      *      *      *      *          *
*          *      *      *      *      *      *      *          *
*          *      *      *      *      *      *      *          *
*****
```

This screen shows you when NAMEA is processed in January. NAMEA is processed every Tuesday and Thursday except for January 1 which is a holiday. Press Enter to scroll forward again, to this screen:

```

RESOLV,TEST=NO,PRINT=YES,OLDYR=*,JOB=NAMEA,YEAR=13
CA-7 SCHEDULE / BASE CALENDAR RESOLUTION
DATE yy.ddd          TIME hh:mm:ss          PAGE NO. 0003
OPTIONS: YEAR=13     SCAL=5D JOB=NAMEA
        OLDYR=*     TEST=NO  PRINT=YES DUPDATE=NO

*****
*           CA-7 SCHEDULE CALENDAR FOR      SJnnnnnn          *
*           DATE yyddd                       *
*   BASE CALENDAR SCAL135D (DEFAULT)         *
*****
*           MONTH 02 FEB                       *
*           SUN      MON      TUE      WED      THU      FRI      SAT      *
*           *           *           *           *           *           *           *
*           *           *           *           *           *           *           *
*           *           *           *           *           *           *           *
*           *           *           *           *           *           *           *
*           *           *           *           *           *           *           *
*           *           *           *           *           *           *           *
*****

```

This screen shows you that NAMEA is processed every Tuesday and Thursday in February. You can scroll through the rest of the months or can stop at any time and can go on to the next exercise.

Scheduling a Job To Run After Another Job

You can schedule jobs to run after other jobs.

Triggering Jobs

Some jobs must be scheduled after other jobs, regardless of what day those other jobs run. For example, assume that NAMEB has to run after NAMEA, regardless of whether NAMEA runs on Tuesday and Thursday or is rolled forward to Wednesday or Friday. CA Workload Automation SE lets you schedule NAMEA to *trigger* NAMEB. This triggering means that NAMEB is automatically scheduled whenever NAMEA ends successfully. Here is how to define this triggering:

1. Enter **DB.2** at the top of any screen to return to the Scheduling Menu.
The Scheduling Menu is displayed.
2. Enter **4** in the FUNCTION field to select job triggering.

When you press Enter, this screen is displayed:

```
----- CA-7 JOB TRIGGERING -----
FUNCTION:          (FORMAT,LIST,UPD)                PAGE 0001
JOB:
OPT SCHID TRGD-JOB TRGID DOTM  QTM  LDTM  SBTM  *---- EXCEPTIONS ----*

OPTIONS: A=ADD,D=DELETE,U=UPDATE,*=PROCESSED,?=ERROR
PROGRAM: SM75  MSG-INDX: 00  -- DB.2.4  --  yy.ddd / hh:mm:ss
MESSAGE: ENTER FUNCTION, TRANSFER OR ENTER A COMMAND ON THE TOP LINE
```

To trigger NAMEB from NAMEA, fill in the fields on this screen as follows:

FUNCTION:

Enter **UPD** (because you are updating the NAMEA record).

JOB:

Identify the job that runs first, in this case **NAMEA**.

OPT

Tab down to the line under the OPT heading and enter **A** to add the triggered job.

SCHID

Enter **1**.

TRGD-JOB

Identify the job that is to run when NAMEA ends, in this case **NAMEB**.

QTM

Specify **30** to indicate that NAMEB is late when it has to wait more than 30 minutes before it starts processing. The due-out time of the job is calculated for you, based on this number.

LDTM

Assume that NAMEB also takes **30** minutes to process.

When these fields are filled in, press Enter and watch for the UPD FUNCTION SUCCESSFUL message at the bottom of the screen:

```

----- CA-7 JOB TRIGGERING -----
FUNCTION:          (FORMAT,LIST,UPD)          PAGE 0001
JOB:
OPT SCHID TRGD-JOB TRGID DOTM  QTM  LDTM  SBTM  *---- EXCEPTIONS ----*
*   001  NAMEB     000      0030  0030

```

OPTIONS: A=ADD,D=DELETE,U=UPDATE,*=PROCESSED,?=ERROR
PROGRAM: SM75 MSG-INDX: 00 -- DB.2.4 -- yy.ddd / hh:mm:ss
MESSAGE: ENTER FUNCTION, TRANSFER OR ENTER A COMMAND ON THE TOP LINE

From now on, whenever NAMEA ends successfully, NAMEB is scheduled.

Displaying the Triggers

To ensure that NAMEA triggers NAMEB, move the cursor to the top line of your screen and enter this command:

LJOB,JOB=NAMEA,LIST=TRIG

When you press Enter, this output screen is displayed:

```
LJOB, JOB=NAMEA, LIST=TRIG
JOB=NAMEA LIST=TRIG                                DATE=yy.ddd    PAGE 0001

  JOB   ----JCL----  SYSTEM  USR MAIN PROSE  SCHED  --NUMBER OF-  LAST-RUN
  NAME  ID  MEMBER  -NAME-  -ID  -ID-  DSNBR  DSNBR  STP  DDS  RUNS  DATE/TIME
NAMEA   000 NAMEA   PRIMER   000 ALL  *NONE*  nnnnnn  000  000  0000  00000/0000

----- TRIGGERED JOBS -----
      JOB=NAMEB   SCHID=001      QTM=0030 LEADTM=0030 SUBMTM=0000

SLIA-00 REQUEST COMPLETED AT hh:mm:ss ON yy.ddd
```

The screen gives the basic information for NAMEA across the middle of the screen and then lists all jobs that it triggers. So far, the only job we have defined is NAMEB.

Scheduling a Job Differently

Now assume that we receive instructions to schedule NAMEA on Mondays in addition to Tuesdays and Thursdays, to run it every Monday even if Monday is a holiday, and to run NAMED after NAMEA on Mondays only. How do we go about this scheduling?

To begin with, we do not need to change the way we defined NAMEA on the CPU Job Definition screen in the last chapter. The definition of NAMEA stays the same, regardless of when it runs and what jobs run after it. (In fact, we cannot add another definition for NAMEA, because there is only one job by that name.)

What we must do is to add another schedule for NAMEA. To keep this schedule separate from the original schedule, we are going to give it a different *schedule ID*. Previously, we used the number 1 when we scheduled NAMEA for Tuesdays and Thursdays. Now we are going to use the schedule ID 2 to schedule NAMEA on Mondays. To do this, we must return to the CPU Job Scheduling screen and must change the NAMEA scheduling record.

Return to the CPU Job Scheduling screen now by typing **DB.2.1** on the top line of your screen. When you press Enter, this screen is displayed:

```
----- CA-7 CPU JOB SCHEDULING -----  
FUNCTION:          (CLEAR,DELETE,EDIT,FE,FETCH,REPL,RESOLV,SAVE)  
JOB:  
  
SCAL:             (DEFAULT SCAL ID FOR ADDS)  
  
SCHID-COUNT: 000  
  
PROGRAM: SM71  MSG-INDX: 00  -- DB.2.1  --  yy.ddd / hh:mm:ss  
MESSAGE: ENTER FUNCTION, TRANSFER OR ENTER A COMMAND ON THE TOP LINE
```

What we must do now is *fetch* (get) the NAMEA scheduling record and add to it. To do this, fill in these two fields:

FUNCTION:

Enter **FE** to fetch the scheduling record and go into edit mode.

JOB:

Enter **NAMEA** to identify the job you want to edit.

When you press Enter, the CPU Job Scheduling edit screen is automatically displayed with the scheduling criteria we defined the scheduling criteria.

```
----- CA-7 CPU JOB SCHEDULING PARAMETER EDIT -----
FUNCTION: LIST      (ADD,DELETE,EXIT,FORMAT,LIST,REPL,SAVE,SR,SS)
JOB: NAMEA        SCHID: 1   SCAL:      ROLL: F   INDEX: 000
                DOTM LDTM SBTM -----REPEAT-----
                2100 0030      INTERVAL:      TYPE:      COUNT:      STOP:

___ ___ DAILY
___ X ___ WEEKLY   SUN:      MON:      TUE: X  WED:      THU: X  FRI:      SAT:
___ ___ MONTHLY   JAN:      FEB:      MAR:      APR:      MAY:      JUN:
                JUL:      AUG:      SEP:      OCT:      NOV:      DEC:
                WEEK:
                RDAY:
___ ___ ANNUAL   DAY:
___ ___ SYMETRIC START:      SPAN:
                                           DEFAULT SCAL: 5D
                                           SCHID-COUNT: 001

PROGRAM: SM72  MSG-INDX: 00  -- DB.2.1-E --  yy.ddd / hh:mm:ss
MESSAGE: LIST FUNCTION SUCCESSFUL
```

We change this screen to tell CA Workload Automation SE to run NAMEA on Mondays under schedule ID 2. To do this, change the following fields:

FUNCTION:

Change LIST to **ADD**.

SCHID:

Change 1 to **2**.

ROLL:

Change F to **N**. This change tells CA Workload Automation SE to run NAMEA on Mondays even if Monday is a holiday.

LDTM

Change 0030 to **0040** because NAMEA takes a little longer to run on Mondays.

WEEKLY

Leave the X in this field but add an **X** after Monday and erase the Xs after TUE and THU.

Press Enter and watch for the ADD FUNCTION SUCCESSFUL message at the bottom of the screen:

```

----- CA-7 CPU JOB SCHEDULING PARAMETER EDIT -----
FUNCTION: ADD      (ADD,DELETE,EXIT,FORMAT,LIST,REPL,SAVE,SR,SS)
JOB: NAMEA      SCHID: 2   SCAL:   ROLL: N   INDEX: 000
                DOTM LDTM SBTM -----REPEAT-----
                2100 0040      INTERVAL:   TYPE:   COUNT:   STOP:

___  ___  DAILY
___ X ___ WEEKLY  SUN:   MON: X  TUE:   WED:   THU:   FRI:   SAT:

___  ___  MONTHLY  JAN:   FEB:   MAR:   APR:   MAY:   JUN:
                JUL:   AUG:   SEP:   OCT:   NOV:   DEC:
                WEEK:
                RDAY:

___  ___  ANNUAL  DAY:

___  ___  SYMETRIC  START:   SPAN:

                                DEFAULT SCAL: 5D
                                SCHID-COUNT: 002

PROGRAM: SM72  MSG-INDX: 00  -- DB.2.1-E --  yy.ddd / hh:mm:ss
MESSAGE: ADD FUNCTION SUCCESSFUL

```

Now the NAMEA scheduling record is expanded to include another scheduling variation. To replace the original scheduling record with the expanded record, enter **SR** (for save/replace) after FUNCTION and press Enter. This action returns you to the CPU Job Scheduling screen:

```

----- CA-7 CPU JOB SCHEDULING -----
FUNCTION: REPL      (CLEAR,DELETE,EDIT,FE,FETCH,REPL,RESOLV,SAVE)

JOB: NAMEA

SCAL:  5D  (DEFAULT SCAL ID FOR ADDS)

SCHID-COUNT: 002

PROGRAM: SM71  MSG-INDX: 00  -- DB.2.1 --  yy.ddd / hh:mm:ss
MESSAGE: REPL FUNCTION SUCCESSFUL FOR SJnnnnnn
        SCHEDULE MUST BE RESOLVED

```

See how the schedule ID count is now set to 2? This count indicates that NAMEA has two scheduling variations.

Resolving the Revised Schedule

The next step is to resolve the schedule again to include the days that are defined under schedule ID 2. To do this, enter **RESOLV** in the FUNCTION field again and press Enter.

This time the output screens that you see describe schedule ID 2 after schedule ID 1. They look something like the following screens.

Note: If you are resolving jobs during the July to December time frame and the next year calendar has not been defined, you receive a message. The message is SCALxxyy not found (with the yy being the next year). If you receive this message, move the cursor to the end of the command. The command remains at the top of the screen. Enter **,YEAR=yy** where **yy** is the current year. Press Enter.

```
RESOLV,SCAL=5D,TEST=NO,PRINT=YES,OLDYR=*,JOB=NAMEA,YEAR=13
CA-7 SCHEDULE / BASE CALENDAR RESOLUTION
DATE yy.ddd          TIME hh:mm:ss          PAGE NO. 0001
OPTIONS: YEAR=13     SCAL=5D JOB=NAMEA
              OLDYR=* TEST=NO PRINT=YES DUPDATE=NO

0001 SCHEDULES SELECTED FOR RESOLUTION

*****SCHEDULE RESOLUTION STARTED FOR SJnnnnnn JOB=NAMEA
**SCHEDULE DATA :
  ID=001  ROLL=F  INDEX=+000
  SCAL=   DOTM=2100 LEADTM=0030 STARTM=2030
          WEEKLY  DAY=TUE,THU
**SCHEDULE DAYS ROLL STARTED : ROLL=F
SRC1-113 JAN 01 (DAY# 001) ROLLED FORWARD TO JAN 02 (DAY# 002)
SRC1-113 JUL 04 (DAY# 186) ROLLED FORWARD TO JUL 05 (DAY# 187)
**SCHEDULE DAYS ROLL COMPLETED
**SCHEDULE DATA :
  ID=002  ROLL=N  INDEX=+000
  SCAL=   DOTM=2100 LEADTM=0040 STARTM=2020
          WEEKLY  DAY=MON
**SCHEDULE DAYS ROLL STARTED : ROLL=N
```

```

RESOLV,SCAL=5D,TEST=NO,PRINT=YES,OLDYR=*,JOB=NAMEA,YEAR=13
      CA-7 SCHEDULE / BASE CALENDAR RESOLUTION
DATE yy.ddd          TIME hh:mm:ss          PAGE NO. 0002
OPTIONS: YEAR=13     SCAL=5D JOB=NAMEA
      OLDYR=* TEST=NO PRINT=YES DUPDATE=NO

      FEB 18 (DAY# 049) FALLS ON A NON-SCHEDULE DAY : SCHEDULE DAY RETAINED
      MAY 26 (DAY# 147) FALLS ON A NON-SCHEDULE DAY : SCHEDULE DAY RETAINED
      SEP 01 (DAY# 245) FALLS ON A NON-SCHEDULE DAY : SCHEDULE DAY RETAINED
      OCT 13 (DAY# 287) FALLS ON A NON-SCHEDULE DAY : SCHEDULE DAY RETAINED
**SCHEDULE DAYS ROLL COMPLETED
****SCHEDULE RESOLUTION COMPLETED FOR SJnnnnnn
      SCAL=135D JOB=NAMEA
    
```

Keep scrolling until you get to the calendars. Our sample calendar shows you that Monday has been added to Tuesday and Thursday as the regular processing days for NAMEA. These calendars do not distinguish between schedule IDs; they show all the days that NAMEA is scheduled:

```

RESOLV,SCAL=5D,TEST=NO,PRINT=YES,OLDYR=*,JOB=NAMEA,YEAR=13
      CA-7 SCHEDULE / BASE CALENDAR RESOLUTION
DATE yy.ddd          TIME hh:mm:ss          PAGE NO. 0003
OPTIONS: YEAR=13     SCAL=5D JOB=NAMEA
      OLDYR=* TEST=NO PRINT=YES DUPDATE=NO

*****
*                   CA-7 SCHEDULE CALENDAR FOR           SJnnnnnn          *
*                   DATE yyddd                            *
*   BASE CALENDAR SCAL135D (DEFAULT)                       *
*****
*                   MONTH 01 JAN                            *
*                   SUN   MON   TUE   WED   THU   FRI   SAT          *
*                   *     *     *     *     *     *     *           *
*                   *     *     *     *     *     *     *           *
*                   *     *     *     *     *     *     *           *
*                   *     *     *     *     *     *     *           *
*                   *     *     *     *     *     *     *           *
*                   *     *     *     *     *     *     *           *
*                   *     *     *     *     *     *     *           *
*                   *     *     *     *     *     *     *           *
*****
    
```

```

*                   MONTH 02 FEB                            *
*                   SUN   MON   TUE   WED   THU   FRI   SAT          *
*                   *     *     *     *     *     *     *           *
*                   *     *     *     *     *     *     *           *
*                   *     *     *     *     *     *     *           *
*                   *     *     *     *     *     *     *           *
*                   *     *     *     *     *     *     *           *
*                   *     *     *     *     *     *     *           *
*                   *     *     *     *     *     *     *           *
*                   *     *     *     *     *     *     *           *
*****
    
```

Checking Schedule IDs

Before you go on, verify that two schedule IDs are defined for NAMEA. To list all defined schedule IDs, enter this command on the top line of your screen:

LJOB,JOB=NAMEA,LIST=SCHD

When you press Enter, this screen is displayed:

```
LJOB, JOB=NAMEA, LIST=SCHD
JOB=NAMEA LIST=SCHD DATE=yy.ddd PAGE 0001

JOB   ----JCL---- SYSTEM  USR MAIN PROSE  SCHED  --NUMBER OF-  LAST-RUN
NAME  ID  MEMBER  -NAME-  -ID  -ID-  DSNBR  DSNBR  STP  DDS  RUNS  DATE/TIME
NAMEA  000 NAMEA  PRIMER  000 ALL  *NONE* nnnnnn 000 000 0000 00000/0000

----- SCHEDULES -----
                CALENDAR SCAL085D
ID=001  ROLL=F  INDEX=+000
SCAL=   DOTM=2100 LEADTM=0030 STARTM=2030
        WEEKLY  DAY=TUE,THU
ID=002  ROLL=N  INDEX=+000
SCAL=   DOTM=2100 LEADTM=0040 STARTM=2020
        WEEKLY  DAY=MON

SLIA-00 REQUEST COMPLETED AT hh:mm:ss ON yy.ddd
```

The middle of this screen shows all schedules that have been defined for NAMEA. In this case there are two: schedule ID 1 and schedule ID 2.

Triggering Other Jobs

We now use the schedule ID 2 to tell CA Workload Automation SE to run NAMED after NAMEA on Mondays. We do this triggering by returning to the Job Triggering screen for NAMEA and adding NAMED to it. Enter **DB.2.4**. When you press Enter, the Job Triggering screen is displayed again:

```

----- CA-7 JOB TRIGGERING -----
FUNCTION:          (FORMAT,LIST,UPD)          PAGE 0001
JOB:
OPT SCHID TRGD-JOB TRGID DOTM  QTM  LDTM  SBTM  *---- EXCEPTIONS ----*

OPTIONS: A=ADD,D=DELETE,U=UPDATE,*=PROCESSED,?=ERROR
PROGRAM: SM75  MSG-INDX: 00  -- DB.2.4  --  yy.ddd / hh:mm:ss
MESSAGE: ENTER FUNCTION, TRANSFER OR ENTER A COMMAND ON THE TOP LINE

```

To display the jobs that NAMEA currently triggers, enter **LIST** in the FUNCTION field and **NAMEA** in the JOB field.

When you press Enter, the NAMEA triggering record is displayed:

```

----- CA-7 JOB TRIGGERING -----
FUNCTION: LIST      (FORMAT,LIST,UPD)          PAGE 0001
JOB: NAMEA
OPT SCHID TRGD-JOB TRGID DOTM  QTM  LDTM  SBTM  *---- EXCEPTIONS ----*
      001  NAMEB                0030  0030

OPTIONS: A=ADD,D=DELETE,U=UPDATE,*=PROCESSED,?=ERROR
PROGRAM: SM75  MSG-INDX: 00  -- DB.2.4  --  yy.ddd / hh:mm:ss
MESSAGE: LIST FUNCTION SUCCESSFUL
      END OF DATA REACHED

```

To trigger NAMED from NAMEA on Mondays, fill in these fields:

FUNCTION:

Change LIST to **UPD**.

OPT

Tab down to the line below NAMEB and enter **A** under OPT.

SCHID

Enter **2** because we want to trigger NAMED on Mondays when NAMEA runs under schedule ID 2.

TRGD-JOB

Identify the job that is to run after NAMEA under schedule ID 2: **NAMED**.

QTM

Specify **15** to indicate that NAMED is late when it has to wait more than 15 minutes before it starts processing.

LDTM

Assume that NAMED takes one hour to process (0100).

When these fields are filled in, press Enter and watch for the UPD FUNCTION SUCCESSFUL message at the bottom of the screen:

```
----- CA-7 JOB TRIGGERING -----
FUNCTION: UPD          (FORMAT,LIST,UPD)          PAGE 0001
JOB:  NAMEA
OPT  SCHID TRGD-JOB TRGID DOTM  QTM  LDTM  SBTM  *---- EXCEPTIONS ----*
      001  NAMEB           0000   0030  0030
*    002  NAMED           0000   0010  0100

OPTIONS: A=ADD,D=DELETE,U=UPDATE,*=PROCESSED,?=ERROR
PROGRAM: SM75  MSG-INDX: 00  -- DB.2.4  --  yy.ddd / hh:mm:ss
MESSAGE: UPD FUNCTION SUCCESSFUL
        ENTER INPUT FOR NEXT REQUEST
```

The time entries for NAMED are displayed.

The 15 minutes you specified for QTM is automatically rounded down to 10 minutes.

From now on, whenever NAMEA ends successfully on Monday (when it runs under schedule ID 2) NAMED is scheduled.

Other Scheduling Methods

This chapter showed you two ways to schedule a job to run automatically:

- You can use the CPU Job Scheduling screen and calendars to tell CA Workload Automation SE to schedule it on certain days.
- You can use the Job Triggering screens to tell CA Workload Automation SE to schedule it whenever another job ends successfully.

Note: You can also trigger jobs from the creation of a data set or the completion of an input network. These techniques are not illustrated here.

In addition to scheduling jobs to run automatically, you can run them on request by issuing DEMAND or RUN commands.

Note: For more information about these scheduling methods, see the *CA Workload Automation SE Database Maintenance Guide*.

More information:

[Running Jobs By Request](#) (see page 121)

Chapter 4: Adding Requirements to Jobs

This section shows you how to ensure that jobs run in order by adding predecessor requirements to them. Also, it shows you how to prevent two jobs from running simultaneously.

This section contains the following topics:

[Defining a Predecessor](#) (see page 57)

[Preventing Jobs From Running Together](#) (see page 60)

[Defining a Manual Predecessor](#) (see page 62)

[Displaying Requirements](#) (see page 65)

[Connecting Resources to Jobs](#) (see page 66)

Defining a Predecessor

We learned in the last chapter how to help ensure that jobs run in the right order by triggering one job from another. We triggered NAMED from NAMEA to help ensure that NAMED does not run until NAMEA ends successfully.

But what if another job, NAMEC, also provides input to NAMED? To help ensure that NAMED runs with the right input, it must **also** wait for NAMEC to end successfully.

We can define this relationship to CA Workload Automation SE by defining NAMEC as a *requirement* which must be satisfied before NAMED can run. Because NAMEC must *precede* NAMED, it is a *predecessor* requirement. We see how to define NAMEC as a predecessor to NAMED on the following pages.

Start by typing **DB** on any CA Workload Automation SE screen to display the Data Base Maintenance Menu:

