EspAuto

User Manual

READ ME FIRST

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1. INTRODUCTION

1.1 Purpose

Provides the functionality required to setup and maintain complex batch schedules. Once these schedules have been created, they provide an automated batch environment whereby jobs are scheduled to run at specific dates and times.

1.2 Product Overview

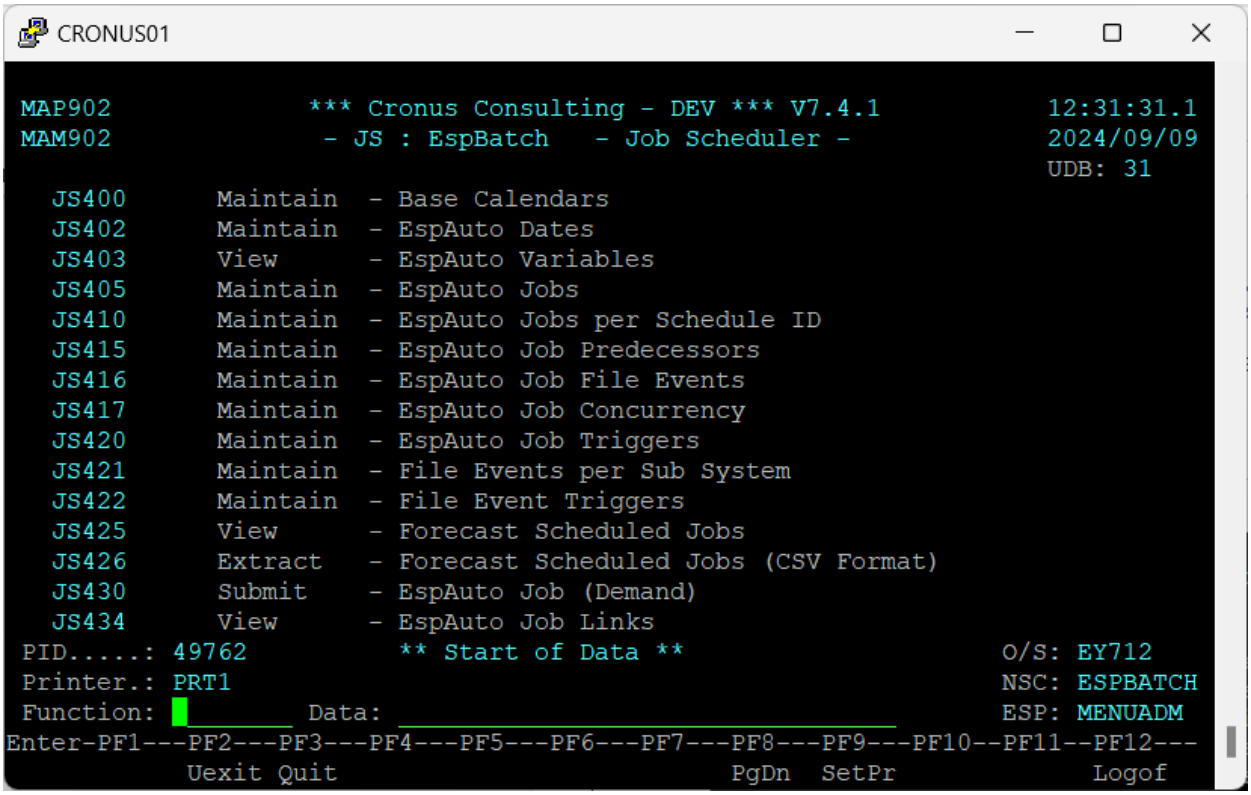
EspAuto is an add-on product to EspBatch as it makes use of the underlying batch submission process and monitoring facility provided by EspBatch. This enhances ease of use by providing a central submission mechanism for all batch jobs.

Key features:

- Calendars: Base calendars provide the functionality to setup the specific day(s) that a job if allowed to run on for a given year. These dates can be adjusted at job level.
- Schedule ID's: Provides the ability to define multiple schedules for a single batch job.
- Predecessors: Allows for the definition of one or more predecessors for a given job. Predecessors are defined per job and schedule id.
- File Events: Allows for the definition of one or more file events for a given job. File events are defined per job and schedule id.
- Triggers: Allows for the definition of one or more triggered jobs for a given job. Triggered jobs are defined per job and schedule id.
- Concurrency: Definition of scheduled jobs that may not run concurrently.
- Notification: Notification via E-mail on completion/failure of a job
- Cycle Jobs: Auto scheduled jobs with a given start/end time and interval.
- Forecasting: Visual representation of dates that jobs have been specified to run on.
- Reporting: Reports providing info on jobs that ran for a specified date range.