```
----- CA-7 DATA BASE MAINTENANCE MENU -----  
FUNCTION ==>  
  
DATA BASE DEFINITION FOR:  
  
  1 - CPU JOB  
    A - CROSS PLATFORM (XPS) JOB DEFINITION  
  2 - SCHEDULING  
  3 - JOB PREDECESSOR/SUCCESSOR  
  4 - WORKLOAD DOCUMENTATION  
  5 - INPUT/OUTPUT NETWORK  
  6 - DATA SET  
  
OTHER FUNCTIONS AVAILABLE:  
  7 - JCL LIBRARY MAINTENANCE  
  8 - TEXT EDITOR  
  9 - CLEAR THE TEXT EDITOR ACTIVE AREA  
      ACTIVE AREA NOW CONTAINS 0000 LINES OF TEXT  
  
PROGRAM: SDM0  MSG-INDX: 00  -- DB      --  yy.ddd / hh:mm:ss  
MESSAGE: SPECIFY DESIRED OPTION OR ENTER A COMMAND ON THE TOP LINE
```

Enter **3** in the FUNCTION field of the Data Base Maintenance Menu to define a predecessor. When you press Enter, the Job Predecessor/Successor Menu is displayed:

```
----- CA-7 JOB PREDECESSOR/SUCCESSOR MENU -----  
FUNCTION ==>  
  
EXECUTION REQUIREMENTS DEFINED BY:  
  1 - DATA SET PREDECESSORS  
  2 - CPU JOB PREDECESSORS  OR  
    MUTUALLY EXCLUSIVE JOBS (CAN NOT RUN AT SAME TIME)  
  4 - INPUT NETWORK PREDECESSORS  OR  
    OUTPUT NETWORK SUCCESSORS  
  6 - USER MEMO-FORM PREDECESSORS  
  7 - REPORT IDS CREATED  
  
PROGRAM: SM60  MSG-INDX: 00  -- DB.3    --  yy.ddd / hh:mm:ss  
MESSAGE: SPECIFY OPTION, TRANSFER OR ENTER A COMMAND ON THE TOP LINE
```

Enter **2** in the FUNCTION field of the Job Predecessor/Successor Menu to define the predecessor for a CPU job.

When you press Enter, the CPU Job Predecessors screen is displayed:

```

----- CA-7 CPU JOB PREDECESSORS -----
FUNCTION:          (FORMAT,LIST,UPD)          PAGE 0001
PRED FOR JOB:                                LIST-SCHID:
OPT SCHID LEADTM   PRED-JOB  NEXT-RUN

OPTIONS: A=ADD,D=DELETE,U=UPDATE,*=PROCESSED,?=ERROR
PROGRAM: SM61  MSG-INDX: 00  -- DB.3.2  --  yy.ddd / hh:mm:ss
MESSAGE: ENTER FUNCTION, TRANSFER OR ENTER A COMMAND ON THE TOP LINE
  
```

Fill in this screen as follows:

FUNCTION:

Enter **UPD**.

PRED FOR JOB:

Identify **NAMED** because this job is the job that must run after a predecessor.

OPT

Enter **A** under OPT.

LEADTM

Enter **6** to tell CA Workload Automation SE that NAMEC must have run within the last six hours to satisfy the requirement that it runs before NAMED. (This value helps ensure that only a recent run of NAMEC satisfies the requirement, not an old run.)

PRED-JOB

Identify **NAMEC** because this job is the predecessor (the job that must run before NAMED can run).

When you press Enter, you probably see the UPD FUNCTION SUCCESSFUL at the bottom of your screen, like the following:

```
----- CA-7 CPU JOB PREDECESSORS -----
FUNCTION: UPD          (FORMAT,LIST,UPD)          PAGE 0001
PRED FOR JOB: NAMED          LIST-SCHID:
OPT SCHID LEADTM  PRED-JOB  NEXT-RUN
 *   0      0006   NAMEC     YES

OPTIONS: A=ADD,D=DELETE,U=UPDATE,*=PROCESSED,?=ERROR
PROGRAM: SM61  MSG-INDX: 00  -- DB.3.2  --  yy.ddd / hh:mm:ss
MESSAGE: UPD FUNCTION SUCCESSFUL
        ENTER INPUT FOR NEXT REQUEST
```

From now on, NAMED is not submitted unless NAMEC has started and ended within the last six hours (and has run after the last time NAMED ran).

Preventing Jobs From Running Together

We can also use the same screen to tell CA Workload Automation SE not to run two jobs simultaneously. For example, assume that NAMEE has been scheduled around the same time as NAMED. However, we do not want it to run simultaneously as NAMED because they update the same data set. Define mutually exclusive jobs to CA Workload Automation SE by using these fields on the same screen:

FUNCTION:

Reenter the **U** in UPD.

OPT

Tab down to the first blank line under these headings and enter another **A** under OPT.

PRED-JOB

Identify **NAMEE** as being *mutually exclusive* with NAMED. Type its name and precede the name with a slash, like the following example: **/NAMEE**.

When you press Enter, the screen looks like the following sample:

```

----- CA-7 CPU JOB PREDECESSORS -----
FUNCTION: UPD          (FORMAT,LIST,UPD)          PAGE 0001
PRED FOR JOB: NAMED          LIST-SCHID:
OPT SCHID LEADTM  PRED-JOB  NEXT-RUN
 *   0      0006   NAMEC      YES
 *   0      0000  /NAMEE      YES

OPTIONS: A=ADD,D=DELETE,U=UPDATE,*=PROCESSED,?=ERROR
PROGRAM: SM61  MSG-INDX: 00  -- DB.3.2  --  yy.ddd / hh:mm:ss
MESSAGE: UPD FUNCTION SUCCESSFUL
        ENTER INPUT FOR NEXT REQUEST

```

Because mutual exclusion requires a definition both ways, now we have to complete the same definition for NAMEE. We can do this definition on the same screen. First enter **FORMAT** in the FUNCTION field and press Enter to clear the screen. Then fill in the fields as follows:

FUNCTION:

Enter **UPD**.

PRED FOR JOB:

Enter **NAMEE**.

OPT

Tab down to the first line and enter **A**.

PRED-JOB

Identify **NAMED** as being mutually exclusive with NAMEE. Type its name and precede the name with a slash, like the following example: **/NAMED**.

When you press Enter, the screen looks like the following sample:

```
----- CA-7 CPU JOB PREDECESSORS -----
FUNCTION: UPD      (FORMAT,LIST,UPD)                PAGE 0001
PRED FOR JOB: NAMEE                                LIST-SCHID:
OPT SCHID LEADTM  PRED-JOB  NEXT-RUN
*   0      0000   /NAMED   YES

OPTIONS: A=ADD,D=DELETE,U=UPDATE,*=PROCESSED,?=ERROR
PROGRAM: SM61  MSG-INDX: 00  -- DB.3.2  --  yy.ddd / hh:mm:ss
MESSAGE: UPD FUNCTION SUCCESSFUL
        ENTER INPUT FOR NEXT REQUEST
```

Now if NAMED and NAMEE are both ready for submission simultaneously, CA Workload Automation SE makes one job wait until the other job ends successfully.

Defining a Manual Predecessor

Not all predecessors are CPU jobs. Sometimes a job has to wait to run until a manual task is performed. For example, a tape is received, output is examined, or someone verifies that the input is complete. All of these conditions can be defined to CA Workload Automation SE on the User Memo-Form Predecessors screen. CA Workload Automation SE then waits for someone to indicate that the manual task is performed before it allows the job to run.

To display the User Memo-Form Predecessors screen, follow these steps:

1. Enter **DB.3** to display the Job Predecessor/Successor Menu again.
2. Enter **6** in the FUNCTION field to display the User Memo-Form Predecessors screen.

This screen is displayed:

```

----- CA-7 USER MEMO-FORM PREDECESSORS -----
FUNCTION:          (FORMAT,LIST,UPD)                PAGE 0001
PRED FOR JOB:          LIST-SCHID:
OPT SCHID  *--- MEMO-FORM USER PREDECESSOR ---*  NEXT-RUN

OPTIONS: A=ADD,D=DELETE,U=UPDATE,*=PROCESSED,?=ERROR
PROGRAM: SM61  MSG-INDX: 00  -- DB.3.6  --  yy.ddd / hh:mm:ss
MESSAGE: ENTER FUNCTION, TRANSFER OR ENTER A COMMAND ON THE TOP LINE
    
```

Now assume that we also have to check with a programmer before running NAMED. Here is how to define that to CA Workload Automation SE:

FUNCTION:

Enter **UPD**.

PRED FOR JOB:

Identify **NAMED** because this job is the job that has a requirement.

OPT

Enter **A** under OPT to add a requirement to NAMED.

MEMO-FORM USER PREDECESSOR

State the manual requirement that must be satisfied before NAMED can run: **CALL DAVE AT X234 BEFORE RUNNING.**

When you press Enter, you probably see the UPD FUNCTION SUCCESSFUL at the bottom of your screen, like the following:

```
----- CA-7 USER MEMO-FORM PREDECESSORS -----
FUNCTION: UPD          (FORMAT,LIST,UPD)          PAGE 0001
PRED FOR JOB: NAMED          LIST-SCHID:
OPT SCHID  *--- MEMO-FORM USER PREDECESSOR ---*  NEXT-RUN
*  0      CALL DAVE AT X234 BEFORE RUNNING.      YES

OPTIONS: A=ADD,D=DELETE,U=UPDATE,*=PROCESSED,?=ERROR
PROGRAM: SM61  MSG-INDX: 00  -- DB.3.6  --  yy.ddd / hh:mm:ss
MESSAGE: UPD FUNCTION SUCCESSFUL
        ENTER INPUT FOR NEXT REQUEST
```

Now in addition to its other requirements, NAMED is not submitted until someone satisfies this manual requirement. (We see in posting requirements how this task is done.)

More information:

[Posting Requirements](#) (see page 126)

Displaying Requirements

Before we finish this chapter, display all the requirements for NAMED to verify that we have defined them correctly. To display requirements, enter this command on the top line of your screen:

LJOB, JOB=NAMED, LIST=RQMT

When you press Enter, a screen like the following is displayed:

```

LJOB, JOB=NAMED, LIST=RQMT
JOB=NAMED    LIST=RQMT                                DATE=yy.ddd    PAGE 0001

  JOB   ----JCL----  SYSTEM  USR MAIN PROSE  SCHED  --NUMBER OF-  LAST-RUN
  NAME  ID  MEMBER  -NAME-  -ID -ID-  DSNBR  DSNBR  STP DDS RUNS  DATE/TIME
NAMED  000 NAMED   PRIMER   000 ALL  *NONE* *NONE* 000 000 0000 00000/0000

----- REQUIREMENTS AND NETWORK CONNECTIONS -----
JOB=NAMEC          SCHID=000  VRSN=yy065/1617  LEADTM=06
JOB=/NAMEE         SCHID=000  VRSN=yy065/1618
USR=CALL DAVE AT X234 BEFORE RUNNING.
                   SCHID=000

SLIA-00 REQUEST COMPLETED AT hh:mm:ss ON yy.ddd
  
```

You can see from the list of requirements that NAMED has two job requirements:

- NAMEC must have run within six hours before NAMED is scheduled or must run while NAMED is in the queues waiting to be submitted.
- NAMED cannot run at the same time as NAMEE.

NAMED also has one user requirement: To contact Dave before running the job.

Connecting Resources to Jobs

The Virtual Resource Management (VRM) facility lets you control job submission that is based on resource availability. A job to resource connection can be defined using VRM which establishes resource use at the job level. The resource can be a data set, started task, or any virtual resource name. During the job submission process, the resource availability and the job to resource relationship determine the eligibility of the job for submission.

```
----- CA-7 VIRTUAL RESOURCE MANAGEMENT MENU -----  
FUNCTION ==>  
  
RESOURCE MANAGEMENT OPTIONS:  
  
  1 - JOB RESOURCE MANAGEMENT  
  2 - JOB RESOURCE CROSS REFERENCE LIST  
  3 - ACTIVE JOB RESOURCES DISPLAY  
  4 - PENDING RESOURCES JOB DISPLAY  
  5 - JOBS WAITING ON RESOURCES DISPLAY  
  6 - COREQUISITE RESOURCES LIST  
  7 - RESOURCE COUNT RESOURCE MANAGEMENT  
  
PROGRAM: RSC0  MSG-INDX: 00  -- RM      --  yy.ddd / hh:mm:ss  
MESSAGE: SPECIFY DESIRED OPTION OR ENTER A COMMAND ON THE TOP LINE
```

The VRM facility provides the following features:

- Resource control at the system, job, or step level.
- Job submission control for jobs that use shared or exclusive resources.
- Job corequisite requirements that can exist internally or externally to CA Workload Automation SE.
- Resource count resources which control job submission that is based on the availability of a total number of predefined resource count occurrences for this resource.

Resource Use Types:

- Shared
- Exclusive
- Corequisite
- Address space
- Resource count resources

Note: For more information about Virtual Resource Management, see the *Database Maintenance Guide*.

Chapter 5: Scheduling Non-CPU Tasks

Not all of the tasks in your data center are computer jobs. Often various input tasks are required before a job is run on the CPU. Other tasks are required after the job ends on the CPU. CA Workload Automation SE allows you to schedule these tasks too.

Non-CPU tasks are grouped together and defined to CA Workload Automation SE as *networks*:

- Tasks performed before a job is run on the CPU (preprocessing tasks) make up an *input network*. For example, a number of different data entry tasks can be grouped together into an input network named DATAPREP.
- Tasks performed after a job is run on the CPU (postprocessing tasks) make up an *output network*. For example, all the tasks required to decollate, burst, and distribute reports can be grouped together into an output network named REPORTS. Other tasks performed on checks can make up an output network named CHEKPREP.

Once these networks are defined to CA Workload Automation SE, it is possible to associate them with one or more computer jobs

- Either as *predecessors* if they are performed before the job runs on the computer
- Or as *successors* if they are performed after the job runs on the computer.

For example, we assume that NAMEE is a payroll job that requires both of the data entry tasks in the DATAPREP input network. The paychecks it prints also require processing by the CHEKPREP output network. (NAMEE could have more than one of each type of network, but we are going to assume that it only requires one of each.)

This chapter shows you how to define and schedule these two networks and associate them with NAMEE.

This section contains the following topics:

[Defining Networks](#) (see page 70)

[Scheduling the Networks](#) (see page 73)

[Defining the Input Network as a Predecessor](#) (see page 83)

[Defining the Output Network as a Successor](#) (see page 85)

[Displaying Network Data](#) (see page 86)

Defining Networks

You can define networks for both input and output tasks.

For Input Tasks

The first step is to define each network. To define a network, enter **DB** on any CA Workload Automation SE screen to display the Data Base Maintenance Menu:

```
----- CA-7 DATA BASE MAINTENANCE MENU -----  
FUNCTION ==>  
  
DATA BASE DEFINITION FOR:  
  
  1 - CPU JOB  
    A - CROSS PLATFORM (XPS) JOB DEFINITION  
  2 - SCHEDULING  
  3 - JOB PREDECESSOR/SUCCESSOR  
  4 - WORKLOAD DOCUMENTATION  
  5 - INPUT/OUTPUT NETWORK  
  6 - DATA SET  
  
OTHER FUNCTIONS AVAILABLE:  
  7 - JCL LIBRARY MAINTENANCE  
  8 - TEXT EDITOR  
  9 - CLEAR THE TEXT EDITOR ACTIVE AREA  
      ACTIVE AREA NOW CONTAINS 0000 LINES OF TEXT  
  
PROGRAM: SDMO  MSG-INDX: 00  -- DB      --  yy.ddd / hh:mm:ss  
MESSAGE: SPECIFY DESIRED OPTION OR ENTER A COMMAND ON THE TOP LINE
```

Enter **5** in the FUNCTION field.

When you press Enter, the Input/Output Network Definition screen is displayed:

```

----- CA-7 INPUT/OUTPUT NETWORK DEFINITION -----
FUNCTION:          (ADD,DELETE,FORMAT,LIST,UPD)

NETWORK:          TYPE:
SUB-ID:           JOB:           SCHED PROSE:

STATION 1:
STATION 2:
STATION 3:
STATION 4:
STATION 5:
STATION 6:
STATION 7:
STATION 8:
STATION 9:

PROGRAM: SM40  MSG-INDX: 00  -- DB.5  --  yy.ddd / hh:mm:ss
MESSAGE: SPECIFY DESIRED OPTION OR ENTER A COMMAND ON THE TOP LINE

```

We use this screen first to define the input network.

Fill in this screen as follows:

FUNCTION:

Enter **ADD**.

NETWORK:

Give the name of the input network: **DATAPREP**

TYPE:

Enter **INPUT** to indicate that the tasks in this network must be performed before a job runs on the CPU.

STATION 1:

Identify the workstation where the data entry is performed. Call it **DATAENT**.

STATION 2:

Identify the workstation where the data is verified. Call it **VERIFY**.

When you press Enter, you see the ADD FUNCTION SUCCESSFUL message at the bottom of your screen, like the following:

```
----- CA-7 INPUT/OUTPUT NETWORK DEFINITION -----  
FUNCTION:          (ADD,DELETE,FORMAT,LIST,UPD)  
  
NETWORK: DATAPREP  TYPE: INPUT  
SUB-ID:           JOB:           SCHD PROSE:  
  
STATION 1: DATAENT  
STATION 2: VERIFY  
STATION 3:  
STATION 4:  
STATION 5:  
STATION 6:  
STATION 7:  
STATION 8:  
STATION 9:  
  
PROGRAM: SM40  MSG-INDX: 00  -- DB.5  --  yy.ddd / hh:mm:ss  
MESSAGE: ADD FUNCTION SUCCESSFUL FOR Nwnnnnn
```

For Output Tasks

Now we use this same screen to define the output network. Change the fields on this screen as follows:

FUNCTION:

Reenter the **A**.

NETWORK:

Change the name of the network to **CHEKPREP**.

TYPE:

Change INPUT to **OUTPUT** to indicate that the tasks in this network must be performed after a job runs on the CPU.

STATION 1:

Identify the workstation where the checks are signed. Call it **SIGNCHKS**.

STATION 2:

This output network only has one workstation, so erase VERIFY and leave this field blank.

When you press Enter, you see the ADD FUNCTION SUCCESSFUL message at the bottom of your screen, like this:

```

----- CA-7 INPUT/OUTPUT NETWORK DEFINITION -----
FUNCTION: ADD      (ADD,DELETE,FORMAT,LIST,UPD)

NETWORK: CHEKPREP  TYPE: OUTPUT
SUB-ID:           JOB:           SCHD PROSE:

STATION 1: SIGNCHKS
STATION 2:
STATION 3:
STATION 4:
STATION 5:
STATION 6:
STATION 7:
STATION 8:
STATION 9:

PROGRAM: SM40  MSG-INDX: 00  -- DB.5  --  yy.ddd / hh:mm:ss
MESSAGE: ADD FUNCTION SUCCESSFUL FOR Mwnnnnnn

```

Scheduling the Networks

You can schedule both input and output networks.

Input Network

Networks must be scheduled, as do jobs. To see how to schedule a network, enter **DB.2** in the FUNCTION field to display the Scheduling Menu again:

```
----- CA-7 SCHEDULING MENU -----  
FUNCTION ==>  
  
DATE/TIME SCHEDULING FOR:  
  1 - CPU JOB  
  2 - INPUT NETWORK  
  3 - OUTPUT NETWORK  
  
TRIGGER SCHEDULING FOR:  
  4 - JOB TRIGGERING OTHER CPU JOB(S)  
  5 - INPUT NETWORK TRIGGERING CPU JOB(S)  
  6 - DATA SET TRIGGERING CPU JOB(S)  
  
OTHER FUNCTIONS AVAILABLE:  
  7 - MODIFICATION TO RESOLVED SCHEDULE DATES  
  8 - BASE CALENDAR MAINTENANCE  
  
PROGRAM: SM70  MSG-INDX: 00  -- DB.2  --  yy.ddd / hh:mm:ss  
MESSAGE: ENTER OPTION, TRANSFER OR ENTER A COMMAND ON THE TOP LINE
```

This time, enter **2** in the FUNCTION field to select scheduling for input networks.

When you press Enter, the Input Network Scheduling screen is displayed:

```
----- CA-7 INPUT NETWORK SCHEDULING -----  
FUNCTION:          (CLEAR,DELETE,EDIT,FE,FETCH,REPL,RESOLV,SAVE)  
  
NETWORK:  
  
SCAL:          (DEFAULT SCAL ID FOR ADDS)  
  
  
SCHID-COUNT: 000  
  
PROGRAM: SM71  MSG-INDX: 00  -- DB.2.2  --  yy.ddd / hh:mm:ss  
MESSAGE: ENTER FUNCTION, TRANSFER OR ENTER A COMMAND ON THE TOP LINE
```

To schedule the input network we just defined, fill in the following fields:

FUNCTION:

Enter **EDIT** to define scheduling information.

NETWORK:

Enter **DATAPREP** to identify the network.

SCAL:

Give the two-character name of the calendar you are using. For example, we have been using **5D**.

Press Enter.

This edit screen is displayed. We use it to tell CA Workload Automation SE that we want to schedule the input network two days before payday. Payday is the 15th of the month.

```

----- CA-7 INPUT NETWORK SCHEDULING PARAMETER EDIT -----
FUNCTION:          (ADD,DELETE,EXIT,FORMAT,LIST,REPL,SAVE,SR,SS)
NWK: DATAPREP  SCHID:      SCAL:  ROLL:  INDEX:
  STATION DOTM LDTM DODY   STATION DOTM LDTM DODY
1 DATAENT                2 VERIFY

--  -- DAILY
--  -- WEEKLY   SUN:   MON:   TUE:   WED:   THU:   FRI:   SAT:

--  -- MONTHLY  JAN:   FEB:   MAR:   APR:   MAY:   JUN:
                   JUL:   AUG:   SEP:   OCT:   NOV:   DEC:
                   WEEK:
                   RDAY:

--  -- ANNUAL   DAY:

--  -- SYMETRIC START:      SPAN:

                                DEFAULT SCAL: 5D
                                SCHID-COUNT: 000

PROGRAM: SM72  MSG-INDX: 00  -- DB.2.2-E --  yy.ddd / hh:mm:ss
MESSAGE: ENTER FUNCTION, TRANSFER OR ENTER A COMMAND ON THE TOP LINE

```

Fill in the following fields:

FUNCTION:

Enter **ADD**.

SCHID:

Enter **1**.

ROLL:

Enter **B**. This value rolls DATAPREP backward if payday falls on a weekend or holiday.

INDEX:

Enter **-2** to indicate that this network is to be scheduled two workdays before the date described on the rest of the screen.

DOTM

Use your tab key to place the cursor under this field next to the name of the first workstation. (Station names are filled in for you.) Specify **1200** to indicate that the data entry tasks must be completed by noon.

LDTM

Specify **300** to indicate that the data entry task takes around 3 hours.

DOTM

Move your cursor under the DOTM field for station 2 and enter **1600** to indicate that the data entry must be verified by 4:00 p.m.

LDTM

Specify **400** to indicate that you are allowing 4 hours for the verification task.

MONTHLY

Tab down to this field and enter an **X** to the left of the word MONTHLY.

RDAY

Tab down to this field and enter **15** because payday is the 15th of the month.

Press Enter and watch for the ADD FUNCTION SUCCESSFUL message at the bottom of the screen:

```
----- CA-7 INPUT NETWORK SCHEDULING PARAMETER EDIT -----
FUNCTION: ADD      (ADD,DELETE,EXIT,FORMAT,LIST,REPL,SAVE,SR,SS)
NWK: DATAPREP  SCHID: 1  SCAL:  ROLL: B  INDEX: -002
  STATION  DOTM  LDTM  DODY  STATION  DOTM  LDTM  DODY
1 DATAENT 1200 0300    2 VERIFY  1600 0400

__  __  DAILY
__  __  WEEKLY  SUN:  MON:  TUE:  WED:  THU:  FRI:  SAT:

__ X __ MONTHLY  JAN: X  FEB: X  MAR: X  APR: X  MAY: X  JUN: X
              JUL: X  AUG: X  SEP: X  OCT: X  NOV: X  DEC: X
              WEEK:
              RDAY: 15
              DAY-OF-WEEK:

__  __  ANNUAL  DAY:

__  __  SYMETRIC  START:  SPAN:

                                DEFAULT SCAL: 5D
                                SCHID-COUNT: 001

PROGRAM: SM72  MSG-INDX: 00  -- DB.2.2-E --  yy.ddd / hh:mm:ss
MESSAGE: ADD FUNCTION SUCCESSFUL
```

DATAPREP now has the following schedule criteria:

- It will be scheduled two workdays before the 15th of every month (because we specified -2 in the INDEX field and 15 in the RDAY field). This will normally be the 13th of the month but could be the 11th or 12th, depending on the month. We will see how this works when we resolve the schedule.
- It will be scheduled at the data entry workstation at 9:00 AM so it can be done by noon.
- It will then be scheduled at the verification workstation so the data can be verified by 4:00 PM.

To save it, enter **SS** after FUNCTION and press Enter.

This automatically returns you to the Input Network Scheduling screen:

```

----- CA-7 INPUT NETWORK SCHEDULING -----
FUNCTION: SAVE      (CLEAR,DELETE,EDIT,FE,FETCH,REPL,RESOLV,SAVE)

NETWORK: DATAPREP

SCAL:  5D  (DEFAULT SCAL ID FOR ADDS)

SCHID-COUNT: 001

PROGRAM: SM71  MSG-INDX: 00  -- DB.2.2  --  yy.ddd / hh:mm:ss
MESSAGE: SAVE FUNCTION SUCCESSFUL FOR SIInnnnn
        SCHEDULE MUST BE RESOLVED

```

Now enter **RESOLV** in the FUNCTION field to resolve the schedule.

Note: If you are resolving input networks during the July-December time frame and the next year calendar has not been defined, you receive a message that says SCALxxyy not available (with the yy being the next year). If you receive this message, move the cursor to the end of the command which remains at the top of the screen and enter **,YEAR=yy** where yy is the current year. Press Enter.

The output screens that you see contain SCHEDULE DATA for network DATAPREP. Under this data, you see the processing days that are moved backwards because they fall on holidays on your calendar. (The dates listed here are based on SCAL135D. You probably see different dates.)

Press Enter to scroll through the output screens:

```

RESOLV,SCAL=5D,TEST=NO,PRINT=YES,OLDYR=*,NW=DATAPREP,YEAR=13
      CA-7 SCHEDULE / BASE CALENDAR RESOLUTION
DATE yy.ddd          TIME hh:mm:ss          PAGE NO. 0001
OPTIONS: YEAR=13     SCAL=5D NETWORK=NW.DATAPREP
      OLDYR=* TEST=NO PRINT=YES DUPDATE=NO

0001 SCHEDULES SELECTED FOR RESOLUTION

*****SCHEDULE RESOLUTION STARTED FOR SInnnnnn Nw=DATAPREP
**SCHEDULE DATA :
  ID=001  ROLL=B  INDEX=-002
  SCAL=   WKSTA=(01,DOTM=1200,LEADTM=0300,DAY=000)
          WKSTA=(02,DOTM=1600,LEADTM=0400,DAY=000)
          MONTHLY RDAY=15 MONTH=ALL
**SCHEDULE DAYS ROLL STARTED : ROLL=B
SRC1-113 MAR 15 (DAY# 075) ROLLED BACKWARD TO MAR 14 (DAY# 074)
SRC1-113 JUN 15 (DAY# 167) ROLLED BACKWARD TO JUN 13 (DAY# 165)
SRC1-113 NOV 15 (DAY# 320) ROLLED BACKWARD TO NOV 14 (DAY# 319)
**SCHEDULE DAYS ROLL COMPLETED
**SCHEDULE DAYS ADJUSTMENT FOR INDEX DAY(S) STARTED : INDEX = -002 DAYS
**SCHEDULE DAYS ADJUSTMENT FOR INDEX DAY(S) COMPLETED
    
```

```

RESOLV,SCAL=5D,TEST=NO,PRINT=YES,OLDYR=*,NW=DATAPREP,YEAR=13
      CA-7 SCHEDULE / BASE CALENDAR RESOLUTION
DATE yy.ddd          TIME hh:mm:ss          PAGE NO. 0002
OPTIONS: YEAR=13     SCAL=5D NETWORK=NW.DATAPREP
      OLDYR=* TEST=NO PRINT=YES DUPDATE=NO
*****SCHEDULE RESOLUTION COMPLETED FOR SInnnnnn
      SCAL=13D Nw=DATAPREP
    
```

This screen shows when DATAPREP is scheduled in January:

```

RESOLV,SCAL=5D,TEST=NO,PRINT=YES,OLDYR=*,NW=DATAPREP,YEAR=13
      CA-7 SCHEDULE / BASE CALENDAR RESOLUTION
DATE yy.ddd          TIME hh:mm:ss          PAGE NO. 0003
OPTIONS: YEAR=13     SCAL=5D NETWORK=NW.DATAPREP
      OLDYR=* TEST=NO PRINT=YES DUPDATE=NO

*****
*                CA-7 SCHEDULE CALENDAR FOR          SInnnnnn          *
*                DATE yyddd                            *
*  BASE CALENDAR SCAL135D (DEFAULT)                    *
*****
*                MONTH 01 JAN                            *
*                SUN    MON    TUE    WED    THU    FRI    SAT          *
*                *                *                *                *          *
*                *                *                *                *          *
*                *                *                *                *          *
*                *                *                *                *          *
*                *                *                *                *          *
*                *                *                *                *          *
*****
    
```

In our example, January 15 falls on a Tuesday. One workday before Tuesday is Monday, and one workday before Monday is Friday. Therefore, DATAPREP will be scheduled on Friday, January 11.

Scroll forward again to see February:

```

*****
*                               MONTH 02 FEB                               *
*          SUN    MON    TUE    WED    THU    FRI    SAT                    *
*                                                                 *
*                                                                 *
*                                                                 *
*                               13                                       *
*                                                                 *
*                                                                 *
*                                                                 *
*****

```

In our example, February 15 is a Friday. Therefore DATAPREP is scheduled on the 13th. Scroll forward one more time to display the March calendar:

```

*****
*                               MONTH 03 MAR                               *
*          SUN    MON    TUE    WED    THU    FRI    SAT                    *
*                                                                 *
*                                                                 *
*                               12                                       *
*                                                                 *
*                                                                 *
*                                                                 *
*****

```

In our example, March 15 falls on a Saturday so payday is rolled backward one day to Friday. Therefore, DATAPREP is scheduled on Wednesday the 12th, which is two workdays before payday.

Output Network

fforut networks are scheduled on the Output Network Scheduling screen.

To display this screen, follow these steps:

1. Enter **DB.2** on your current screen to return to the Scheduling Menu.
2. Enter **3** in the FUNCTION field to display the scheduling screen for output networks:

```
----- CA-7 OUTPUT NETWORK SCHEDULING -----  
FUNCTION:          (CLEAR,DELETE,EDIT,FE,FETCH,REPL,RESOLV,SAVE)  
  
NETWORK:  
  
SCHID-COUNT: 000  
  
PROGRAM: SM71  MSG-INDX: 00  -- DB.2.3  --  yy.ddd / hh:mm:ss  
MESSAGE: ENTER FUNCTION, TRANSFER OR ENTER A COMMAND ON THE TOP LINE
```

Fill in this screen as follows:

FUNCTION:

Enter **EDIT** to define scheduling information.

NETWORK:

Enter **CHEKPREP** to identify the network.

Did you notice that there is no SCAL field on this screen? That is, because output networks are scheduled with their CPU jobs; therefore you do not have to resolve them against a calendar.

When you press Enter, this edit screen is displayed:

```

----- CA-7 OUTPUT NETWORK SCHEDULING PARAMETER EDIT -----
FUNCTION:          (ADD,DELETE,EXIT,FORMAT,LIST,REPL,SAVE,SR,SS)
NWK: CHEKPREP   SCHID:
  STATION  DOTM  LDTM  DODY
  1  SIGNCHKS

SCHID-COUNT: 000

PROGRAM: SM72  MSG-INDX: 00  -- DB.2.3-E --  yy.ddd / hh:mm:ss
MESSAGE: ENTER FUNCTION, TRANSFER OR ENTER A COMMAND ON THE TOP LINE

```

Because the output network is scheduled when its CPU job is scheduled, this screen does not contain the usual scheduling criteria. We use it to tell CA Workload Automation SE how long the various tasks in the output network take and when they must be done. To describe the tasks and time, fill in the following fields:

FUNCTION:

Enter **ADD**.

SCHID:

Enter **1**.

DOTM

Assume that someone must sign the checks by noon the day after the CPU job runs so they can be distributed on the 15th. Specify **1200**.

LDTM

Specify **300** to give whoever signs the checks 3 hours to complete the task.

DODY

Enter **1** to indicate that these times are one day later than the times on the CPU job. (The CPU job is scheduled to run the evening before. Therefore, one midnight passes between the CPU job and the output network.)

When you press Enter, the screen looks like the following:

```
----- CA-7 OUTPUT NETWORK SCHEDULING PARAMETER EDIT -----  
FUNCTION: ADD      (ADD,DELETE,EXIT,FORMAT,LIST,REPL,SAVE,SR,SS)  
NWK: CHEKPREP   SCHID: 1  
      STATION  DOTM  LDTM  DODY  
1 SIGNCHKS 1200 0300 0001  
  
SCHID-COUNT: 001  
  
PROGRAM: SM72  MSG-INDX: 00  -- DB.2.3-E --  yy.ddd / hh:mm:ss  
MESSAGE: ADD FUNCTION SUCCESSFUL
```

Enter **SS** to save these times. When you press Enter, you are returned to the Output Network Scheduling screen:

```
----- CA-7 OUTPUT NETWORK SCHEDULING -----  
FUNCTION: SAVE      (CLEAR,DELETE,EDIT,FE,FETCH,REPL,RESOLV,SAVE)  
  
NETWORK: CHEKPREP  
  
SCHID-COUNT: 001  
  
PROGRAM: SM71  MSG-INDX: 00  -- DB.2.3  --  yy.ddd / hh:mm:ss  
MESSAGE: SAVE FUNCTION SUCCESSFUL FOR S0nnnnnn
```

Because the output network is automatically scheduled when its CPU job is scheduled, you do not have to resolve it.

We now have an input network and an output network. The next step is to associate them with a CPU job that requires their services.

Defining the Input Network as a Predecessor

We do not want NAMEE to run on the CPU until its data entry and verification are complete. To keep this situation from happening, we can define the input network DATAPREP as a predecessor to NAMEE. This definition is done on the Input/Output Network Tasks screen. Here is how to display this screen:

1. Return to the main menu by typing **DB** on any screen.
2. When the menu is displayed, enter **3** in the FUNCTION field to define a job predecessor or successor.
3. When the Job Predecessor/Successor Menu is displayed, enter **4** in the FUNCTION field to define the input network as a predecessor.

When you press Enter, this screen is displayed:

```

----- CA-7 INPUT/OUTPUT NETWORK TASKS -----
FUNCTION:          (FORMAT,LIST,UPD)                PAGE 0001
TASK FOR JOB:
OPT SCHID LEADTM  NETWORK  SUB-ID  NWK-SCHID  DESCRIPTION  NEXT-RUN
LIST-SCHID:

OPTIONS: A=ADD,D=DELETE,U=UPDATE,*=PROCESSED,?=ERROR
PROGRAM: SM61  MSG-INDX: 00  -- DB.3.4  --  yy.ddd / hh:mm:ss
MESSAGE: ENTER FUNCTION, TRANSFER OR ENTER A COMMAND ON THE TOP LINE

```

To define the input network as a predecessor for NAMEE, fill in the fields on this screen as follows:

FUNCTION:

Enter **UPD**.

TASK FOR JOB:

Identify **NAMEE**.

OPT

Enter **A** under OPT to add a requirement.

NETWORK

Identify **DATAPREP**.

When these fields are filled in, press Enter and watch for the UPD FUNCTION SUCCESSFUL message at the bottom of the screen:

```
----- CA-7 INPUT/OUTPUT NETWORK TASKS -----
FUNCTION: UPD          (FORMAT,LIST,UPD)          PAGE 0001
TASK FOR JOB: NAMEE          LIST-SCHID:
OPT SCHID LEADTM  NETWORK  SUB-ID  NWK-SCHID  DESCRIPTION  NEXT-RUN
*   0      0000   DATAPREP          0              YES

OPTIONS: A=ADD,D=DELETE,U=UPDATE,*=PROCESSED,?=ERROR
PROGRAM: SM61  MSG-INDX: 00  -- DB.3.4  --  yy.ddd / hh:mm:ss
MESSAGE: UPD FUNCTION SUCCESSFUL
        ENTER INPUT FOR NEXT REQUEST
```

DATAPREP is now defined as a requirement for NAMEE. Because DATAPREP is an input network and an input network must precede CPU processing, CA Workload Automation SE knows that we want DATAPREP as a predecessor to NAMEE. It enforces this relationship for us by not letting NAMEE run on the computer until the people at the DATAENT and VERIFY workstations indicate that they have completed their tasks.

Defining the Output Network as a Successor

Before the payroll checks produced by NAMEE can be distributed, they have to be signed. To help ensure that this manual task is scheduled at the same time that NAMEE is scheduled, we can define the CHEKPREP output network as another requirement for NAMEE. Because an output network follows CPU processing, CA Workload Automation SE assumes that it is a successor to the CPU job. CA Workload Automation SE schedules it for processing at the same time as it schedules NAMEE at the CPU.

We define successor requirements on the Input/Output Network Tasks screen too. Because this screen is already displayed with the predecessor requirement, simply add these fields:

FUNCTION:

Reenter the **U**.

OPT

Tab down to the blank line and enter **A** to add another requirement.

NETWORK

Identify **CHEKPREP**. Because CHEKPREP is an output network, CA Workload Automation SE knows that it is a successor to NAMEE.

NWK-SCHID

Enter **1** because this SCHID is the schedule ID for CHEKPREP.

When you press Enter, you should see the UPD FUNCTION SUCCESSFUL message at the bottom of your screen, like the following:

```

----- CA-7 INPUT/OUTPUT NETWORK TASKS -----
FUNCTION: UPD          (FORMAT,LIST,UPD)          PAGE 0001
TASK FOR JOB: NAMEE          LIST-SCHID:
OPT SCHID LEADTM  NETWORK  SUB-ID  NWK-SCHID  DESCRIPTION  NEXT-RUN
*   0   0000   DATAPREP      0           0           YES
*   0   0000   CHEKPREP      1           1           YES

OPTIONS: A=ADD,D=DELETE,U=UPDATE,*=PROCESSED,?=ERROR
PROGRAM: SM61  MSG-INDX: 00  -- DB.3.4  --  yy.ddd / hh:mm:ss
MESSAGE: UPD FUNCTION SUCCESSFUL
        ENTER INPUT FOR NEXT REQUEST

```

From now on, whenever NAMEE is scheduled for processing, the CHEKPREP network is scheduled too.

Displaying Network Data

To display all jobs that have input network DATAPREP as a predecessor, enter this command on the top line of your screen:

LNTWK,NW=DATAPREP,LIST=USERS

When you press Enter, this screen is displayed:

```
NTWK,NW=DATAPREP,LIST=USERS
LIST=USERS  DSN=NW.DATAPREP                                DATE=yy.ddd    PAGE 0001
*----- NETWORK -----*  SCHED  PROSE  NUMBER  LAST MAINTENANCE  NETWORK
  NAME   DSNBR   TYPE   DSNBR   DSNBR   ST JOB  YYDDD/HMMSS TYPE-  SUBID
DATAPREP Mwnnnnnn  INPUT  SIInnnnn *NONE*  02 001 yyddd/hhmmss DBM
      . LAST MAINTENANCE ON yy.ddd AT hh:mm:ss VIA DBM BY OPERATOR: xxxxxx
----- NETWORK/JOB CROSS REFERENCE -----
JOB=NAMEE      NUMBER OF TIMES USED=01

SLIH-00 REQUEST COMPLETED AT hh:mm:ss ON yy.ddd
```

This screen shows that the only job that uses the DATAPREP input network so far is NAMEE, but many jobs can use the same input network.

To display all jobs that have output network CHEKPREP as a successor, change the command on the top line of your screen from DATAPREP to **CHEKPREP**, like the following:

LNTWK,NW=CHEKPREP,LIST=USERS

When you press Enter, this screen is displayed:

```

LNTWK,NW=CHEKPREP,LIST=USERS
LIST=USERS  DSN=NW.CHEKPREP                                DATE=yy.ddd    PAGE 0001

*----- NETWORK -----*  SCHED  PROSE  NUMBER  LAST MAINTENANCE  NETWORK
NAME  DSNBR  TYPE  DSNBR  DSNBR  ST JOB  YYDDD/HMMSS  TYPE-  SUBID

CHEKPREP Nwnnnnnn  OUTPT  SOnnnnnn  *NONE*  01 001  yyddd/hhmmss  DBM

. LAST MAINTENANCE ON yy.ddd AT hh:mm:ss VIA DBM  BY OPERATOR: xxxxxx

----- NETWORK/JOB CROSS REFERENCE -----
JOB=NAMEE  NUMBER OF TIMES USED=01

SLIH-00 REQUEST COMPLETED AT hh:mm:ss ON yy.ddd
    
```

This screen shows that the only job that uses the CHEKPREP output network so far is NAMEE, but, again, many jobs can use the same output network.

To display the relationship between NAMEE and its networks, enter this command on the top line of your screen:

LJOB,JOB=NAMEE,LIST=RQMT

When you press Enter, this screen is displayed:

```

LJOB,JOB=NAMEE,LIST=RQMT
JOB=NAMEE  LIST=RQMT                                DATE=yy.ddd    PAGE 0001

JOB  ----JCL----  SYSTEM  USR MAIN  PROSE  SCHED  --NUMBER OF-  LAST-RUN
NAME  ID  MEMBER  -NAME-  -ID -ID-  DSNBR  DSNBR  STP  DDS  RUNS  DATE/TIME

NAMEE  000  NAMEE  PRIMER  000  ALL  *NONE*  *NONE*  000  000  0000  00000/0000

----- REQUIREMENTS AND NETWORK CONNECTIONS -----
JOB=/NAMED  SCHID=000  VRSN=yy065/1619
NwK=DATAPREP  SCHID=000  NwKSCHID=000  LEADTM=0000
NwnBR=Nwnnnnnn  SUBID=  ** INPUT **
NwK=CHEKPREP  SCHID=000  NwKSCHID=001  LEADTM=0000
NwnBR=Nwnnnnnn  ** OUTPUT **

SLIA-00 REQUEST COMPLETED AT hh:mm:ss ON yy.ddd
    
```

The screen lists both the input network DATAPREP and the output network CHEKPREP as requirements for NAMEE.

Chapter 6: Checking Schedule Definitions

This section tells you how to use various CA Workload Automation SE commands to see when jobs run, when workstations are scheduled, and how jobs are triggered.

This section contains the following topics:

[Seeing When Jobs Will Run](#) (see page 89)

[Seeing Which Jobs Will Run on Specific Days](#) (see page 91)

[Seeing Which Workstations Will Be Scheduled on Specific Days](#) (see page 92)

[Displaying Trigger Streams](#) (see page 93)

Seeing When Jobs Will Run

When we learned how to resolve a schedule, the output screen (seeing when the job runs) showed us the exact dates the job would run. We can see the same type of display at any time for any job. Enter this command on the top line of any screen, with the name of the job you want to see:

LSCHD,LIST=CALS,JOB=NAMEA

When you press Enter, you see a screen like the following:

```
LSCHD,LIST=CALS,JOB=NAMEA
LIST=CALS JOB=NAMEA                                DATE=yy.ddd    PAGE 0001

JOB      SYSTEM  SCHEDULE #SCH  -BASE CALENDAR-  PROSE  COMMENTS
NAME     NAME     NUMBER  IDS   USERID  B-DATE  NUM

NAMEA    PRIMER   SJnnnnnn 002  SCALyy5D  yy001  *NONE*  JANUARY SCHEDULE
. LAST MAINTENANCE ON yy.ddd AT hh:mm:ss VIA DBM BY OPERATOR: USERX
----- SCHEDULES -----
ID=001   ROLL=F   INDEX=+000
SCAL=    DOTM=2100 LEADTM=0030 STARTM=2030
          WEEKLY   DAY=TUE,THU
ID=002   ROLL=N   INDEX=+000
SCAL=    DOTM=2100 LEADTM=0040 STARTM=2020
          WEEKLY   DAY=MON
----- TRIGGERED JOBS -----
JOB=NAMEB  SCHID=001  QTM=0030 LEADTM=0030 SUBMTM=0000
JOB=NAMED  SCHID=002  QTM=0010 LEADTM=0100 SUBMTM=0000
```

The screen summarizes the scheduling and triggering information that we defined for NAMEA.

Press Enter to scroll forward until you come to a screen that looks like the following:

```
LSCHD,LIST=CALS,JOB=NAMEA
LIST=CALS JOB=NAMEA                                DATE=yy.ddd    PAGE 0002
*****
**          CA-7 SCHEDULE CALENDAR          FOR JOB=NAMEA          **
**                                DATE yyddd                                **
**  BASE CALENDAR SCAL995D  (DEFAULT)                                **
*****
**                                                                 **
**  MONTH 01                                JAN                                **
**                                                                 **
**          SUN          MON          TUE          WED          THU          FRI          SAT          **
**                                                                 **
**                                02          03                                **
**                                07          08          10                                **
**                                14          15          17                                **
**                                21          22          24                                **
**                                28          29          31                                **
**                                                                 **
*****
```

The screen shows you the exact days in January when this job runs. To see the rest of the months, continue to scroll forward as long as you want.

Seeing Which Jobs Will Run on Specific Days

Another way to see when jobs run is to use the FJOB command to *forecast* scheduled jobs. The FJOB command lists all jobs that are scheduled during a specified time. For example, assume that you want to see which jobs will be scheduled on January 2. Enter this command on the top line of your screen:

FJOB, FROM=0102, SPAN=24

When you press Enter, you see a screen like the following:

```

FJOB, FROM=0102, SPAN=24
FJOB                                DATE mm-dd-yy  PAGE 0001
                                FORECAST FOR CA-7 JOBS
PERIOD      : 01-02-yy AT 0000 HRS TO 01-02-yy AT 2400 HRS
JOB(S)      : ALL
SYSTEM(S)   : ALL                JOBNET(S) : ALL
OPTIONS     : JOB-TRIGGERED JOBS INCLUDED
              DSN-TRIGGERED JOBS NOT INCLUDED
              CONNECTED OUTPUT NETWORKS NOT INCLUDED
HIGHEST JOB DATE AND TIME : yy002/2130
HIGHEST JOB NAME         : NAMEB
    
```

Scroll to the next screen.

This screen lists the jobs that are scheduled throughout the one day specified on the forecast command. (The contents of your screen vary, depending on your database.)