2. MENU OVERVIEW AND FUNCTION SELECTION

Once a user logs on the EspBatch/EspAuto menu will be displayed with all functions that the user has access to. The following information is displayed on the menu screen.



Screen Layout:

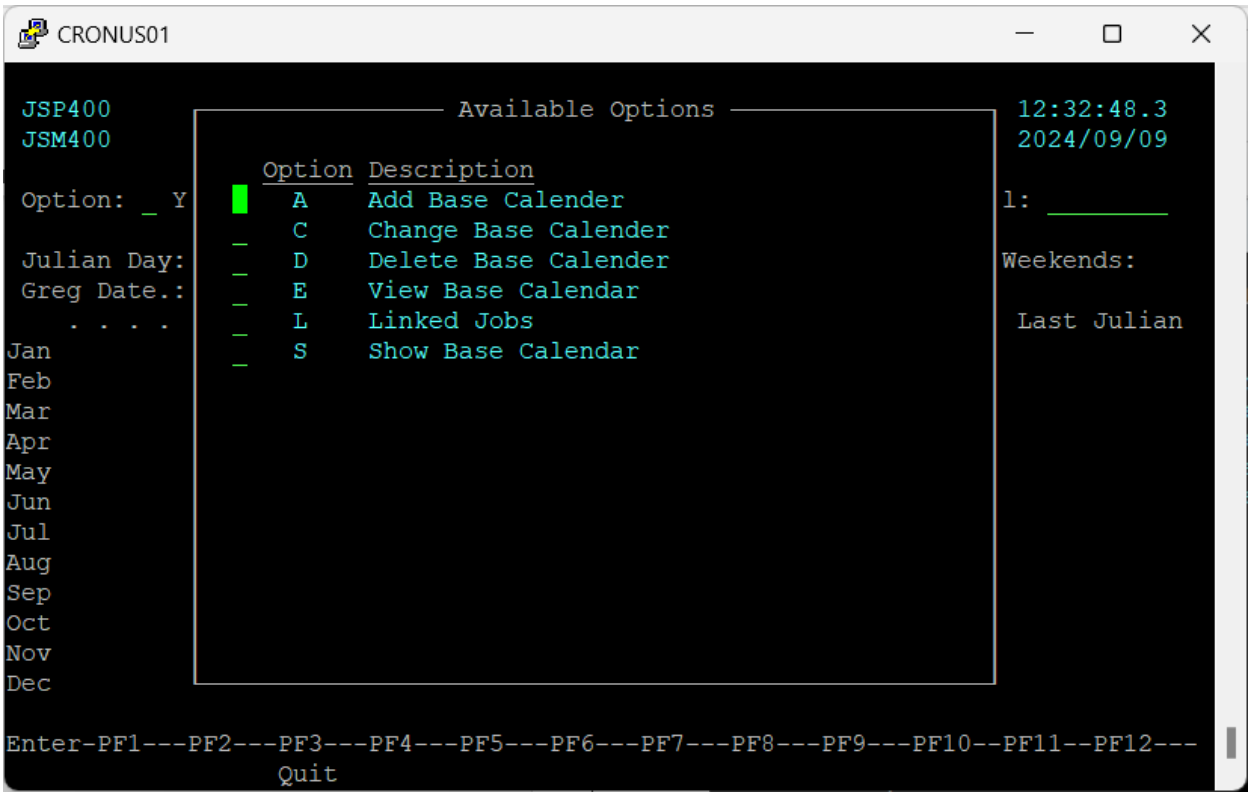
- Top line - Object name, main heading, EspSoft version and system time.
- Second line - Object name, menu name and system date.
- Third Line - Current value of Natural UDB parameter.
- Lines 4 to 18 - Available menus/functions.
- Line 19 - O/S Process/Terminal Id and User Id
- Line 20 - Default Printer (If the user has not specified a default printer, then the value of Printer 1 defined on **JS002 Maintain - EspBatch Codes** with Code Type/Value **REPORT/DEFAULTS** is displayed).
  The Natural Security User ID.
- Line 21 - Function selection area and EspMenu User ID. **MENUADM** is displayed if the user has administrator privileges.
- Line 22 and 23 - Available function keys.