```

FJOB, FROM=0102, SPAN=24
FJOB                                DATE mm-dd-yy  PAGE 0001
                                FORECAST FOR CA-7 JOBS
PERIOD      : 01-02-yy AT 0000 HRS TO 01-02-yy AT 2400 HRS
START DTTM  END DTTM  JOB      SYS      SCHED#  SID  TRIGGERING JOB/DSN  RQMT
yy002/2100  yy002/2100  NAMEA   PRIMER  SJnnnnnn 001                NOEX
yy002/2130  yy002/2130  NAMEB   PRIMER  LEV001   001  NAMEA                NOEX
SFC1-00 REQUEST COMPLETED AT hh:mm:ss ON yy.ddd
    
```

As you can see, you can use the FJOB command to see any of the following:

- The schedule of the next day.
- The schedule of the next week.
- The number of jobs scheduled for Christmas day.
- A time in the past, like the forecasted schedule for last Saturday.

Seeing Which Workstations Will Be Scheduled on Specific Days

You can also forecast the workload at workstations. Assume that you want to see which workstations will be scheduled on January 11. Enter this command on the top line of your screen:

FSTN, FROM=0111, TO=0111

When you press Enter, you see a screen like the following:

```
FSTN, FROM=0111, TO=0111
FSTN
                                DATE mm-dd-yy  PAGE 0001
                                FORECAST FOR CA-7 STATIONS
PERIOD      : 01-11-yy AT 0000 HRS  TO 01-11-yy AT 2359 HRS
STATION(S)  : ALL
NETWORK(S)  : ALL
OPTIONS     : JOB-TRIGGERED JOBS INCLUDED
              DSN-TRIGGERED JOBS NOT INCLUDED
              DETAILED STATION RECORDS PROVIDED

HIGHEST STATION DATE AND TIME : yy011/1600
HIGHEST STATION NAME         : VERIFY
```

Scroll to the next screen.

The screen lists the workstations that will be scheduled on January 11, with the times each one is scheduled:

```
FSTN, FROM=0111, TO=0111
FSTN
                                DATE mm-dd-yy  PAGE 0001
                                FORECAST FOR CA-7 STATIONS
PERIOD      : 01-11-yy AT 0000 HRS  TO 01-11-yy AT 2359 HRS

START DTTM  END DTTM  STN #/NAME NETWORK  SUBID  SCHED#  SID  CONNJOB/SID
yy011/0900  yy011/1200  1 DATAENT  DATAPREP  SInnnnnn 001
yy011/1200  yy011/1600  2 VERIFY   DATAPREP  SInnnnnn 001

SFC1-00 REQUEST COMPLETED AT hh:mm:ss ON yy.ddd
```

Displaying Trigger Streams

In Chapter 3, we defined two different schedules for NAMEA:

- In the first schedule, NAMEA triggers NAMEB.
- In the second schedule, NAMEA triggers NAMED.

To verify that we have defined each schedule correctly, we can use the FSTRUC command to display the "structure" of each schedule. To display the first schedule, enter this command on the top line of your screen:

```
FSTRUC,JOB=NAMEA,SCHID=1
```

When you press Enter, an output screen like this one is displayed:

```
FSTRUC,JOB=NAMEA,SCHID=1
FSTRUC                                DATE mm-dd-yy  PAGE 0001
                                FORECAST FOR CA-7 JOBS
START TIME : mm-dd-yy AT hhmm HRS
JOB(S)      : NAMEA
SYSTEM(S)   : ALL                JOBNET(S)  : ALL
OPTIONS     : BOTH JOB- AND DSN-TRIGGERED JOBS INCLUDED
            : CONNECTED OUTPUT NETWORKS NOT INCLUDED
HIGHEST JOB DATE AND TIME      : yyddd/hhmm
HIGHEST JOB NAME                : NAMEB
```

The screen contains general information about NAMEA, including the name of the last job it triggers when it runs under schedule ID 1.

Scroll forward to display this screen:

```
FSTRUC, JOB=NAMEA, SCHID=1
FSTRUC                                DATE mm-dd-yy  PAGE 0001
                                NETWORK STRUCTURE FOR CA-7 JOBS
                                START TIME : mm-dd-yy AT hhmm HRS

LEV#      JOB NAME          SYS   START DTTM  END DTTM  TRIGGERING JOB/DSN/SID
--- NAMEA  ..... PRIMER   yyddd/hhmm yyddd/hhmm           :001
001  NAMEB  ..... PRIMER   yyddd/hhmm yyddd/hhmm  NAMEA           :001

SFC1-00 REQUEST COMPLETED AT hh:mm:ss ON yy.ddd
```

The left side of this screen shows NAMEA at the top of a list. All of the jobs that are triggered from it are indented under it. In this example, the only job we have defined is NAMEB. However, when CA Workload Automation SE is in full production at your shop, you can use this command to examine long lists of triggered jobs. This method is also a good way to examine triggering changes before putting them into production.

The right column identifies NAMEA as the trigger for NAMEB.

To display the second schedule, move the cursor to the end of the FSTRUC command and change SCHID=1 to **SCHID=2**. When you press Enter, these two screens are displayed:

```

FSTRUC,JOB=NAMEA,SCHID=2
FSTRUC                                     DATE mm-dd-yy  PAGE 0001
                                FORECAST FOR CA-7 JOBS
START TIME : mm-dd-yy AT hhmm HRS

JOB(S)      : NAMEA

SYSTEM(S)   : ALL                JOBNET(S)  : ALL

OPTIONS     : BOTH JOB- AND DSN-TRIGGERED JOBS INCLUDED
              CONNECTED OUTPUT NETWORKS NOT INCLUDED

HIGHEST JOB DATE AND TIME      : yyddd/hhmm
HIGHEST JOB NAME                : NAMED
    
```

```

FSTRUC,JOB=NAMEA,SCHID=2
FSTRUC                                     DATE mm-dd-yy  PAGE 0001
                                NETWORK STRUCTURE FOR CA-7 JOBS
START TIME : mm-dd-yy AT hhmm HRS

LEV#      JOB NAME      SYS  START DTTM  END DTTM  TRIGGERING JOB/DSN/SID
--- NAMEA ..... PRIMER  yyddd/hhmm yyddd/hhmm          :002
001  NAMED ..... PRIMER  yyddd/hhmm yyddd/hhmm  NAMEA          :002

SFC1-00 REQUEST COMPLETED AT hh:mm:ss ON yy.ddd
    
```

Here NAMEA triggers NAMED, the way we intended it to.

Chapter 7: Adding Documentation

CA Workload Automation SE lets you define documentation for jobs, systems, networks, data sets, and DD statements. This documentation is free-form and almost unlimited, and can be used to store descriptions, instructions, or call lists.

The next few pages show you how to define documentation for the network we defined previously.

This section contains the following topics:

[Documenting Networks](#) (see page 97)

[Displaying the Documentation](#) (see page 103)

[Documenting Systems](#) (see page 104)

[Displaying System Documentation](#) (see page 107)

[Documenting Jobs](#) (see page 108)

[Displaying a Segment](#) (see page 110)

Documenting Networks

Enter **DB** on any CA Workload Automation SE screen to display the Data Base Maintenance Menu:

```
----- CA-7 DATA BASE MAINTENANCE MENU -----
FUNCTION ==>

DATA BASE DEFINITION FOR:

  1 - CPU JOB
    A - CROSS PLATFORM (XPS) JOB DEFINITION
  2 - SCHEDULING
  3 - JOB PREDECESSOR/SUCCESSOR
  4 - WORKLOAD DOCUMENTATION
  5 - INPUT/OUTPUT NETWORK
  6 - DATA SET

OTHER FUNCTIONS AVAILABLE:
  7 - JCL LIBRARY MAINTENANCE
  8 - TEXT EDITOR
  9 - CLEAR THE TEXT EDITOR ACTIVE AREA
      ACTIVE AREA NOW CONTAINS 0000 LINES OF TEXT

PROGRAM: SDMO  MSG-INDX: 00  -- DB      --  yy.ddd / hh:mm:ss
MESSAGE: SPECIFY DESIRED OPTION OR ENTER A COMMAND ON THE TOP LINE
```

Enter **4** in the FUNCTION field of the Data Base Maintenance Menu to select workload documentation. When you press Enter, the Workload Documentation Menu is displayed:

```
----- CA-7 WORKLOAD DOCUMENTATION MENU -----  
FUNCTION ==>  
  
DOCUMENTATION FOR:  
  1 - CPU JOB  
  2 - INPUT/OUTPUT NETWORK  
  3 - USER-DEFINED ITEM  
  4 - DATA SET  
  5 - DD STATEMENT  
  6 - APPLICATION SYSTEM  
  
PROGRAM: SM10  MSG-INDX: 00  -- DB.4  --  yy.ddd / hh:mm:ss  
MESSAGE: SPECIFY OPTION, TRANSFER OR ENTER A COMMAND ON THE TOP LINE
```

Enter **2** in the FUNCTION field of the documentation menu to select networks.

When you press Enter, the Input/Output Network Documentation screen is displayed:

```
----- CA-7 INPUT/OUTPUT NETWORK DOCUMENTATION -----  
FUNCTION:          (APPEND,CLEAR,DELETE,EDIT,FE,FETCH,LIST,REPL,SAVE,UPD)  
  
JOB:  
SYSTEM:  
  
NETWORK:  
  
DESC:              LINK:  
  
STEP:              DDNAME:  
REPORT-ID:  
FORM:              TRAIN:  CARRIAGE:  COPIES:  
  
ACTIVE SIZE: 0000  
  
PROGRAM: SM11  MSG-INDX: 00  -- DB.4.2  --  yy.ddd / hh:mm:ss  
MESSAGE: ENTER INPUT DATA
```

Fill in this screen as follows:

FUNCTION:

Enter **CLEAR** and press Enter to verify that the work area is clear. Then enter **EDIT**.

NETWORK:

Identify the network that you are documenting: **DATAPREP**.

When you press Enter, a blank input screen like this one is displayed unless you are using CA Workload Automation SE under ISPF.

Note: If you are using CA Workload Automation SE under ISPF, an ISPF editor screen is displayed. You can use standard ISPF edit commands and techniques to enter your documentation.

```

-----10-----20-----30-----40-----50-----60-----70*
PF                                     UPPER NOFILL I(010)

-----10-----20-----30-----40-----50-----60-----70*
EDTK-15 EWF EMPTY.

```

Without moving the cursor, enter the word INSERT on top of the PF, under the scale line at the top of the screen. When you press Enter, the screen is formatted with numbered lines, like the following example:

```
-----10-----20-----30-----40-----50-----60-----70---
+----8
00010
00020
00030
00040
00050
00060
00070
00080
00090
00100
*** INSERT MODE ***
EDTB-00  COMMAND PROCESSED.
```

Enter your documentation on these lines. To illustrate how this process works, enter something on the 00010 line. Then move the cursor to line 00020 and enter something on that line. When you are finished typing, press Enter.

To save your documentation, enter **SS** over PF. (Under ISPF, enter **CA7SS**.) When you press Enter, you are returned to the Input/Output Network Documentation screen. The screen now looks like the following example:

```
----- CA-7 INPUT/OUTPUT NETWORK DOCUMENTATION -----  
FUNCTION: SAVE      (APPEND,CLEAR,DELETE,EDIT,FE,FETCH,LIST,REPL,SAVE,UPD)  
  
JOB:  
SYSTEM:  
  
NETWORK: DATAPREP  
  
DESC:                                     LINK: 0  
  
STEP:          DDNAME:  
REPORT-ID:  
FORM:          TRAIN:    CARRIAGE:    COPIES: 0  
  
ACTIVE SIZE: 0002  
  
PROGRAM: SM11  MSG-INDX: 00  -- DB.4.2  --  yy.ddd / hh:mm:ss  
MESSAGE: SAVE FUNCTION SUCCESSFUL FOR PPnnnnnnnn
```

The ACTIVE SIZE field near the bottom of the screen tells you how many lines of documentation were entered for this network. In this example, it was two lines.

Displaying the Documentation

To display the documentation you recently entered, enter the following command on the top line of your screen:

LPROS,NW=DATAPREP

This output screen is displayed with your network documentation at the bottom:

```

LPROS,NW=DATAPREP
DSN=PP.DATAPREP.NW                                DATE yy.ddd    PAGE 0001

----- PROSE DATASET NAME -----          PPNBR      PROS-TYPE
PP.DATAPREP.NW .....                   PPnnnnnn   NETWORK

. PROSE-TYPE=NWK,NETWORK=DATAPREP
. DESC=
. LAST MAINTENANCE ON yy.ddd AT hh:mm:ss BY OPERATOR: USERX
. FORM=,CARRIAGE=,TRAIN=,COPIES=
. RPTNAME=

THIS INPUT NETWORK PREPARES THE DATA FOR THE PAYROLL JOB AND IS
SCHEDULED TWO WORKDAYS BEFORE PAYDAY.

SLIB-00 REQUEST COMPLETED AT hh:mm:ss ON yy.ddd.
    
```

The LPROS command can be used at any time to display the documentation.

Documenting Systems

Now add the documentation to the system that all of your jobs belong to. To display the Application System Documentation screen, follow these directions:

1. Return to the Workload Documentation Menu by typing **DB.4** on any screen.
2. When the menu is displayed, enter **6** in the FUNCTION field to select APPLICATION SYSTEM.

When you press Enter, this screen is displayed:

```
----- CA-7 APPLICATION SYSTEM DOCUMENTATION -----  
FUNCTION:          (APPEND,CLEAR,DELETE,EDIT,FE,FETCH,LIST,REPL,SAVE,UPD)  
  
SYSTEM:  
  
DESC:              LINK:  
  
ACTIVE SIZE: 0002  
  
PROGRAM: SM11  MSG-INDX: 00  -- DB.4.6  --  yy.ddd / hh:mm:ss  
MESSAGE: ENTER INPUT DATA
```

Fill in this screen as follows:

FUNCTION:

Enter **CLEAR** and press Enter to clear out the work area. Then enter **EDIT**.

SYSTEM:

Identify your system as **PRIMER**.

When you press Enter, a blank input screen displays like this one unless you are using CA Workload Automation SE under ISPF.

Note: If you are using CA Workload Automation SE under ISPF, an ISPF editor screen is displayed. You can use standard ISPF edit commands and techniques to enter your documentation.

```

-----10-----20-----30-----40-----50-----60-----70*
PF                                     UPPER NOFILL I(010)

-----10-----20-----30-----40-----50-----60-----70*
EDTK-15 EWF EMPTY.

```

Enter **INSERT** over PF. When you press Enter, the screen is formatted with numbered lines, like this example:

```

-----10-----20-----30-----40-----50-----60-----70---
+----8
00010

00020

00030

00040

00050

00060

00070

00080

00090

00100

*** INSERT MODE ***
EDTB-00  COMMAND PROCESSED.

```

Enter some documentation about your system on the numbered lines. When you are finished typing, press Enter.

Your screen looks something like this example:

```
-----10-----20-----30-----40-----50-----60-----70*
PF                                UPPER NOFILL I(010)
00010 THIS SYSTEM CONTAINS SAMPLE JOBS FOR THE EXERCISES IN THE PRIMER.

-----10-----20-----30-----40-----50-----60-----70*
```

To save your documentation, enter **SS** over PF. (Under ISPF, enter **CA7SS**.) This action returns you to the Application System Documentation screen:

```
----- CA-7 APPLICATION SYSTEM DOCUMENTATION -----
FUNCTION:      (APPEND,CLEAR,DELETE,EDIT,FE,FETCH,LIST,REPL,SAVE,UPD)

SYSTEM:

DESC:                                     LINK:

ACTIVE SIZE: 0002

PROGRAM: SM11  MSG-INDX: 00  -- DB.4.6  --  yy.ddd / hh:mm:ss
MESSAGE: SAVE FUNCTION SUCCESSFUL FOR PPnnnnnnnn
```

Displaying System Documentation

To display the documentation you recently entered, enter the following command on the top line of your screen:

LPROS,SYS=PRIMER

This output screen is displayed with your system documentation at the bottom:

```

LPROS,SYS=PRIMER
DSN=PP.PRIMER.SYS                                DATE yy.ddd    PAGE 0001

----- PROSE DATASET NAME -----      PPNBR      PROS-TYPE
PP.PRIMER.SYS .....                  PPnnnnnnnn  SYSTEM

. PROSE-TYPE=SYS,SYS=PRIMER
. DESC=
. LAST MAINTENANCE ON yy.ddd AT hh:mm:ss BY OPERATOR: USERX

THIS SYSTEM CONTAINS SAMPLE JOBS FOR THE EXERCISES IN THE PRIMER.

SLIB-00 REQUEST COMPLETED AT hh:mm:ss ON yy.ddd.
    
```

Documenting Jobs

Finally add documentation for NAMEA, including restart instructions which can be displayed separately. Follow these steps to display the CPU Job Documentation screen:

1. Return to the Workload Documentation Menu by typing **DB.4** on any screen.
2. When the menu is displayed, enter **1** in the FUNCTION field to select job documentation.

When you press Enter, this screen is displayed:

```
----- CA-7 CPU JOB DOCUMENTATION -----  
FUNCTION:          (APPEND,CLEAR,DELETE,EDIT,FE,FETCH,LIST,REPL,SAVE,UPD)  
  
JOB:  
SYSTEM:  
  
DESC:                                LINK:  
  
ACTIVE SIZE: 0001  
  
PROGRAM: SM11  MSG-INDX: 00  -- DB.4.1  --  yy.ddd / hh:mm:ss  
MESSAGE: ENTER INPUT DATA
```

Fill in this screen as follows:

FUNCTION:

Enter **CLEAR** and press Enter to clear out the work area. Then enter **EDIT**.

JOB:

Enter **NAMEA**.

When you press Enter, a blank input screen like this one is displayed.

Note: If you are using CA Workload Automation SE under ISPF, an ISPF editor screen is displayed. You can use standard ISPF edit commands and techniques to enter your documentation.

```

-----10-----20-----30-----40-----50-----60-----70*
PF                                     UPPER NOFILL I(010)

-----10-----20-----30-----40-----50-----60-----70*
EDTK-15 EWF EMPTY.

```

Enter **INSERT** over PF.

When you press Enter, the screen is formatted with numbered lines, like this example:

```

-----10-----20-----30-----40-----50-----60-----70---
+----8
00010

00020

00030

00040

00050

00060

00070

00080

00090

00100

*** INSERT MODE ***
EDTB-00  COMMAND PROCESSED.

```

Enter one line of general job documentation. Then move the cursor to line 00020 and enter:

#RESTART

Then move the cursor to line 00030 and enter this line:

THIS JOB IS ONLY RESTARTABLE FROM STEP 1.

Now move the cursor to line 00040 and enter:

#END,RESTART

Next, press Enter. Enter **SS** over PF to save it and return to the CPU Job Documentation screen. (Under ISPF, enter **CA7SS**.)

Displaying a Segment

Now move the cursor to the top line of your screen. Use this command to display only the restart instructions for NAMEA, not the first line of general documentation:

LPROS,JOB=NAMEA,SEG=RESTART

The output screen shows only the line of restart instructions you entered on the edit screen. By introducing them with the #RESTART, you can display only that *segment* of the documentation that applies to restart. The segment looks like this example:

```
LPROS ,JOB=NAMEA,SEG=RESTART
DSN=PP.NAMEA.JOB                DATE yy.ddd   PAGE 0001
SEG=(RESTART)

----- PROSE DATASET NAME -----      PPNBR      PROS-TYPE
PP.NAMEA.JOB .....                PPnnnnnnnn  JOB
. PROSE-TYPE=JOB,JOB=NAMEA,SYS=
. DESC=
. LAST MAINTENANCE ON yy.ddd AT hh:mm:ss BY OPERATOR: USERX

THIS JOB IS ONLY RESTARTABLE FROM STEP 1.

SLIB-00 REQUEST COMPLETED AT hh:mm:ss ON yy.ddd.
```

Chapter 8: Tracking Scheduled Work

This section describes various CA Workload Automation SE commands that you can use to list current and completed work.

This section contains the following topics:

[Listing Current Jobs](#) (see page 112)

[Listing Current Networks](#) (see page 117)

[Listing Completed Work](#) (see page 118)

Listing Current Jobs

When the CPU jobs are scheduled for processing, CA Workload Automation SE places them in a *Request queue*. In the Request queue, they wait until all of their requirements are satisfied. When all of their requirements are satisfied, they move into a *Ready queue*. From there, they are submitted to the computer. When they start running, they move into an *Active queue*. To see a list of the jobs in these three queues, enter this command on the top line of your screen:

LQ

When you press Enter, you see a screen like this example.

Note: The number of jobs on your list can vary, depending on the number of jobs that CA Workload Automation SE is processing currently at your shop. If your queues display no jobs, use this sample to see the information that the LQ command displays.

```

LQ
LIST=                                DATE=yy.ddd    PAGE 0001

  JOB  QUEUE CA-7 -DAY(DDD) AND TIME(HHMM) -- CPU   SCH ENTRY MSTR JOB
  NAME  NAME JOB# DEADLINE SUB/START DUE-OUT SPEC/RUN ID  MODE  REQ  STATUS

JOBX   REQ 0003 326/1025 *NONE* 326/1030 ALL-   001 SSCN 001
DLBR2  REQ 0005 326/1125 *NONE* 326/1126 *NOEX* 001 DEMD 001
JOBY   REQ 0001 326/1154 *NONE* 326/1200 ALL-   001 AUTO 008 LATE
M123   RDY 0002 326/1155 *NONE* 326/1200 SY1 - 001 SSCN 000
FYW883 ACT 0037 326/1324 *NONE* 326/1345 ALL-   001 AUTO 000
EOM    RDY 0045 326/1524 326/1500 326/1530 ALL-   001 AUTO 000

SLIF-00 REQUEST COMPLETED AT hh:mm:ss ON yy.ddd
    
```

The second column identifies the queue that each job is in at the current time:

REQ

Indicates the Request queue.

RDY

Indicates the Ready queue.

ACT

Indicates the Active queue.

The ENTRY MODE column tells how the job got into the queue:

SSCN

The job was brought in automatically when CA Workload Automation SE scanned the database looking for jobs that are scheduled for processing in the next few hours.

DEMD

Someone used the DEMAND command to tell CA Workload Automation SE to run the job now.

AUTO

Another job, a network, or a data set triggered the job.

The last column gives the current status of the job. The status can tell you like the job is late, has abended, or has failed with a JCL error.

Note: For more information about the JOB STATUS field, see the *Command Reference Guide*.

Listing By Status or Queue

Instead of listing all of the jobs in the three queues, you can list only jobs with a particular status. Add the ST parameter to the LQ statement, like this example:

LQ,ST=LATE

This command lists only late jobs. Another useful variation of this command is this example:

LQ,ST=RSTR

This command lists all jobs that require a restart. These jobs are back in the request queue after abending or ending with JCL errors or bad condition codes.

If you want to list the jobs in each queue separately, you can do so with these commands:

LREQ

Lists the jobs in the request queue, either waiting for all of their requirements to be satisfied or waiting to be restarted. Jobs that end successfully also appear in this queue briefly while their job completion is processed.

LRDY

Lists these types of jobs:

- Jobs that have been submitted to the CPU but are not yet active.
- Jobs that are ready to submit to the CPU but are waiting for resources to become available.

LACT

Lists the jobs that are currently executing on a CPU.

Try issuing each of these commands at your terminal now. If you do not see any jobs, no jobs are currently in the specified queue.

Listing More About One Job

If you want to see the queue information about a particular job, you can add the JOB parameter to the LQ statement, like this example:

LQ,JOB=NAMED

Assuming the job that you specify is in one of the queues at the time, the screen you see look like this example:

```

LQ,JOB=NAMED

LIST=STATUS JOB=NAMED                                DATE=yy.ddd    PAGE 0001

  JOB  QUEUE CA-7 -DAY(DDD) AND TIME(HHMM) -- CPU   SCH ENTRY MSTR JOB
  NAME  NAME JOB# DEADLINE SUB/START DUE-OUT SPEC/RUN ID  MODE  REQ  STATUS

NAMED   REQ 0008 068/1538 *NONE* 068/1538 *NOEX* 001 DEMD 002

----- REQUIREMENTS STATUS -----
----- INTERNAL JOB=NAMEC      DATE/TIME=yy068/0838
----- EXTERNAL USR=CALL DAVE AT X234 BEFORE RUNNING.
----- DATE/TIME=yy068/1438

SLIF-00 REQUEST COMPLETED AT hh:mm:ss ON yy.ddd

```

This display shows you the queue the job is in (REQ for request). The display lists the requirements that must be satisfied so that this job can move to the ready queue.

Listing Requirements

To list the satisfied and unsatisfied requirements, add the LIST parameter to the command like this example:

LQ,JOB=NAMED,LIST=RQMT

```
LQ, JOB=NAMED, LIST=RQMT
LIST=RQMT JOB=NAMED                                DATE=yy.ddd    PAGE 0001

  JOB  QUEUE CA-7 -DAY(DDD) AND TIME(HHMM) -- CPU   SCH ENTRY MSTR JOB
  NAME NAME JOB# DEADLINE SUB/START DUE-OUT SPEC/RUN ID  MODE  REQ  STATUS

NAMED   REQ 0008 068/1538 *NONE* 068/1538 *NOEX* 001 DEMD 002

----- REQUIREMENTS STATUS -----
----- INTERNAL JOB=NAMEC    DATE/TIME=yy068/0838
----- X  INTERNAL JOB=/NAMEE  DATE/TIME=yy065/1618
----- EXTERNAL USR=CALL DAVE AT X234 BEFORE RUNNING.
----- DATE/TIME=yy068/1438

SLIF-00 REQUEST COMPLETED AT hh:mm:ss ON yy.ddd
```

The satisfied requirements have an X in front of them. The unsatisfied ones are without the X.

Listing Current Networks

When input networks are scheduled for processing, as defined previously, CA Workload Automation SE places them in a *Preprocessing queue* where they wait to be posted. To see a list of these networks, enter this command on the top line of your screen:

LPRE

You see a screen like this example:

```

LPRE
LIST=                                DATE=yy.ddd    PAGE 0001

  CA-7 NETWORK NETWORK STATION  JOB  *-----DAY(DDD) AND TIME(HHMM)-----*
  REF#  SUBID  DESC  NAME  NAME  DEADLINE  LOGIN  DUE-OUT NW/LGOUT

0010001          DATAPREP DATAENT DMD#0010 068/1442 *NONE* 068/1742 DATAPREP
0010002          DATAPREP VERIFY  DMD#0010 068/1742 *NONE* 068/2142 DATAPREP

SLIF-00 REQUEST COMPLETED AT hh:mm:ss ON yy.ddd

```

The number of networks on your list varies, depending on the number of networks that CA Workload Automation SE schedules at your shop. If your queues show no networks, you can use this picture to see the information in this display. Each workstation in the network is listed separately.

Output networks are placed in a *Postprocessing queue*. This placement happens automatically if the output network is defined on the Input/Output Network Tasks screen as a successor to a CPU job. When the CPU job is placed in the request queue, its output network is automatically placed in the postprocessing queue.

To see a list of networks in the postprocessing queue, enter this command on the top line of your screen:

LPOST

You see a screen like this example:

```

LPOST
LIST=                                DATE=yy.ddd    PAGE 0001

  CA-7 NETWORK NETWORK STATION  JOB  *-----DAY(DDD) AND TIME(HHMM)-----*
  REF#  SUBID  DESC  NAME  NAME  DEADLINE  LOGIN  DUE-OUT NW/LGOUT

0011011          SIGNCHKS DMD#0011 068/1442 *NONE* 068/1742 CHEKPREP

SLIF-00 REQUEST COMPLETED AT hh:mm:ss ON yy.ddd

```

Again, the number of networks on your list can vary, depending on the number of networks that CA Workload Automation SE schedules at your shop. If your queues show no networks, you can use this picture to see the information in this display. Again, each workstation in the network is listed separately.

Listing Completed Work

Two more list commands show you jobs that already ran. When a job ends successfully, its queue record moves into the *Prior-run queue*. To list the jobs currently in your prior-run queue, use this command:

LPRRN

Depending on the number of jobs that have run in your shop, you see a screen similar to this example:

```
LPRRN
LIST=                                     DATE=yy.ddd   PAGE 0001

JOB   CA-7 DEADLINE  START  DUE-OUT  COMPLETE  CPU   SCH  ENTRY JOB
NAME  JOB#  DDD/HHMM DDD/HHMM DDD/HHMM YYDDD/HHMM SPEC/RUN ID  MODE STATUS

WHIDO951 0001 068/1104 068/1014 068/1200 yy068/1014 ALL-IP01 001 SSCN C-C0000
WHIDO952 0002 068/1103 068/1014 068/1200 yy068/1014 ALL-IP01 001 SSCN C-C0000
WHIDO511 0004 068/1104 068/1014 068/1200 yy068/1014 ALL-IP01 001 AUTO C-C0000
WHIDO521 0005 068/1103 068/1014 068/1200 yy068/1014 ALL-IP01 001 AUTO C-C0000
A       0121 047/1207 047/1115 047/1207 yy047/1115 ALL-IP01 001 DEMD C-C0000
WHIDO981 0048 067/0920 067/0415 067/0930 yy067/0415 ALL-IP01 001 SSCN C-C0000
WHIDO961 0060 067/0915 067/0615 067/0930 yy067/0615 ALL-IP01 001 SSCN C-C0000
WHIDO971 0050 067/0915 067/0415 067/0930 yy067/0415 ALL-IP01 001 SSCN C-C0000
WHIDO982 0051 067/0905 067/0415 067/0930 yy067/0415 ALL-IP01 001 AUTO C-C0000
XWHIDO  0052 067/1100 067/0415 067/1150 yy067/0415 ALL-IP01 001 AUTO C-C0000
XXWHIDO 0053 067/0850 067/0415 067/0940 yy067/0415 ALL-IP01 001 AUTO C-C0000
AWHIDO  0061 067/1100 067/0615 067/1150 yy067/0615 ALL-IP01 001 AUTO C-C0000
WHIDO96A 0062 067/0914 067/0615 067/0930 yy067/0615 ALL-IP01 001 AUTO C-C0000
WHIDO96B 0063 067/0913 067/0615 067/0930 yy067/0615 ALL-IP01 001 AUTO C-C0000
WHIDO96C 0064 067/0912 067/0615 067/0930 yy067/0615 ALL-IP01 001 AUTO C-C0000
WHIDO962 0065 067/0905 067/0615 067/0930 yy067/0615 ALL-IP01 001 AUTO C-C0000
```

This screen lists the last good run of every CA Workload Automation SE submitted job.

You can use the LRLOG command to list the jobs and networks that have been processed in your shop in the last five days. You can issue the command without a job name to see all the jobs that have been processed. Alternately, you can specify a job name to track a specific job or group of jobs. Here is how you would use the command to track a group of jobs:

LRLOG,JOB=WHIDO95*,DATE=*

The output shows all the occurrences of WHIDO951 and WHIDO952 in the last five days, including restarts:

```
LRLOG,JOB=WHIDO95*,DATE=*
DATE=*                                DATE=yy.ddd    PAGE 0001

  EVENT      OBJECT                      ENTRY TRGR          LATE
TYPE  TIME   TYPE  NAME  CA7#  SCH SYSTEM  STATUS MODE CA7#  START      END

C yy066/0815 J WHIDO951 0008 001      COMP  SSCN 0000 yy066/0812 yy066/0813
C yy066/0825 J WHIDO952 0013 001      COMP  SSCN 0000 yy066/0822 yy066/0824
C yy067/0815 J WHIDO951 0069 001      COMP  SSCN 0000 yy067/0811 yy067/0812
C yy067/0825 J WHIDO952 0070 001      COMP  SSCN 0000 yy067/0820 yy067/0822
C yy068/0813 J WHIDO951 0031 001      COMP  SSCN 0000 yy068/0809 yy067/0812
C yy068/0823 J WHIDO952 0032 001      COMP  SSCN 0000 yy068/0818 yy067/0821
C yy069/0815 J WHIDO951 0086 001      COMP  SSCN 0000 yy069/0812 yy069/0813
C yy069/0825 J WHIDO952 0088 001      COMP  SSCN 0000 yy069/0822 yy069/0824
C yy070/0813 J WHIDO951 0126 001      COMP  SSCN 0000 yy070/0809 yy070/0812
C yy070/0823 J WHIDO952 0128 001      COMP  SSCN 0000 yy070/0818 yy070/0821

SLIF-00 REQUEST COMPLETED AT hh:mm:ss ON yy.ddd
```

Do you know the name of a job that has run in your shop in the last five days? If so, try this command with your job name in the JOB field. If you do not specify a job name, the output from this command can be long. If this long output happens, you can stop scrolling through it at any time. You can go on to the next exercise.

Chapter 9: Controlling Work in Progress

This section shows you how to demand jobs and networks and how to use the various queue maintenance screens to control jobs and networks in the queues.

This section contains the following topics:

- [Running Jobs By Request](#) (see page 121)
- [Showing Jobs That Are Waiting](#) (see page 122)
- [Posting Requirements](#) (see page 126)
- [Restarting a Failed Job](#) (see page 129)
- [Changing JCL for a Waiting Job](#) (see page 130)
- [Posting Networks](#) (see page 131)

Running Jobs By Request

Most of the jobs in your shop are either scheduled or triggered, the way we scheduled and triggered jobs in Chapter 3. But sometimes a job must run on a different day or must run only by special request. These jobs can be *demanded in* to the system by issuing the DEMAND command. Demanding in two of our jobs illustrates this method. Enter this command on the top line of your screen:

DEMANDH,JOB=NAMED

You see a message like this example on your screen:

```
DEMANDH,JOB=NAMED
SP07-00 JOB NAMED (nnnn) ADDED TO THE REQ/Q BY DEMANDH
REQUEST COMPLETED AT hh:mm:ss ON yy.ddd.
```

Then enter this command:

DEMANDH,JOB=NAMEC

You see this message:

```
DEMANDH,JOB=NAMEC
SP07-00 JOB NAMEC (nnnn) ADDED TO THE REQ/Q BY DEMANDH
REQUEST COMPLETED AT hh:mm:ss ON yy.ddd.
```

Showing Jobs That Are Waiting

Now we can see these jobs in the Request queue and can learn how to control them. Start by displaying the Queue Maintenance Menu. To display this menu, enter this command (either on the top line or in the FUNCTION field):

QM

This menu is displayed:

```
----- CA-7 QUEUE MAINTENANCE MENU -----  
FUNCTION ==>  
  
MAINTENANCE TO BE PERFORMED ON:  
 1 - CPU JOBS STATUS  
 2 - CPU JOB PREDECESSORS  
 3 - CPU JOB ATTRIBUTES  
 4 - CPU JOB IN RESTART STATUS  
 5 - QUEUED JCL  
 6 - INPUT NETWORKS  
 7 - OUTPUT NETWORKS  
  
PROGRAM: QM00 MSG-INDX: 00 -- QM -- yy.ddd / hh:mm:ss  
MESSAGE: ENTER FUNCTION, TRANSFER OR ENTER A COMMAND ON THE TOP LINE
```

To see the status of your CPU jobs, enter **1** in the FUNCTION field.

When you press Enter, this screen is displayed:

```

----- CA-7 QUEUE MAINTENANCE - CPU JOBS STATUS PROMPT -----
FUNCTION ==> (LEAVE BLANK EXCEPT TO TRANSFER)

DESIRED JOB(S) => SPECIFIC, MASK OR CA-7# (DEFAULT ALL)
CA-7 SYSTEM => SPECIFIC OR MASK (DEFAULT ALL)
LIST SEQUENCE => J=JOBNAME, N=JOB#, E=QUEUE ENTRY (DEFAULT)
CA-7 QUEUE ID => REQ RDY OR ACT (DEFAULT IS REQ)
DISPLAY RQMTS => NO (DISPLAY REQUIREMENT INFORMATION)
RQMT CRITERIA => (ALL, ANY, JOB, INT, EXT, USR, NWK, SUB, HLD, JCLO,
VER, SKEL, REST, BINT)

FILL FUNCTION => (OPTIONAL)
  C = CANCEL R = RELEASE FROM HOLD STATUS
  F = GO TO RESTART SCREEN S = SATISFY SUBMIT TIME RQMT
  H = PLACE IN HOLD U = GO TO ATTRIBUTE UPDATE SCREEN
  J = REVERSE JCL OVERRIDE RQMT V = REVERSE VERIFY RQMT STATUS
  P = RESPOND TO PROMPTING X = GO TO JOB PREDECESSOR SCREEN
  Q = REQUEUE FOR A RESTART E = FETCH QUEUED JCL AND EDIT

PROGRAM: QM2F MSG-INDX: 00 -- QM.1 -- yy.ddd / hh:mm:ss
MESSAGE: ENTER VALUES, TRANSFER OR ENTER A COMMAND ON THE TOP LINE

```

The panel asks you the jobs that you want to see, the order you want them listed, and the queues you want to see. To see all jobs in the Request queue in the order they reside in the queue, press Enter.

This screen is displayed:

```

----- CA-7 QUEUE MAINTENANCE - CPU JOBS STATUS -----
F-JOBNAME--CA7#
  NAMED   nnnn
  NAMEC   nnnn
JOB: *
SYS: *
SEQ: ENTRY
QUEUE: REQ
LIST: ALL
FUNCTIONS:
  C=CANCEL
  F=RESTART
  H=HOLD
  J=JCLOVRD
  P=RSVP
  Q=REQUEUE
  R=RELEASE
  S=SUBTM OFF
  U=UPDATE
  V=VERIFY
  X=RQMT POST
  E=EDIT QJCL

PROGRAM: QM20 MSG-INDX: 00 -- QM.1-X -- yy.ddd / hh:mm:ss
MESSAGE: ENTER FUNCTION IN 'F' FIELD OR ENTER A COMMAND ON THE TOP LINE

```

The jobs that you see listed on your screen depend on the number of actual jobs in your Request queue currently. You can also see NAMEC and NAMED, which you recently added to the Request queue by the DEMANDH command. (If not, scroll forward until you do.)

This screen not only lists the jobs in the queue, it also lets you change their status, their JCL, or the way they are processed. The right side of the screen lists the function codes that you can use for changes.

The best way to see why a job is sitting in the Request queue is to use the LQ command to list its requirements. This way is the same way we did previously. Try this method now with NAMED by typing this command on the top line of your screen:

LQ,JOB=NAMED

When you press Enter, this screen is displayed:

```
LQ,JOB=NAMED
LIST=STATUS JOB=NAMED                                DATE=yy.ddd    PAGE 0001

  JOB  QUEUE CA-7 -DAY(DDD) AND TIME(HHMM)-- CPU    SCH ENTRY MSTR JOB
  NAME NAME JOB# DEADLINE SUB/START DUE-OUT SPEC/RUN ID  MODE REQ  STATUS

NAMED   REQ nnnn 068/1828 *NONE* 068/1828 *NOEX* 001 DEMD 003

----- REQUIREMENTS STATUS -----
----- JOB ON HOLD
----- INTERNAL JOB=NAMEC    DATE/TIME=yy068/1727
----- EXTERNAL USR=CALL DAVE AT X234 BEFORE RUNNING.
-----                   DATE/TIME=yy068/1728

SLIF-00 REQUEST COMPLETED AT hh:mm:ss ON yy.ddd
```

As you can see, NAMED has the same requirements it did in the (listing more than one job) sample screen. NAMED also has the additional requirement that it is on hold. The job is on hold because we added it to the Request queue with the DEMANDH command.

Another way to see what requirements are holding a job in the Request queue is to use the XQM command. If you go to the top of the screen and you enter XQM, the CPU Jobs Status (RQMTS) screen is displayed:

```

----- CA-7 QUEUE MAINTENANCE - CPU JOBS STATUS (RQMTS) -----
F-JOBNAME---J--I--E--U--N-SHJV
NAMEC      . . . . . H
NAMED      1 . . 1 . H

JOB: *
SYS: *
SEQ: JOBNAME
QUEUE: REQ
LIST: ALL
FUNCTIONS:
C=CANCEL
F=RESTART
H=HOLD
J=JCLOVRD
P=RSVP
Q=REQUEUE
R=RELEASE
S=SUBTM OFF
U=UPDATE
V=VERIFY
X=RQMT POST
E=EDIT QJCL

PROGRAM: QM20  MSG-INDX: 00  -- QM.1-M  --  yy.ddd / hh:mm:ss
MESSAGE: ENTER FUNCTION IN 'F' FIELD OR ENTER A COMMAND ON THE TOP LINE

```

The CPU Jobs Status (RQMTS) screen shows you a summary of the outstanding requirements for each job listed. The screen shows counts for the number of job requirements (J), internal data set requirements (I), external data set requirements (E), user requirements (U), and network requirements (N). The screen also has flags (SHJV) for submit time requirement (S), hold requirement (H), JCL override requirement (J), and verify requirement (V).

For NAMED to move from the request queue to the ready queue, all of its requirements must be posted. We can illustrate how to do this method by returning to the CPU Jobs Status screen. (You can also post them the same way from the XQM screen.)

Posting Requirements

To return directly to the CPU Jobs Status screen, enter **XQ** on the top line of your screen. When you press Enter, this screen is redisplayed:

```
----- CA-7 QUEUE MAINTENANCE - CPU JOBS STATUS -----
F-JOBNAME--CA7#
  NAMED      nnnn
  NAMEC      nnnn
                                           JOB: *
                                           SYS: *
                                           SEQ: ENTRY
                                           QUEUE: REQ
                                           LIST: ALL
                                           FUNCTIONS:
                                           C=CANCEL
                                           F=RESTART
                                           H=HOLD
                                           J=JCLVRD
                                           P=RSVP
                                           Q=REQUEUE
                                           R=RELEASE
                                           S=SUBTM OFF
                                           U=UPDATE
                                           V=VERIFY
                                           X=RQMT POST
                                           E=EDIT QJCL

PROGRAM: QM20  MSG-INDX: 00  -- QM.1-X  --  yy.ddd / hh:mm:ss
MESSAGE: ENTER FUNCTION IN 'F' FIELD OR ENTER A COMMAND ON THE TOP LINE
```

Because NAMEC is one of the NAMED requirements, it must run before NAMED can run. For NAMEC to run, we must satisfy its requirements. To satisfy them, tab down to the F field next to NAMEC and enter **X**.

When you press Enter, the CPU Job Predecessors screen is displayed:

```
----- CA-7 QUEUE MAINTENANCE - CPU JOB PREDECESSORS -----
JOB: NAMEC   CA-7#: nnnn  MCNT: 001
F-TYP-NUMBER-E-DESCRIPTION
  HLD        JOB HELD IN REQUEST QUEUE

PROGRAM: QM30  MSG-INDX: 00  -- QM.2-X  --  yy.ddd / hh:mm:ss
MESSAGE: SET 'F' = 'X' TO POST OR ENTER A COMMAND ON TOP LINE
```

The screen lists the only requirement that is keeping NAMEC in the Request queue: the job is on hold. To satisfy this requirement, simply tab down to the requirement and enter **X** next to it. When you press Enter, you are returned to the CPU Jobs Status screen:

```

----- CA-7 QUEUE MAINTENANCE - CPU JOBS STATUS -----
F-JOBNAME--CA7#
  NAMED      nnnn
* NAMEC      nnnn
JOB: *
SYS: *
SEQ: ENTRY
QUEUE: REQ
LIST: ALL
FUNCTIONS:
  C=CANCEL
  F=RESTART
  H=HOLD
  J=JCLOVRD
  P=RSVP
  Q=REQUEUE
  R=RELEASE
  S=SUBTM OFF
  U=UPDATE
  V=VERIFY
  X=RQMT POST
  E=EDIT QJCL

PROGRAM: QM20  MSG-INDX: 00  -- QM.1-X  --  yy.ddd / hh:mm:ss
MESSAGE: ENTER FUNCTION IN 'F' FIELD OR ENTER A COMMAND ON THE TOP LINE
  
```

The asterisk next to NAMEC indicates that its requirement was posted. You can now post 'the remaining requirements for NAMED by typing **X** next to it.

When you press Enter, the CPU Job Predecessors screen is displayed with the outstanding requirements for NAMED:

```

----- CA-7 QUEUE MAINTENANCE - CPU JOB PREDECESSORS -----
JOB: NAMED  CA-7#: nnnn  MCNT: 003
F-TYP-NUMBER-E-DESCRIPTION
HLD        JOB HELD IN REQUEST QUEUE
JOB        NAMEC
USR        CALL DAVE AT X234 BEFORE RUNNING.