Function keys:

- PF2 - Invoke user exit **ESPUX001**.This user exit can be customized for your environment. It should contain code that transfers the user to the correct system location after exiting **EspMenu**. Function key is enabled if *"**Enable User Exit**" is set to **Yes** using function **MA001*** **Maintain - EspMenu Setup**.
- PF3 - Return to Main/Previous Menu
- PF7 - Page Backward
- PF8 - Page Forward
- PF9 - Set up default printers
- PF12 - Logoff

Function / Menu selection can be done as follows:

- All menu and function selection are cursor sensitive and can be accomplished by positioning the cursor on the line containing the desired menu or function and then pressing <ENTER>.
- Typing the menu or function name in the function selection area. Parameters required by the function can be typed in the data area, which will be passed to the function.



Once a function is selected that contains an OPTION field, the user will be required to enter a valid option, the option entered by the user will be validated against the predefined access set up for that user, thus only allowing the user to perform actions at function level according to their security profile. If the option field is omitted and the <ENTER> key is pressed, a window containing valid options will be displayed allowing the user to choose the desired option. Option selection can be accomplished by marking the desired option or by placing the cursor in the line containing the option and pressing <ENTER>.

The **JS4*** range of functions is used to define and monitor Auto Scheduled Jobs.

3. FUNCTION OVERVIEW

3.1 JS400 Maintain - Base Calendars

This function is used to maintain the base calendars used for the auto scheduling of batch jobs. Base Calendars define the days of the year which an auto scheduled job can run.

Function Options:

A - Add Base Calendar

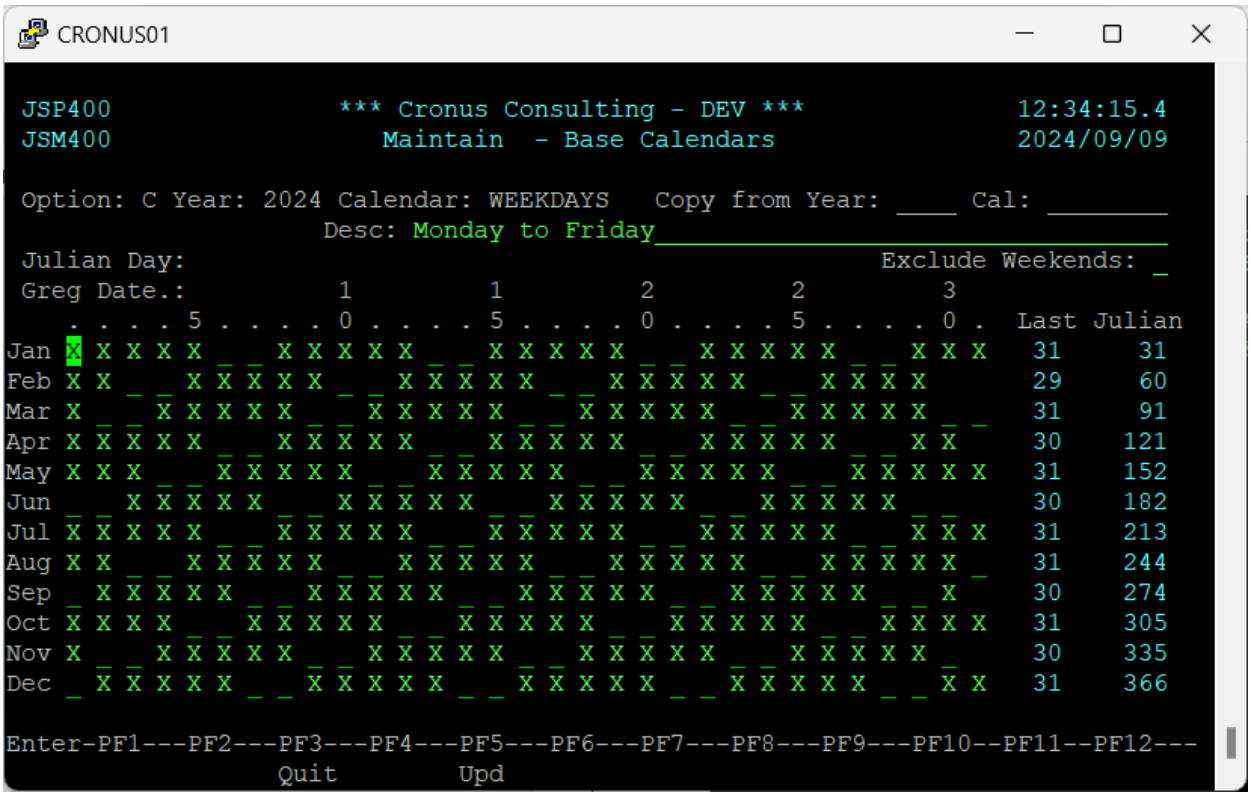
C - Change Base Calendar

D - Delete Base Calendar

E - View Base Calendar

L - Linked Jobs

S - Show Base Calendar



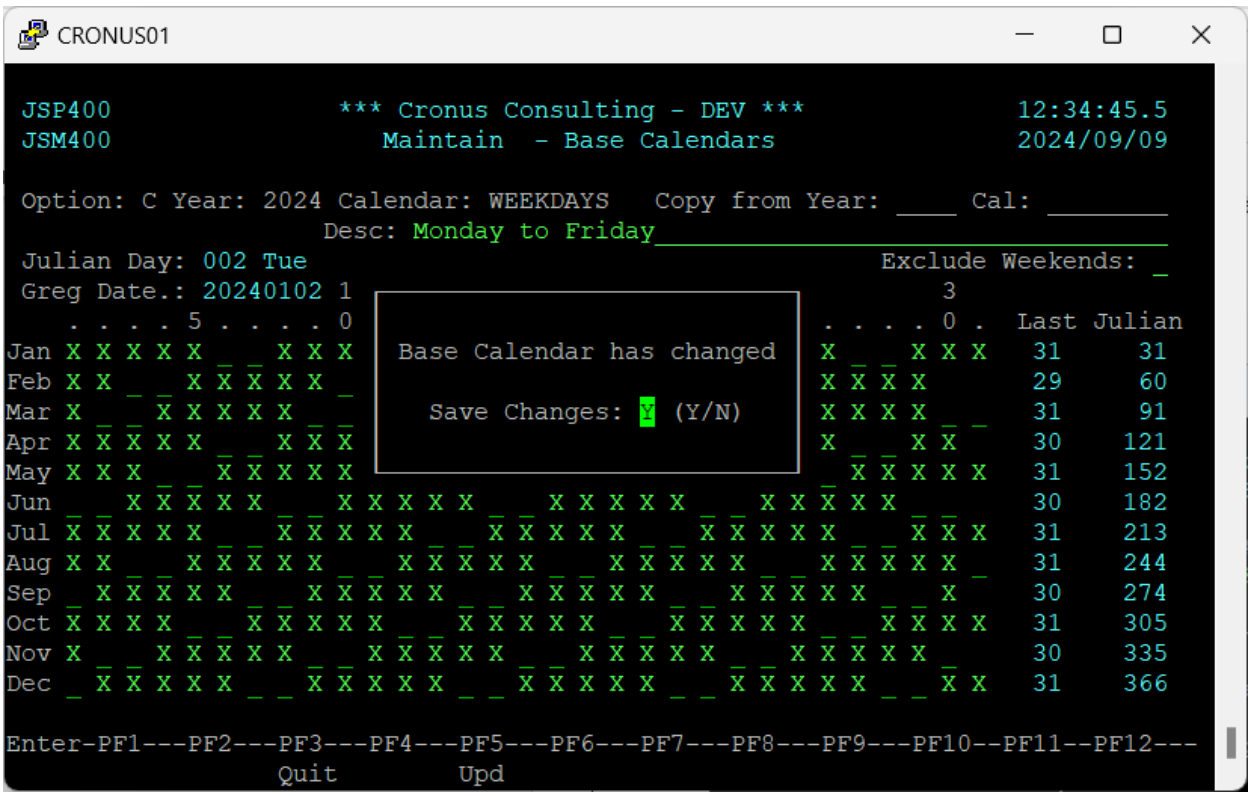
All days marked with an **X** are valid run days. The Exclude Weekends acts as a toggle to either select or deselect weekend days as valid run days. Entering an '**N**' in this field will include weekends (Saturday and Sunday), a '**Y**' will exclude weekends (Saturday and Sunday).