PROGRAM: QM30  MSG-INDX: 00  -- QM.2-X  --  yy.ddd / hh:mm:ss
MESSAGE: SET 'F' = 'X' TO POST OR ENTER A COMMAND ON TOP LINE
  
```

Assume that we call Dave to ensure that we can release NAMED. Now we can post this requirement as having been satisfied. To post this requirement, enter **X** in front of it. Also assume that you are ready to remove the hold on NAMED. To do that, enter **X** next to that requirement. When you press Enter, you are returned to the CPU Jobs Status screen:

```
----- CA-7 QUEUE MAINTENANCE - CPU JOBS STATUS -----
F-JOBNAME--CA7#
* NAMED      nnnn
  NAMEC      nnnn
                                           JOB: *
                                           SYS: *
                                           SEQ: ENTRY
                                           QUEUE: REQ
                                           LIST: ALL
                                           FUNCTIONS:
                                           C=CANCEL
                                           F=RESTART
                                           H=HOLD
                                           J=JCLOVRD
                                           P=RSVP
                                           Q=REQUEUE
                                           R=RELEASE
                                           S=SUBTM OFF
                                           U=UPDATE
                                           V=VERIFY
                                           X=RQMT POST
                                           E=EDIT QJCL

PROGRAM: QM20  MSG-INDX: 00  -- QM.1-X  --  yy.ddd / hh:mm:ss
MESSAGE: ENTER FUNCTION IN 'F' FIELD OR ENTER A COMMAND ON THE TOP LINE
```

The asterisk next to NAMED indicates that its requirements were posted.

Restarting a Failed Job

If you must restart a job, the job is also listed on the CPU Jobs Status screen. To restart it, you would enter F next to the job name. (We do not have any jobs to restart. Do not do this command online.) This restart would display this screen (or a shorter version if your shop does not use CA WA Restart Option):

```
----- CA-7 QUEUE MAINTENANCE - CPU JOB IN RESTART STATUS -----
JOB: NAMEC      CODE: JCLERR  LAST-STEP:      MCNT: 001    CA 11:
CA-7#: nnnn     JES#: nnnn   NODE-NAME: LOCAL  JNODE:

REASON:

--  -- RESUBMIT FOR PRODUCTION

--  -- FORCE COMPLETE

--  -- CA-11 RESTART/RERUN      PSEUDO:
START:                          END:
CC:      BYPGDG:      USAGE:      LRTCD:      = 0
CMT STATUS:

--  -- SET PARM DATA FOR RMS AND RESUBMIT
PARM:                              #

--  -- DO NOT INSERT RMS PROC BUT RESUBMIT

PROGRAM: QM50  MSG-INDX: 01  -- QM.4-X  -- yy.ddd / hh:mm:ss
MESSAGE: 'X' THE DESIRED FUNCTION OR ENTER A COMMAND ON THE TOP LINE
```

The name of the job you want to restart would be filled in for you at the top of the screen. All that you would have to do is give the reason for the restart and select one of the listed options on the screen.

Changing JCL for a Waiting Job

Previously, we saw the JCL Library Maintenance screen that you can use to change the JCL of a job. You can only use that screen to change JCL when the job is not yet in the Request queue. To change the JCL of a job already in the request queue, type E next to the job name on the CPU Jobs Status screen. (Our sample jobs do not have JCL, so do not do this process online.)

The JCL is displayed, either on a screen similar to this one or on an ISPF editor screen when you are using CA Workload Automation SE under ISPF:

```
-----10-----20-----30-----40-----50-----60-----70*
PF                                     NOFILL XSEQ (NONUM) I(010)
00010 //JOBA   JOB ...
00020 //*      TESTING
00030 /*JOBPARM R=5070,T=1
00040 /*ROUTE PRINT USDALSP8
00050 //STEP1 EXEC PGM=IEFBR14
00060 /*
```

You would change the JCL right on this screen and then enter **SR** over PF to save your changes (or **CA7SR** under ISPF), and return to the CPU Jobs Status screen.

Posting Networks

You can also change the status of networks when they are in the queues waiting to be processed. To illustrate this process, add a network to your preprocessing queue now by typing this command on the top line of your screen:

DMDNW,NW=DATAPREP

You see a message similar to this one on your screen:

```
DMDNW,NW=DATAPREP
SPOE-00 JOB DMD#0001(nnnn) ADDED TO THE PRE/Q
        FOR NETWORK=DATAPREP

REQUEST COMPLETED AT hh:mm:ss ON yy.ddd.
```

To see the network in the queue, start by typing **QM** on the top line of your screen to return to the Queue Maintenance Menu.

```
----- CA-7 QUEUE MAINTENANCE MENU -----
FUNCTION ==>

MAINTENANCE TO BE PERFORMED ON:
 1 - CPU JOBS STATUS
 2 - CPU JOB PREDECESSORS
 3 - CPU JOB ATTRIBUTES
 4 - CPU JOB IN RESTART STATUS
 5 - QUEUED JCL
 6 - INPUT NETWORKS
 7 - OUTPUT NETWORKS

PROGRAM: QM00  MSG-INDX: 00  -- QM      -- yy.ddd / hh:mm:ss
MESSAGE: ENTER FUNCTION, TRANSFER OR ENTER A COMMAND ON THE TOP LINE
```

When the menu is displayed, enter **6** in the function field to select INPUT NETWORKS.

When you press Enter, this prompting screen is displayed:

```

----- CA-7 QUEUE MAINTENANCE - INPUT NETWORKS PROMPT -----
FUNCTION ==> (LEAVE BLANK EXCEPT TO TRANSFER)

NETWORK(S) => SPECIFIC OR GENERIC (DEFAULT ALL)

SUBID(S) ==> SPECIFIC OR GENERIC (DEFAULT ALL)

JOB(S) ==> * SPECIFIC, GENERIC OR CA-7# (DEFAULT ALL)

STATION(S) => SPECIFIC, GENERIC OR * (DEFAULT IS ALL THE
                STATIONS ASSIGNED TO THIS TERMINAL)

2-UP ? ==> N Y = 2-UP (DEFAULT IS 1-UP)

FILL WITH ==> C = CANCEL          O = LOGOUT
(OPTIONAL)   H = HOLD            P = RESPOND TO PROMPTING
              I = LOGIN          R = RELEASE FROM HOLD

PROGRAM: QM10  MSG-INDX: 00  -- QM.6  -- yy.ddd / hh:mm:ss
MESSAGE: ENTER VALUES, TRANSFER OR ENTER A COMMAND ON THE TOP LINE
    
```

The panel asks you questions, like which networks you want to see. To see all networks that are scheduled at all stations, enter * in the STATION(S) field and press Enter. This screen is displayed:

```

----- CA-7 QUEUE MAINTENANCE - INPUT NETWORKS -----*
                                POS:   FL:   INITS:
F --REF-- JOBNAME- NETWORK- STATION- SUBID--- DESC---- REMARKS-----*
 0013001 DMD#0001 DATAPREP DATAENT          DATAPREP FIRST STATION

PROGRAM: QM10  MSG-INDX: 00  -- QM.6-X  -- yy.ddd / hh:mm:ss
MESSAGE: ENTER FUNCTION (C,F,H,I,O,P, OR R) IN 'F' FIELD   OR
        ENTER A COMMAND ON THE TOP LINE
    
```

The panel lists the first workstation in the network and provides a function field for you to log in and out of this station. Assume that you are ready to process the work at the DATAENT station now. To log in to this station, enter I in the F field.

When you press Enter, the screen looks like this example:

```

----- CA-7 QUEUE MAINTENANCE - INPUT NETWORKS -----*
                                POS:      FL:      INITS:
F --REF-- JOBNAME- NETWORK- STATION- SUBID--- DESC---- REMARKS-----*
  0013001 DMD#0001 DATAPREP DATAENT          DATAPREP IN PROCESS

```

```

PROGRAM: QM10  MSG-INDX: 00  -- QM.6-X  --  yy.ddd / hh:mm:ss
MESSAGE: 01 TRANSACTIONS PROCESSED

```

Now, assume that you have completed the work at the first station. Log off it by typing **O** in the F field and pressing Enter. The screen now looks like this example:

```

----- CA-7 QUEUE MAINTENANCE - INPUT NETWORKS -----*
                                POS:      FL:      INITS:
F --REF-- JOBNAME- NETWORK- STATION- SUBID--- DESC---- REMARKS-----*
  0013001 DMD#0001 DATAPREP DATAENT          DATAPREP SEND TO VERIFY
  0013002 DMD#0001 DATAPREP VERIFY          DATAPREP FROM DATAENT

```

```

PROGRAM: QM10  MSG-INDX: 00  -- QM.6-X  --  yy.ddd / hh:mm:ss
MESSAGE: ENTER FUNCTION (C,F,H,I,O,P, OR R) IN 'F' FIELD  OR
        ENTER A COMMAND ON THE TOP LINE

```

Now log in to the second workstation by typing **I** in the F field on the line with the VERIFY station.

The screen now looks like this example:

```
----- CA-7 QUEUE MAINTENANCE - INPUT NETWORKS -----*
                                POS:      FL:      INITS:
F --REF-- JOBNAME- NETWORK- STATION- SUBID--- DESC---- REMARKS-----*
 0013001 DMD#0001 DATAPREP DATAENT      DATAPREP SEND TO VERIFY
 0013002 DMD#0001 DATAPREP VERIFY        DATAPREP IN PROCESS

PROGRAM: QM10  MSG-INDX: 00  -- QM.6-X  --  yy.ddd / hh:mm:ss
MESSAGE: 01 TRANSACTIONS PROCESSED
```

Now, log out from the second workstation by typing **O** in the F field on the second line. The screen now looks like this example:

```
----- CA-7 QUEUE MAINTENANCE - INPUT NETWORKS -----*
                                POS:      FL:      INITS:
F --REF-- JOBNAME- NETWORK- STATION- SUBID--- DESC---- REMARKS-----*
 0013001 DMD#0001 DATAPREP DATAENT      DATAPREP SEND TO VERIFY
 0013002 DMD#0001 DATAPREP VERIFY        DATAPREP NETWORK COMPLETE

PROGRAM: QM10  MSG-INDX: 00  -- QM.6-X  --  yy.ddd / hh:mm:ss
MESSAGE: 01 TRANSACTIONS PROCESSED
```

The network has now been completely posted.

Chapter 10: Deleting What You Defined

This section deletes the records you added to the database.

This section contains the following topics:

[Deleting Jobs](#) (see page 136)

[Deleting Networks](#) (see page 138)

[Deleting Documentation](#) (see page 140)

[Schedule ID Examples](#) (see page 141)

Deleting Jobs

When you have finished all of the exercises in this book, please delete everything you added to the database. Start by typing **XQ** command on the top line of your screen to see if any of your jobs are in the request queue. If they are, tab down to them and enter **C** next to them to cancel them.

Then start deleting the jobs you have defined by following these steps:

1. Display the CPU Job Definition screen by typing **DB.1** on any screen.
2. When the CPU Job Definition screen is displayed, enter **LIST** in the FUNCTION field and **NAMEA** in the JOB field to display NAMEA's values.

When you press Enter, this screen is displayed:

```
----- CA-7 CPU JOB DEFINITION -----  
FUNCTION: LIST      (ADD,DELETE,DD,PURGE,DELPRRN,FORMAT,LIST,UPD)  
JOB: NAMEA  
GENERAL:          SYSTEM: PRIMER   JOBNET:          OWNER:          UID: 0  
  
JCL:              ID: 0    MEMBER: NAMEA   RELOAD: N EXEC: N RETAIN-JCL: N  
LIB:  
REQUIREMENTS:   HOLD: N JCL-OVRD: N USE-OVRD-LIB: N VERIFY: N MAINT: N  
SATISFACTION LEAD-TIME: JOB: 0  DSN: 0  ARFSET:  
  
EXECUTION:       MAINID: ALL  INSERT-RMS: N COND-CODE: 0  RO: 0  
DONT SCHEDULE -- BEFORE: 00000 0000  AFTER: 99999 0000  
  
MESSAGES:        LTERM:          REQUIREMENT-LIST: Y PROMPTS: N  
ERROR MSGS -- RQMTS NOT USED: Y  DSN NOT FOUND: Y  
  
RESOURCES:       REGION: 0    CLOCK-TIME: 0000  CPU-TIME: 00000  
CLASS:          PRTY: 000  MSGCLASS:      DRCLASS:  
TAPE DRIVES...TYPE1: 000 M 000 C  TYPE2: 000 M 000 C  
  
PROGRAM: SM20  MSG-INDX: 00  -- DB.1  -- yy.ddd / hh:mm:ss  
MESSAGE: LIST SUCCESSFUL
```

To delete this record, just enter **DD** in the FUNCTION field and press Enter.

The screen now looks like this:

```

----- CA-7 CPU JOB DEFINITION -----
FUNCTION: DD      (ADD,DELETE,DD,PURGE,DELPRRN,FORMAT,LIST,UPD)
JOB: NAMEA
GENERAL:         SYSTEM: PRIMER   JOBNET:         OWNER:         UID: 0

JCL:            ID: 0    MEMBER: NAMEA    RELOAD: N EXEC: N RETAIN-JCL: N
LIB:
REQUIREMENTS: HOLD: N JCL-OVRD: N USE-OVRD-LIB: N VERIFY: N MAINT: N
SATISFACTION LEAD-TIME: JOB: 0 DSN: 0 ARFSET:

EXECUTION:     MAINID: ALL  INSERT-RMS: N COND-CODE: 0   RO: 0
DONT SCHEDULE -- BEFORE: 00000 0000 AFTER: 99999 0000

MESSAGES:      LTERM:         REQUIREMENT-LIST: Y PROMPTS: N
ERROR MSGS -- RQMTS NOT USED: Y DSN NOT FOUND: Y

RESOURCES:     REGION: 0    CLOCK-TIME: 0000 CPU-TIME: 00000
CLASS:        PRTY: 000  MSGCLASS:    DRCLASS:
TAPE DRIVES...TYPE1: 000 M 000 C  TYPE2: 000 M 000 C

PROGRAM: SM20  MSG-INDX: 00  -- DB.1    -- yy.ddd / hh:mm:ss
MESSAGE: DELETE SUCCESSFUL. 000 DATA SET(S) DELETED

```

Deleting the job also deletes all of the following information you added to this job's record:

- Any scheduling information defined on the CPU Job Scheduling screens **for all schedule IDs**
- Any triggers defined on the Job Triggering screen (but not the jobs triggered; they must be deleted separately)
- Any requirements defined on the predecessor/successor screens, including network requirements defined on the Input/Output Network Tasks screen (but not the networks themselves)
- Any documentation defined on the CPU Job Documentation screen

Now follow the same steps to delete NAMEB, NAMEC, NAMED, and NAMEE. Listing the job first is not required. You can delete the job by typing **DD** in the FUNCTION field and the name of the job in the JOB field. We suggest listing the job first to make sure you are deleting the right job!

Deleting Networks

The next thing we have to delete is the two networks we defined. To delete them, follow these steps:

1. Display the Input/Output Network Definition screen by typing **DB.5**.
2. When the Input/Output Network Definition screen is displayed, enter **LIST** in the **FUNCTION** field and the name of your **input** network in the **NETWORK** field: **DATAPREP**.

When you press Enter, this screen is displayed:

```
----- CA-7 INPUT/OUTPUT NETWORK DEFINITION -----  
FUNCTION: LIST      (ADD,DELETE,FORMAT,LIST,UPD)  
  
NETWORK: DATAPREP  TYPE: INPUT  
SUB-ID:           JOB:           SCHD PROSE:  
  
STATION 1: DATAENT  
STATION 2: VERIFY  
STATION 3:  
STATION 4:  
STATION 5:  
STATION 6:  
STATION 7:  
STATION 8:  
STATION 9:  
  
PROGRAM: SM40  MSG-INDX: 00  -- DB.5  --  yy.ddd / hh:mm:ss  
MESSAGE: LIST FUNCTION SUCCESSFUL FOR Nwnnnnn
```

When you are sure this is the right record, enter **DELETE** in the **FUNCTION** field and press Enter.

This screen is displayed:

```
----- CA-7 INPUT/OUTPUT NETWORK DEFINITION -----  
FUNCTION: DELETE (ADD,DELETE,FORMAT,LIST,UPD)  
  
NETWORK: DATAPREP TYPE: INPUT  
SUB-ID: JOB: SCHED PROSE:  
  
STATION 1: DATAENT  
STATION 2: VERIFY  
STATION 3:  
STATION 4:  
STATION 5:  
STATION 6:  
STATION 7:  
STATION 8:  
STATION 9:  
  
PROGRAM: SM40 MSG-INDX: 00 -- DB.5 -- yy.ddd / hh:mm:ss  
MESSAGE: DELETE FUNCTION SUCCESSFUL FOR Nwnnnnn
```

Now delete the **output** network by retyping the **D** in the FUNCTION field and changing NETWORK to **CHEKPREP**. Deleting the networks also deletes all of their scheduling information and documentation.

Deleting Documentation

The only documentation that has not been deleted automatically is the documentation that you defined for your system. To delete it, follow these steps:

1. Display the Application System Documentation screen by typing **DB.4.6**.
2. When the Application System Documentation screen is displayed, enter **DELETE** in the FUNCTION field and **PRIMER** in the SYSTEM field.

When you press Enter, this screen is displayed:

```
----- CA-7 APPLICATION SYSTEM DOCUMENTATION -----  
FUNCTION: DELETE (APPEND,CLEAR,DELETE,EDIT,FE,FETCH,LIST,REPL,SAVE,UPD)  
  
SYSTEM: PRIMER  
  
DESC: LINK: 0  
  
ACTIVE SIZE: 0014  
  
PROGRAM: SM11 MSG-INDX: 00 -- DB.4.6 -- yy.ddd / hh:mm:ss  
MESSAGE: DELETE FUNCTION SUCCESSFUL FOR PPnnnnnnnn
```

When you have finished deleting all of your records, you can return to any chapter in this book for review, keep the book for reference, or return it to your installation's CA Workload Automation SE administrator.

Appendix A: Schedule ID Examples

This section explains schedule IDs and contains sample scheduling flowcharts in two different formats.

This section contains the following topics:

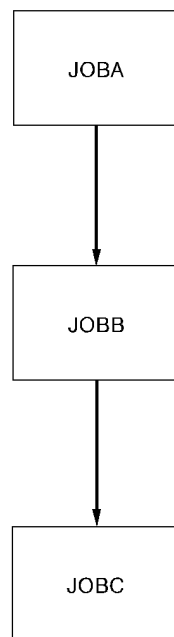
[Understanding Schedule IDs](#) (see page 141)

[Flowcharts](#) (see page 143)

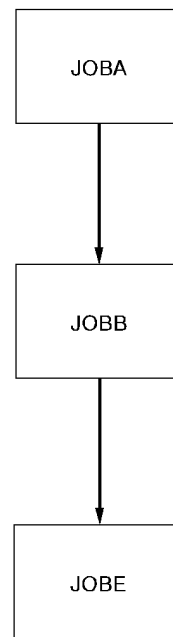
Understanding Schedule IDs

Schedule IDs are 1- to 3-digit numbers that are used to identify scheduling variations. These variations allow you to schedule the same job in different ways. Here is an example:

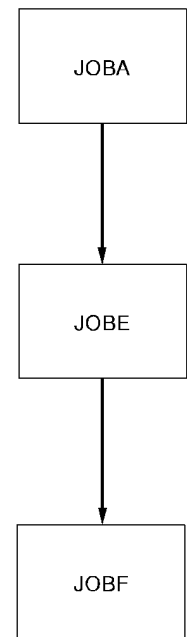
MONDAY THROUGH FRIDAY



FIRST MONDAY



END OF MONTH



JOBA always uses the same JCL and has the same requirements, but it triggers different jobs depending on what day it is. To define each of these scheduling variations to CA Workload Automation SE, JOBA must be given three different schedule IDs:

- It is scheduled with schedule ID 1 Monday through Friday when it triggers JOBB which then triggers JOBC.
- It is scheduled with schedule ID 2 on the first Monday of the month when JOBB triggers JOBE.
- It is scheduled with schedule ID 3 at the end of the month when it triggers JOBE.

Schedule IDs can also be used to allow other scheduling variations:

- Data set or network triggers instead of job triggers on certain days
- Different requirements on different days
- Different due-out or processing times on different days
- Special JCL on certain days (the inclusion or exclusion of JCL statements is predefined in the JCL library using #J or #X control statements)

The same job can even be triggered under one schedule ID and calendar-scheduled under another schedule ID.

The schedule ID is defined in the SCHID field on the Job Schedule Parameter Edit screen when you schedule the job. It is then entered on the screens where you define triggers and requirements. It could also be included when you issue the DEMAND and RUN commands. If it is not, it defaults to the first schedule ID defined in the database. If no schedule has been defined for the job in the database, it defaults to 1.

Flowcharts

This topic contains examples of the kind of flowcharts you can use to organize your jobs into groups. They illustrate an accounts payable system with three different scheduling variations:

SCHID=1

The first flowchart shows the daily processing flow. This flow runs Monday through Friday, except the first and last days of the month.

SCHID=2

The second flowchart shows the first day of the month. This flow processes the normal daily jobs, and several monthly jobs.

SCHID=3

The third flowchart shows the last day of the month. This flow processes some of the normal daily jobs and some different monthly jobs.

The only job in this sample system that is calendar-scheduled is JOB01:

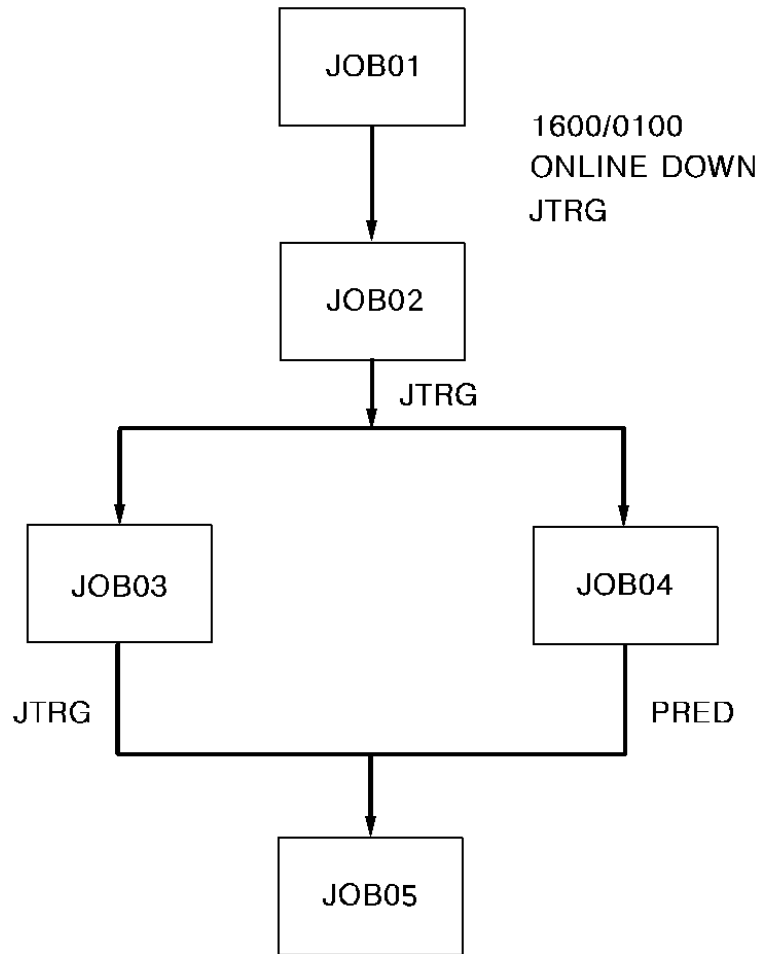
- It must be scheduled with a due-out time (DOTM) of 1600 under schedule IDs 1 and 2 and a due-out time of 1800 under schedule ID 3.
- Its lead time (LDTM) should be defined as one hour.
- It also has an extra requirement that the online systems are down; this must be defined to CA Workload Automation SE on the User Memo-Form Predecessors screen.

The rest of the jobs are triggered in:

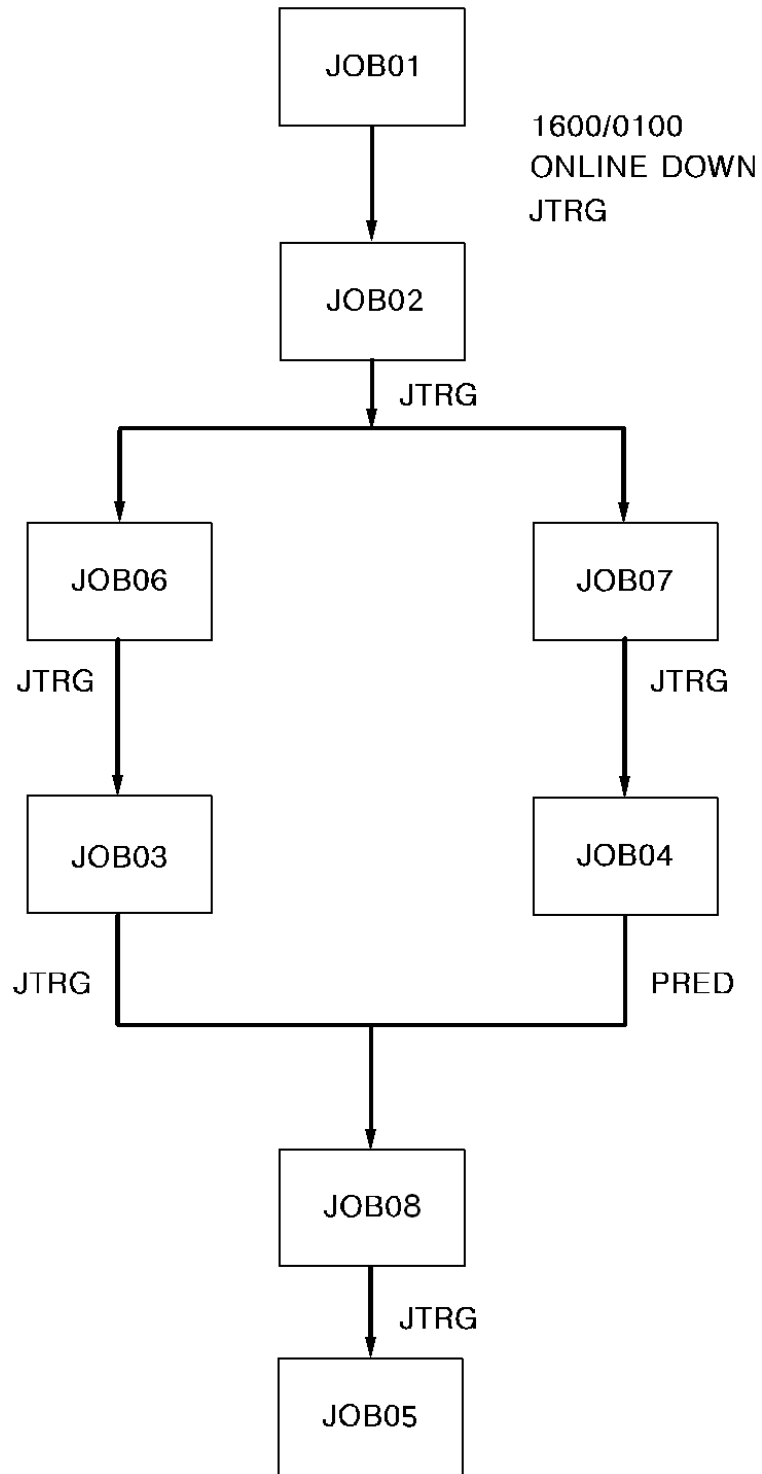
- The word **JTRG** next to the flowchart identifies the trigger relationship. These relationships must be defined to CA Workload Automation SE on the Job Triggering screen.
- The word **PRED** on the flowchart identifies requirements that must be defined to CA Workload Automation SE on the CPU Job Predecessors screen.

Following the three standard flowcharts are three alternate flowcharts. They reflect the same relationships as the standard flowcharts but use a format that is similar to the output from the CA Workload Automation SE FSTRUC command. If you find it easier to work with, you can use this format. You can then use the output from the FSTRUC command to ensure that you defined your schedules correctly.

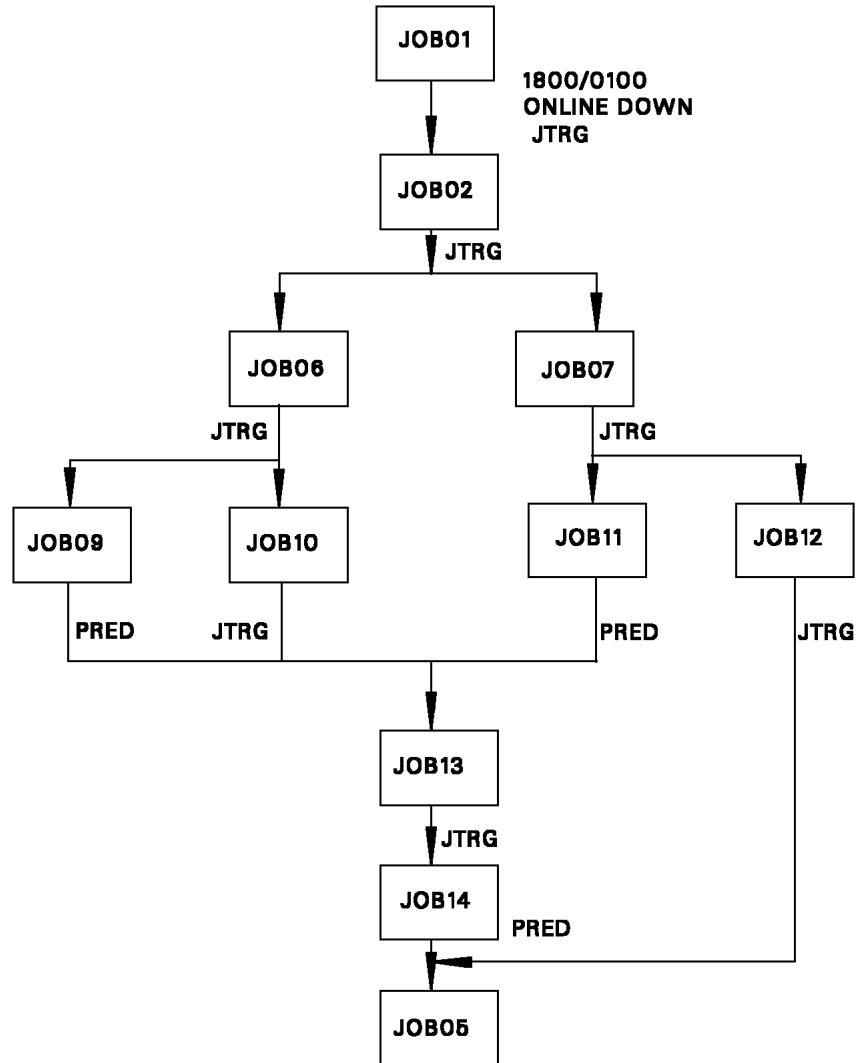
The following is a sample flowchart for SCHID=1.



The following is a sample flowchart for SCHID=2.



The following is a sample flowchart for SCHID=3.



The following is an alternate flowchart for SCHID=1, daily flow.

Jobname	DOTM/LDTM	Requirements
JOB01	1600/0100	Online down
JOB02		
JOB03		
JOB05		JOB04
JOB04		

The following is an alternate flowchart for SCHID=2, first day of month.

Jobname	DOTM/LDTM	Requirements
JOB01	1600/0100	Online down
JOB02		
JOB06		
JOB03		
JOB08		JOB04
JOB05		
JOB07		
JOB04		

The following is an alternate flowchart for SCHID=3, last day of month.

Jobname	DOTM/LDTM	Requirements
JOB01	1800/0100	Online down
JOB02		
JOB06		
JOB09		
JOB10		
JOB13		JOB09, JOB11
JOB14		
JOB07		
JOB11		
JOB12		
JOB05		JOB14

Appendix B: Concepts

Calendar

Base calendars define the processing days (workdays) and nonprocessing days (weekends and holidays) in your data center. They can also be used to define the beginning and end of each month if you do not use the standard Gregorian months. They also tell CA Workload Automation SE how to count relative days: whether to count every day or just processing days.

At least one calendar is required for every year. It is defined by coding keyword values in a CA Workload Automation SE macro which must then be assembled and link edited into the CA Workload Automation SE calendar library or load library. For detailed information about calendars, see Calendar Definition and Structure in the chapter "Installation Requirements" in the *Systems Programming Guide*. Once a calendar is defined, it can be referenced by any number of jobs.

Documentation

Free-form, card-image documentation about any part of the workload can be stored in the CA Workload Automation SE database and then either displayed online or printed (through the batch-terminal interface). Relevant documentation can also be routed to a terminal and displayed there when a job is scheduled. Documentation can be defined for a CPU job, an application system, a data set, a network, a DD statement, or any other user-defined item. It can be manually entered into the database using the documentation screens or transferred to the CA Workload Automation SE database from other online sources. Documentation members can be divided into segments for easier retrieval.

JCL

When a job is ready to be processed under CA Workload Automation SE control, CA Workload Automation SE automatically finds its JCL and submits a copy of it to the computer for execution. Therefore, the JCL for each job under CA Workload Automation SE control must be stored in a CA Librarian, CA Panvalet for z/OS, or partitioned data set which can be dynamically accessed by CA Workload Automation SE.

Each library you use to store JCL must have a unique ID number and must be defined to CA Workload Automation SE on a JCL statement in the initialization file. Each library can have an alternate library which can be used to store temporary JCL; this alternate library is automatically searched before the permanent JCL library. Onetime overrides can be stored in a special override library. Other overrides can be made by adding special statements to the JCL or by using the CA Workload Automation SE text editor to change the JCL before it is submitted for execution.

Job

A job is a task or unit of work directed to a CPU. Although CA Workload Automation SE can bypass CPU execution, a job usually includes a set of JCL control statements with one JOB statement and one or more steps that are executed on the computer. Jobs are defined to CA Workload Automation SE on the CPU Job Definition screen, either online or in batch mode. Each job's individual scheduling criteria can also be defined to CA Workload Automation SE so that the job can be automatically selected for processing on the right day, at the right time, in the right order.

Jobs that are defined to CA Workload Automation SE but do not have defined scheduling criteria can be run on request by issuing online commands. Jobs that have not been defined to CA Workload Automation SE can also be run on request; they are added to the database with default values the first time they are run by request. The LOAD command can be used to add jobs to the database without running them.

Network

A network is a group of non-computer tasks that must be performed either before a job runs on the computer (input network) or after a job runs on the computer (output network). Each network consists of from one to nine workstations, listed in the order in which their tasks are performed. Input networks can be scheduled just like CPU jobs and can trigger CPU jobs. Input networks can also be defined as predecessors of CPU jobs so that the CPU job cannot run until its input network is complete. Output networks can be defined as successors of CPU jobs so that the output network is placed in the postprocessing queue when its CPU job is placed in the request queue.

Queue

Five disk data sets hold records of CPU jobs during different phases of processing. A job starts in the request queue. It is put there because of one of the following: the schedule scan program reads the database and finds out the job is scheduled for processing; it is triggered by an event; or it is requested by the LOAD, DEMAND, or RUN command. At the same time, the job's JCL is found in the appropriate JCL library and a copy is written to the trailer queue.

When all of the job's requirements are satisfied, the job record is moved from the request queue to the ready queue. When resources are available, the JCL is submitted to JES. When the job goes active on the system, the job record is moved to the active queue. At job termination, CA Workload Automation SE returns the job record to the request queue. If the termination was not successful, the record is held for operator intervention, and the JCL remains in the trailer queue so the job can be restarted. If the termination was successful, the job record is moved to the prior-run queue and the JCL is deleted from the trailer queue.

Two additional disk data sets hold records of noncomputer tasks: the preprocessing queue lists all input networks that are scheduled for processing; the postprocessing queue lists all output networks that are waiting for their CPU jobs to end so they can be processed.

Requirement

Requirements are things that must happen before a job can run. They are called predecessors because they must precede the job. They can be the completion of another job, the completion of an input network, the completion of a manual task, or the creation of a data set. They can be defined for each job, in addition to its scheduling criteria.

When the job is brought into the queues for processing, its requirements are attached to it, and it cannot be released for processing until all of its requirements are satisfied (either automatically or manually). The requirements screens can also be used to define mutually exclusive jobs or output networks that are successors to CPU jobs.

Schedule ID

Schedule IDs are numbers from 1 to 255 that are used to identify scheduling variations. Scheduling variations allow you to schedule the same job in different ways: at different dates and times, with different triggers, with different requirements, with different due-out times, and with different JCL overrides.

Schedule Scan

The schedule scan program scans the database as often as you specify, selects jobs that are scheduled for processing in the next few hours, and brings them into the request queue.

Scheduling

Each job can have its own unique scheduling criteria. This scheduling criteria is defined to CA Workload Automation SE on the scheduling screens and stored in the database with the job's definition. The scheduling criteria can be based on either dates and times or events. Date-and-time scheduling tells CA Workload Automation SE when to run a job, for example, the last workday of every month. CA Workload Automation SE then uses the calendar referenced on the scheduling screen to determine the exact processing days. Triggering tells CA Workload Automation SE to process a job after an event, regardless of when that event takes place. The event can be the completion of another job, the completion of an input network, or the creation of a data set.

The first job in a job stream is usually scheduled by date and time, and the rest of the jobs are then triggered. This ensures that jobs run in the proper order, while reducing calendar maintenance, schedule-scan activity, requirement posting, and the amount of jobs in the queues at one time.

Workstation

A workstation is the place where a non-computer task is performed. Workstations where pre-CPU tasks are performed are grouped together as input networks. Workstations where post-CPU tasks are performed are grouped together as output networks. CA Workload Automation SE monitors each workstation and sends messages prompting the workstation terminal operator if its task is not started or completed on time. When a task at one workstation is finished, it must be manually posted as complete before the task at the next workstation can be started.

Appendix C: Data Collection Worksheets

This section contains examples of several different worksheets you can use to get the information you need to define your jobs and schedules to CA Workload Automation SE. Because every data center is different, you will probably have to combine and modify these examples to meet your needs.

The worksheets with entries like #JOB and #END,JOB are designed to help you gather the documentation you will define on the Workload Documentation screens.

Note: For more information about using the # to identify documentation segments, see the *Database Maintenance Guide*.

This section contains the following topics:

[Sample Worksheet 1](#) (see page 154)

[Sample Worksheet 2](#) (see page 157)

[Sample Worksheet 3](#) (see page 161)

Sample Worksheet 1

JOBNAME _____ SYSTEM _____

RUN FREQUENCY

___ MONDAY - FRIDAY

___ TUESDAY - SATURDAY

___ WEEKLY DAY _____

___ BI-WEEKLY DAY _____

___ MONTHLY DAY _____

___ QUARTERLY WHEN _____

___ ANNUAL WHEN _____

___ OTHER DESCRIBE REQUIREMENTS _____

TIME OF DAY RUN (24-HOUR CLOCK) _____

IF JOB IS SCHEDULED ON A HOLIDAY, SHOULD IT

___ BE RUN THE PREVIOUS BUSINESS DAY ___ BE RUN THE NEXT BUSINESS DAY

___ NOT RUN AT ALL ___ RUN ANYWAY

LIST ALL IMMEDIATE PREDECESSORS TO THIS JOB:

LIST ANY JOBS THAT CANNOT RUN WITH THIS JOB:

LIST ANY JOBS THAT WILL BE RELEASED BY THIS JOB:

WHAT CONDITION CODES ARE CONSIDERED SUCCESSFUL FOR ALL STEPS OF THIS JOB?

WHAT CONDITION CODES ARE CONSIDERED SUCCESSFUL FOR INDIVIDUAL STEPS OF THIS JOB?

STEP _____ CONDITION CODE _____

STEP _____ CONDITION CODE _____

STEP _____ CONDITION CODE _____

STEP _____ CONDITION CODE _____

STEP _____ CONDITION CODE _____

STEP _____ CONDITION CODE _____

PREPROCESSING REQUIREMENTS (CHECK ALL THAT APPLY):

___ CARD INPUT
WHO SUPPLIES IT _____ WHEN _____

___ TAPE INPUT (FROM OUTSIDE COMPUTER CENTER)
WHO SUPPLIES IT _____ WHEN _____

___ CONTROL CARDS (DATES/BATCH TOTALS)
WHO SUPPLIES IT _____ WHEN _____

AUTHORIZATIONS:

USER WILL TELL US WHEN TO RUN JOB
WHO/DEPT. _____ WHEN _____

MANUAL VERIFICATION BY OPERATOR
DESCRIBE _____

PROCESSING REQUIREMENTS:

RERUN/RESTART PROCEDURES

___ ON RESTART DATABASE

___ NOT ON DATABASE - DESCRIBE

PREVIOUS INFORMATION SUPPLIED AND/OR VERIFIED BY:

PRODUCTION CONTROL _____

USER _____

APPLICATION PROGRAMMER _____

LOADED ON TO CA 7 DATABASE

DATE _____

SIGNATURE _____

PARALLEL TEST OF JOB UNDER CA 7

DATE _____

SIGNATURE _____

DATE IN PRODUCTION UNDER CA 7 _____

Sample Worksheet 2

 #JOB
 LAST UPDATED _____ JOBNAME _____

JOB SUMMARY:

WHO IS RESPONSIBLE FOR PROBLEMS OTHER THAN THE ON-CALL PERSON? _____

HAVE ALL INDEXES BEEN BUILT? _____

HAS VOL=RETAIN BEEN USED WHERE POSSIBLE? _____

HAS FREE=CLOSE BEEN USED WHERE POSSIBLE? _____

ARE THERE NORMAL CONDITION CODES OTHER THAN 000? _____

IF YES, EXPLAIN _____

IS THE OUTPUT DISTRIBUTION HOT? _____

DO ALL REPORTS HAVE BANNER PAGES? _____

ARE ANY PRINT TAPES CREATED? _____

IF YES, IS THE NEXT STEP A TAPEPRINT STEP? _____

#END, JOB

 #SCHED

SCHEDULE SUMMARY:

WHAT IS THE ESTIMATED RUN TIME? _____

WHEN DOES THIS JOB RUN? _____

WHICH JOBS MUST IT RUN AFTER? _____

WHICH JOBS MUST IT RUN BEFORE? _____

WHICH JOBS CAN IT NOT RUN WITH? _____

IF DEPENDENT ON ONLY ONE JOB, AFTER WHICH STEP CAN THIS JOB START?

CAN IT RUN ON ANY CPU? -----

CAN THE JOB RUN WITH THE ONLINE UP? -----

IF NO, WHICH FILES NEED TO BE DISABLED SO THAT IT CAN RUN?

LIST ALL DATABASE FILES UPDATED -----

LIST ALL OUTSIDE CONDITIONS ON WHICH THIS JOB IS DEPENDENT
(WANG, SERIES1, OTHER)

WHAT TIME ARE INPUT TRANSMISSIONS EXPECTED? -----

WHAT TIME ARE OUTPUT TRANSMISSIONS EXPECTED? -----

WHAT IS THE TRANSMISSION VOLUME? -----

WHAT LOCATIONS ARE AFFECTED? -----

IF WE ARE LATE, WHOM DO WE NOTIFY? -----

#END,SCHED

#SETUP
SETUP INSTRUCTIONS -----

#END,SETUP

#BALANCE
BALANCING INSTRUCTIONS:
REPORT NUMBER: -----
REPORT TITLE: -----
PROGRAM NAME: -----
INSTRUCTIONS: -----

#END,BALANCE

#DIST

DISTRIBUTION INSTRUCTIONS:

BANNER PAGE KEY: _____
 REPORT ID: _____
 REPORT TITLE: _____
 INSTRUCTIONS: _____

COPY RECIPIENT	LOCATION
1	_____
2	_____
3	_____
4	_____

BANNER PAGE KEY: _____
 REPORT ID: _____
 REPORT TITLE: _____
 INSTRUCTIONS: _____

COPY RECIPIENT	LOCATION
1	_____
2	_____
3	_____
4	_____

#END, DIST

#OFFSITE

CRITICAL DATA SETS CREATED OR UPDATED	CODE
_____	_____
_____	_____
_____	_____
_____	_____

#END, OFFSITE

#ERRORS

PROGRAM	ERROR MSG	A C T I O N
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

#END, ERRORS

#RESTART

RESTART PROCEDURES:

CA 11 RESTARTABLE -----

CA 11 NONRESTARTABLE - RESTART IN STEP XX -----

USER NONRESTARTABLE - VSAM UPDATE - RESTART IN STEP XX -
RUN JOB XXXXXX TO RECOVER

CA 11 RESTARTABLE - DATABASE UPDATE - RECOVER DATABASE BEFORE RESTARTING

#END,RESTART

Sample Worksheet 3

#SCHEDULE

SCHEDULING CRITERIA:

FREQUENCY OF JOB TO BE SCHEDULED: _____
SCHEDULED RELEASE WORKDAY TO USER: _____
TEAM NO.: _____
RESTART INSTRUCTIONS (O/S OR CA 11): _____
JOB MUST RUN BEFORE/AFTER JOB: _____
OUTPUT TO BALANCING (YES OR NO): _____

#END,SCHEDULE

#JCL

LIST OF PRODUCTION JCL, DATE CARDS, AND REQUIRED OVERRIDES:

EXECUTION JCL LISTING: _____

DATE CARD FORMAT: _____

SPECIAL OVERRIDES REQUIRED: _____

#END,JCL

#MESSAGES

PROGRAM ERROR MESSAGES:

STEP NO: _____
PGM ID: _____
COND-CODE: _____
MESSAGE DISPLAYED: _____
CAUSE: _____
ACTION: _____

#END,MESSAGES

#RESTART

OS RESTART PROCEDURES: _____

#END,RESTART

#VITAL

VITAL RECORDS PROGRAM FOR MAGNETIC TAPE:

FILE NO: _____
FILE DESCRIPTION: _____
ESTIMATED VOLUME: _____
RETENTION PERIOD: _____
ROTATION INSTRUCTIONS: _____

#END,VITAL

#DISASTER

DISASTER RECOVERY PLAN: _____

DISASTER RECOVERY RESTART REQUIREMENTS:

JOB STREAM NO.: _____
NAME: _____
RESTART AT STEP NO.: _____
NAME: _____
NORMAL RUN TIME(CPU): _____
CLOCK: _____
RUN FREQUENCY: _____
PERIPHERALS NEEDED: _____
MEMORY NEEDED: _____

BACKUP FILES NEEDED: _____
AGE (CURRENT,PREV,OTHER): _____
WHERE LOCATED: _____
REPORTS PRODUCED: _____
NUMBER: _____
NAME: _____
FREQUENCY: _____
USER DEPT.: _____
DELIVER TO: _____

#END,DISASTER

#PRINT

COMPUTER PRINTER AND CARD DISPOSITION SHEET:

STEP NO. : _____
JOB NAME: _____
EFFECTIVE DATE: _____
JOB STEP NAME: _____
DATA SET NAME: _____