If <ENTER> is pressed while the cursor is positioned on a given day within a given month, the Julian Day and Gregorian Date fields will be updated to reflect the current cursor position.

If the "**Copy from Year"** and "**Cal"** fields are specified when adding a new calendar with option "**A"**, a new calendar will be created by making a copy of the calendar specified in the **Copy from Year** and **Cal** fields.

Note: When making use of the "**Copy from Year"** function the calendar being copied to must be validated to ensure that the dates are valid for the new calendar. When copying from a **non-leap year** to a **leap year** make sure that the **29'th of February** is selected if **required**.

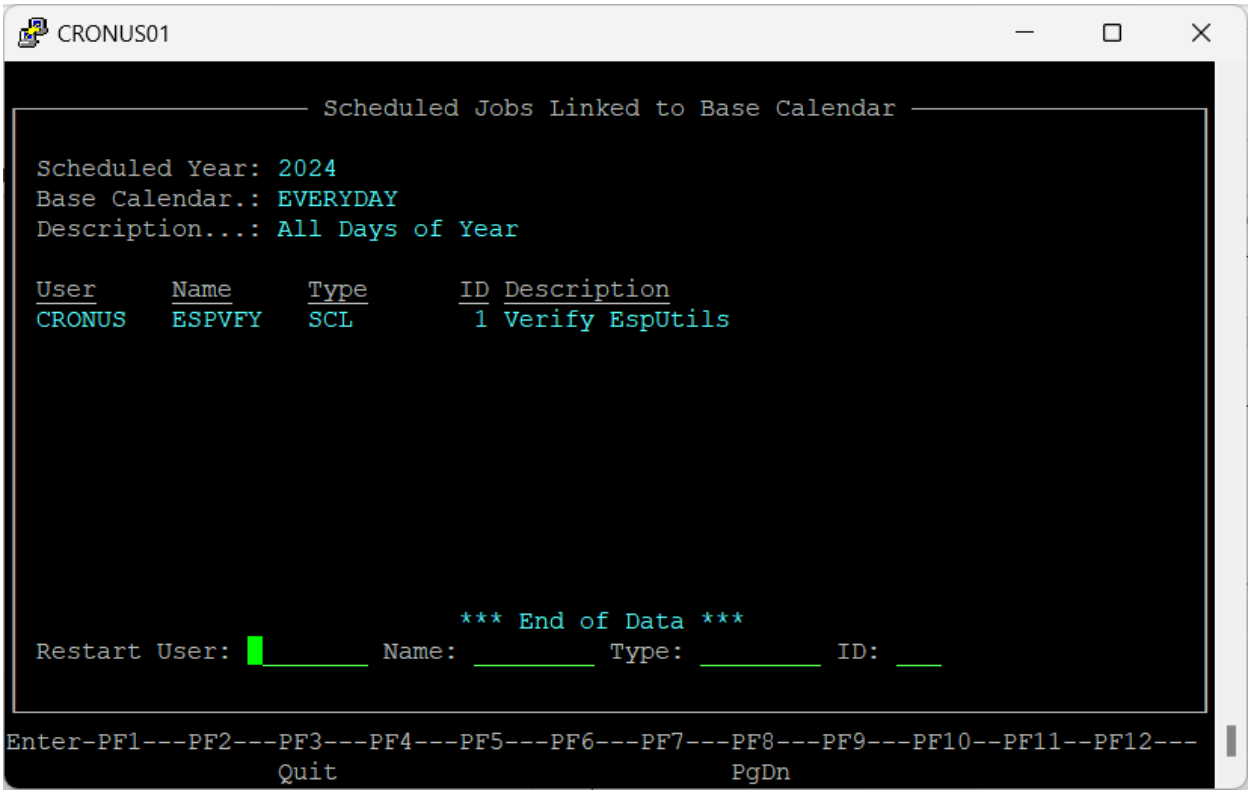
The current calendar can be updated at any stage by pressing **PF5**. If **PF3** is pressed and the calendar has been changed after the last **PF5** key press a window is displayed prompting the user if changes should be saved.