ENGLISH DATA SET NAME: _____
NO. OF COPIES: _____
SPECIAL FORM: _____

PRINTER OUTPUT:

DECOLLATE: _____
BURST: _____
STRIP: _____
LEFT: _____
RIGHT: _____
OTHER: _____

DISTRIBUTION TO USER:

ORIGINAL: _____
1ST COPY: _____
2ND COPY: _____
3RD COPY: _____
4TH COPY: _____

BALANCING DATA:

THIS O/P IS USED TO BALANCE: _____
OUT OF BALANCE NOTIFY: _____
MANUAL BALANCING TIME: _____
DATA USED TO BALANCE THIS OUTPUT: _____
RETENTION OF O/P AND BALANCE WORKSHEET: _____

INPUT CARDS:

DATA SET NAME: _____
DISPOSITION: _____

OUTPUT CARDS:

DATA SET NAME: _____
DISPOSITION: _____

INPUT TAPES:

DATA SET NAME: _____
DISPOSITION: _____

OUTPUT TAPES:

DATA SET NAME: _____
DISPOSITION: _____

#END,PRINT

#BALFORM

BALANCING FORMULA:

STEP NUMBER: _____

#END,BALFORM

#BALSHEET

BALANCE WORKSHEET:

STEP NUMBER: _____

#END,BALSHEET

#PRINTSPE

COMPUTER PROGRAM PRINTER SPECIFICATION:

JOB STEP NO.: _____
JOB STEP NAME: _____
DATA SET NAME: _____
FORM DESCRIPTION: _____
NO. OF COPIES: _____

CARRIAGE CONTROL

TAPE NO.: _____
LINES PER INCH: _____
LENGTH: _____
CHANNEL: _____

ALIGNMENT INSTRUCTIONS:

#END,PRINTSPE

Glossary

A

ACT

See active queue.

active area

The *active area* is a temporary work area that the CA Workload Automation SE text editor and CA Workload Automation SE schedule editor use.

active queue

The *active queue* is a file that contains a record of all jobs currently executing on your CPUs.

agent job

An *agent job* is a set of job types that are routed from CA Workload Automation SE to execute on an operating environment under a CA WA agent.

AGJOB

See agent job.

alternate master terminal

An *alternate master terminal* is one or more terminals defined to CA Workload Automation SE with special capabilities such as issuing the /SHUTDOWN command.

APA

See Automated Performance Analysis.

ARF

See Automated Recovery Facility.

Automated Performance Analysis

The *Automated Performance Analysis* facility provides statistical graphs that report on job, system, network, and database activity.

Automated Recovery Facility

The *Automated Recovery Facility* in CA Workload Automation SE monitors exception conditions for jobs and schedules recovery actions to execute near or at the point of failure.

B

base calendars

See calendars.

batch card load program

The *batch card load program* is a CA Workload Automation SE program that loads card input or card-image data to a file to satisfy data set requirements or perform data set triggers.

batch terminal

A *batch terminal* is a set of files that perform the same as a physical terminal using the SASSBSTR program.

BCLP

See batch card load program.

browse data set

The *browse data set* is a wraparound file used to replace the master station printer for CA Workload Automation SE. The master station receives messages about schedule scan, submit, and SMF feedback activity. The file also receives messages about any job not directed to a specific station.

C**CAICCI terminal**

A *CAICCI terminal* is a special terminal definition to CA Workload Automation SE that uses the CA Common Services CAICCI interface to send commands and receive output from the CA Workload Automation SE online system.

calendars

The *calendars* are load modules built using CA Workload Automation SE macros. They define which days are considered processing days in your data center and which days are not processing days. Perpetual calendars let you specify criteria to generate calendars automatically.

completion processing

Completion processing occurs when a job under the control of CA Workload Automation SE ends successfully. Requirements are posted. Other jobs are triggered. The database, prior-run queue, and run log are updated.

CPM

See Critical Path Monitor.

CPU job

A *CPU job* is a task or unit of work directed to a CPU. The job usually includes a set of JCL control statements with one JOB statement and additional statements that execute one or more steps.

Critical Path Monitor

A *Critical Path Monitor* is the monitoring of a flow of jobs deemed critical. The last job of the flow must complete within certain date and time requirements.

cross-platform scheduling (XPS)

Cross-platform scheduling occurs when one CA scheduling solution requesting the execution and tracking of work on another CA scheduling solution on another operating system/platform.

Cross-system Communications Facility

The *Cross-system Communications Facility* of the IBM operating system sends messages from one z/OS operating system to another z/OS operating system using channel-to-channel communications. Also called XCF.

cyclic scheduling

See repeat scheduling.

D**data set number**

A *data set number* is a unique number assigned to each data set by CA Workload Automation SE.

data set requirement

A *data set requirement* is a condition that a job cannot be submitted until a data set is marked as updated.

data set trigger

A *data set trigger* selects and submits a job based on the creation of a data set.

database

The *database* represents three files (job, index, and data set) that contain the information defined to CA Workload Automation SE.

database maintenance

Database maintenance is the adding, deleting, or changing the information in the CA Workload Automation SE database.

DB

The *DB* command that you can enter on any CA Workload Automation SE screen displays the Data Base Maintenance Menu.

deadline start time

See start time.

demand

To *demand* a job is to schedule manually a job that typically runs on a different day or runs only by request.

dependent job

A *dependent job* is a job that must wait for another job to complete successfully so that it can run.

DLDT

DLDT is the deadline-date and time. See start time.

DOTM

DOTM is the due-out time.

DSNBR

DSNBR is the data set number.

DTTM

DTTM is the date and time.

due-out time

The *due-out time* is the time when a job or network should be finished processing, as defined on the schedule screens.

E**event scheduling**

See triggering.

F**forecast**

A *forecast* is a list that shows what you want to process during a specified time, based on what is defined in the database.

I**IAS**

See Integrated Agent Services.

ICOM

See Independent Communications Manager.

Independent Communications Manager

The *Independent Communications Manager* is a program that passes SMF data from each CPU to CA Workload Automation SE.

index

An *index* is a field on the scheduling criteria panels that let you adjust the scheduling day so that it falls a certain number of processing days before or after the day described in the initialization file.

index number

The *index number* is a number that you assign to each JCL library that CA Workload Automation SE can access. The number is assigned in the initialization file.

initialization file

The *initialization file* is a set of control parameters that you use to customize CA Workload Automation SE to your data center.

input network

An *input network* consists of up to nine sequential preprocessing tasks that are performed before a job is run on the CPU.

input network trigger

An *input network trigger* is the selection and submission of a CPU job when its preprocessing tasks are complete.

Integrated Agent Services

Integrated Agent Services is a CA scheduling common component that interfaces with the CA WA agents.

J**JFM**

See Jobflow Monitor.

Jl

See Jobflow Illustrator.

job

A *job* is a task or unit of work directed to an operating system for execution.

job requirement

A *job requirement* is condition that a job cannot be submitted until a previous job has completed successfully.

job stream

A *job stream* is a group of related jobs each with its own job definition.

job trigger

The *job trigger* selects and submits a job based on the successful completion of another job.

Jobflow Illustrator

Jobflow Illustrator is a batch feature of CA Workload Automation SE used to forecast and provide simulations for jobs defined to the database. Also has an interface to the Microsoft Visio product.

Jobflow Monitor

Jobflow Monitor is the monitoring feature that monitors the active and near-future workload that one or more CA Workload Automation SE systems are processing.

L

late

A *late* job or network is one that has not started by its deadline start time or has not completed by its due-out time.

lead time

The *lead time* is an amount of clock time required to complete a task.

load

The *load* process adds job and data set definitions to the CA Workload Automation SE database. This process is how CA Workload Automation SE knows which data sets that each job creates and uses.

M

master station

A *master station* is a terminal defined to CA Workload Automation SE that receives special messages related to job activity. This terminal is usually the browse data set.

master terminal

A *master terminal* is the terminal defined to CA Workload Automation SE that has special capabilities such as issuing the /SHUTDOWN command.

mutual exclusion

Mutual exclusion is a job requirement that prevents two jobs from running at the same time, possibly because they update the same data set. One job cannot be submitted until the other ends successfully.

N

network

A *network* is a group of non-computer tasks that must be performed either before or after the job runs on the computer.

network requirement

A *network requirement* is a condition that a CPU job cannot be submitted until all preprocessing tasks are complete.

nonexecutable job

A *nonexecutable* job that does not require JCL and is not submitted to a CPU. In all other respects, it is exactly like a CPU job; it can be scheduled like a CPU job or defined as a requirement for other jobs.

nonprocessing days

The *nonprocessing days* are days when CA Workload Automation SE schedules no work. The days are typically used for all weekends or holidays.

NOSCHDAY

NOSCHDAY is a nonprocessing day defined in a base calendar. This day is typically used to identify all weekends and holidays.

NWK

NWK means network.

O**on request job**

An *on request job* is defined to CA Workload Automation SE but never scheduled automatically.

operator ID

The *operator ID* is a logon ID for CA Workload Automation SE.

output network

The *output network* is a group of preprocessing tasks performed after a job is run on the CPU.

P**perpetual calendars**

See calendars.

post

A *post* satisfies a requirement, either by issuing the POST command or by typing X on the CPU Jobs Status panel.

postprocessing queue

A *postprocessing queue* is a file that contains a record of each workstation in an output network that is currently scheduled.

PRE

See preprocessing queue.

predecessor

A *predecessor* is a requirement that must be satisfied before a job can be submitted to the CPU.

preprocessing queue

The *preprocessing queue* is a file that contains a record of each workstation in an input network that is currently scheduled.

primary log

The *primary log* is a file that contains records of activity under CA Workload Automation SE control.

prior-run queue

The *prior-run queue* is a file that contains a record of the last successful run of each job under CA Workload Automation SE control.

processing days

The *processing days* are the days when you can schedule jobs for processing by CA Workload Automation SE.

PROSE

PROSE is freeform documentation added to jobs, networks, systems, and data sets.

PRRN

See prior-run queue.

PST

See postprocessing queue.

Q**QDWELL**

The *QDWELL* is a time factor added to the scan span to prevent jobs from becoming late as soon as they enter the request queue.

QTM

See queue time.

queue

A *queue* is a file that contains CA Workload Automation SE control information.

queue time

The *queue time* is the amount of time that a job can remain in the request queue before the job is considered late.

R**RDY**

See ready queue.

ready queue

The *ready queue* is a file that contains job records for jobs that are submitted to the CPU but are not yet active. The file also contains jobs that are ready for submission to the CPU but are waiting for resources to become available.

repeat scheduling

Repeat scheduling lets you schedule jobs to run multiple times in a single day while using a single schedule ID.

REQ

See request queue.

request queue

The *request queue* is a file that contains a record of all jobs waiting for the satisfaction of their requirements so that they can be submitted to the CPU. Also includes jobs that require restart because they abended or ended with JCL errors or bad condition codes. Briefly includes jobs that ended successfully and are going through completion processing.

requirement

A *requirement* is a condition that must be satisfied before a job can run. Requirements include the completion of CPU jobs, the completion of input networks, the creation of data sets, or the completion of manual tasks.

resolving a schedule

Resolving a schedule tells CA Workload Automation SE to compare the scheduling criteria to the base calendar specified on the CPU Job Scheduling panel to determine the exact days to process a job.

RLOG

See run log.

run log

The *run log* contains a record of all occurrences of all jobs and networks completed or restarted under the control of CA Workload Automation SE in the last five days.

S**satisfaction lead time**

The *satisfaction lead time* is a time limit within which a job requirement must be met to be satisfied at queue entry. If not met, the requirement must be posted while the job is in the request queue.

SBTM

See submit time.

scan increment

The *scan increment* is the amount of time that passes before CA Workload Automation SE scans the database looking for jobs to bring into the request queue.

scan span

The *scan span* is the amount of time that CA Workload Automation SE looks forward in the database when it looks for jobs to bring into the request queue.

SCHD DAY ONLY

SCHD DAY ONLY is a value specified on the OPTIONS statement in the calendar macro. The value tells CA Workload Automation SE to include only workdays when counting relative days.

schedule

A *schedule* is a set of instructions defined for a job that tell CA Workload Automation SE when to process the job.

schedule ID

A *schedule ID* is a scheduling variation. A job can have up to 255 different scheduling variations, each with its own schedule ID, scheduling criteria, requirements, and triggers.

schedule resolution

See resolving a schedule.

schedule scan

The *schedule scan* is the process that scans the database and brings jobs into the request queue at the right time on the right day. Also brings networks into the preprocessing and postprocessing queues.

SCHID

See schedule ID.

secondary log

The *secondary log* is a file that contains records of activity under CA Workload Automation SE.

segment

A *segment* is a part of documentation that a label introduces so that it displays separately. To display the segment, issue the LPROS command and specify the segment name in the SEG parameter.

SID

See schedule ID.

SMF

SMF is the IBM System Management Facility that generates records for all activities on the CPU.

SSCN

See schedule scan.

start time

The *start time* is the deadline start time. This time is when a job should start so that it finishes by its due-out time. CA Workload Automation SE calculates this time by subtracting the lead time of the job from its due-out time.

station

See workstation.

STTM

See start time.

submit time

The *submit time* is a requirement that CA Workload Automation SE does not submit the job until this time is reached.

successor

A *successor* is a job that runs after another job or an output network whose tasks must be performed after a job ends on the CPU.

system

A *system* is a name assigned to a group of jobs, usually jobs that belong to the same application.

T**TCP/IP terminal**

A *TCP/IP terminal* is a special terminal definition to CA Workload Automation SE that uses the TCP/IP network to send commands and receive output from the CA 7 Online system.

terminal

A *terminal* is an input/output path to CA Workload Automation SE. This path includes IBM 3270-compatible CRTs (VTAM), system consoles, batch data sets, and a special trailer terminal.

time scheduling

Time scheduling is the scheduling of jobs for processing at certain times on certain days.

Time Zone Normalization

The *Time Zone Normalization* feature normalizes the time zone to the same time zone in which CA Workload Automation SE executes. A job can be routed to a different time zone, and generally the job initiation and termination data is kept to the time zone where the job executes. Normalization modifies these dates/times to the same time zone where CA Workload Automation SE executes.

Time Zone Offset

The *Time Zone Offset* is the difference between the time zone where the job executes and the Universal Time Coordinated (UTC). CA Workload Automation SE normalizes time zones through this UTC value.

top line command

A *top line command* is a command entered on the first line of any CA Workload Automation SE screen except the CA Workload Automation SE text editor. This value can be the name of a formatted screen or any other CA Workload Automation SE command. See the *Quick Reference Guide* for syntax.

trailer queue

The *trailer queue* is a file that contains JCL, control records, and predecessor information.

trailer terminal

The *trailer terminal* is a nonphysical terminal for processing input from the trailer step and U7SVC program. Input comes through the communications data set. Output is sent to the master station.

transfer

A *transfer* goes directly to a formatted screen when you type its screen ID on another screen.

TRGID

See trigger ID.

trigger

A *trigger* is an event that causes a job to be brought into the request queue.

trigger ID

A *trigger ID* is the schedule ID a job is to use when it gets triggered into the request queue.

triggering

Triggering is event scheduling. Triggering brings jobs into the request queue based on the successful completion of an activity, like the end of another job or the creation of a data set.

TRLR

See trailer queue.

TZO

See Time Zone Offset.

U**U7SVC**

The *U7SVC* is a facility in CA Workload Automation SE that lets a user request that certain actions are performed in CA Workload Automation SE.

user dependency

See user requirement.

user requirement

A *user requirement* is a manual requirement that must be satisfied before a job can be submitted.

V**Virtual Resource Management**

The *Virtual Resource Management* is the facility in CA Workload Automation SE that defines conditions on job submission based on resource availability.

VRM

See Virtual Resource Management.

W**WLB**

See workload balancing.

WLP

See workload planning.

work area

See active area.

workday

A *workday* is day when work is scheduled for processing by CA Workload Automation SE

workload balancing

The *workload balancing* facility in CA Workload Automation SE prevents jobs from being submitted until resources are available to process them.

workload planning

The *workload planning* facility in CA Workload Automation SE lets you model your workload against your resources to project the processing outcome.

workstation

The *workstation* is the place where a non-CPU task is performed.

X**XCF**

See Cross-system Communications Facility.

XPJOB

An *XPJOB* is a cross-platform job type using CAICCI communications to a CA universal agent or another CA scheduling manager solution. For example, other scheduling manager solutions include CA Workload Automation AE, CA Scheduler, or CA Jobtrac.

XPS

See cross-platform scheduling.

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