When changes are made to a base calendar, all scheduled jobs linked to the base calendar via function "**JS410 Maintain - EspAuto Jobs per Schedule ID"** will automatically be updated to reflect the changes made.

A Base calendar may not be deleted if it is linked to one or more Scheduled Jobs.

Option L – Linked Jobs displays a list off all **Scheduled Jobs** defined on **JS410** that make use of the specified Calendar.



3.2 JS402 Maintain - EspAuto Dates

This function is used to maintain the **work days** and **holidays** that are used when scheduling jobs via functions **JS410** and **JS420**. On function **JS410** the **Include Holidays/Workdays** fields refer to the values defined for "**Holidays"** and "**Work Days**" for the corresponding year specified. The trigger conditions on function **JS420** allow for a value specification of "**HOLIDAY"** and "**WORKDAY**" that reference "**Holidays**" and "**Work Days**" defined on this function.

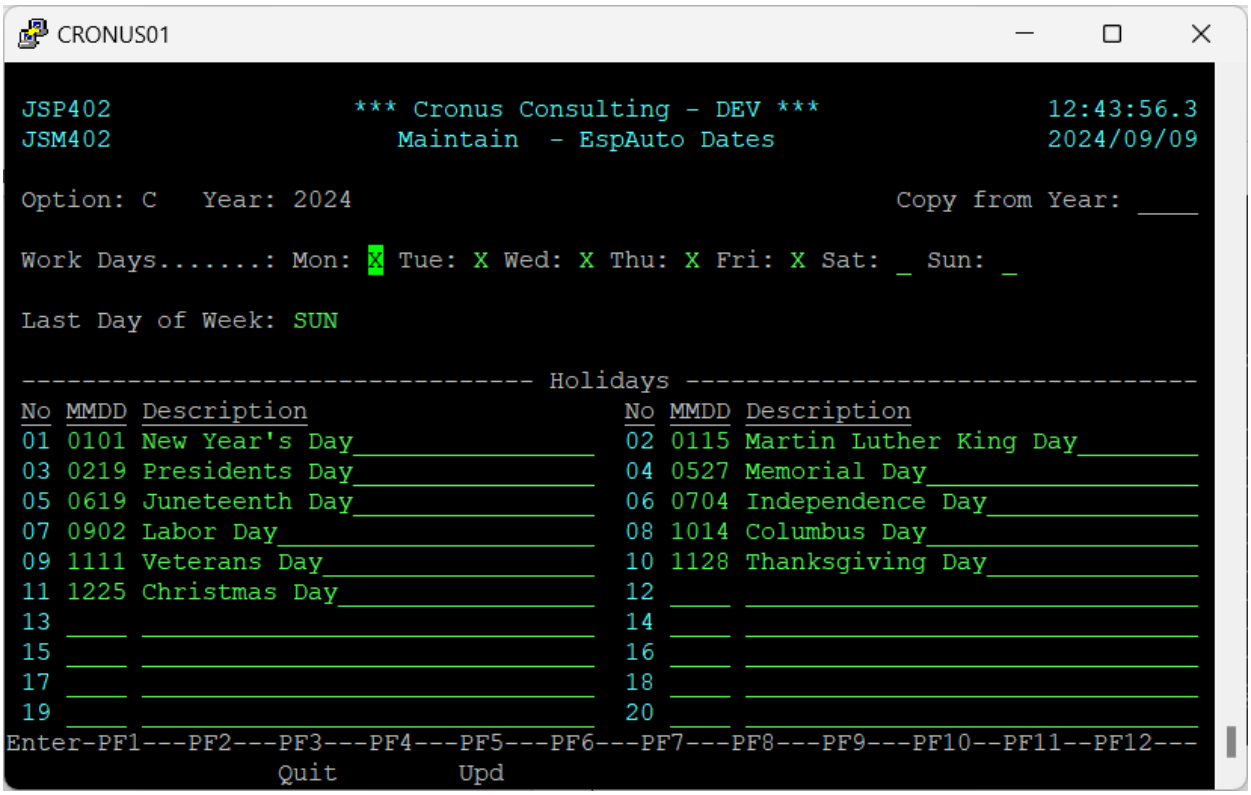
Function Options:

A - Add Dates

C - Change Dates

D - Delete Dates

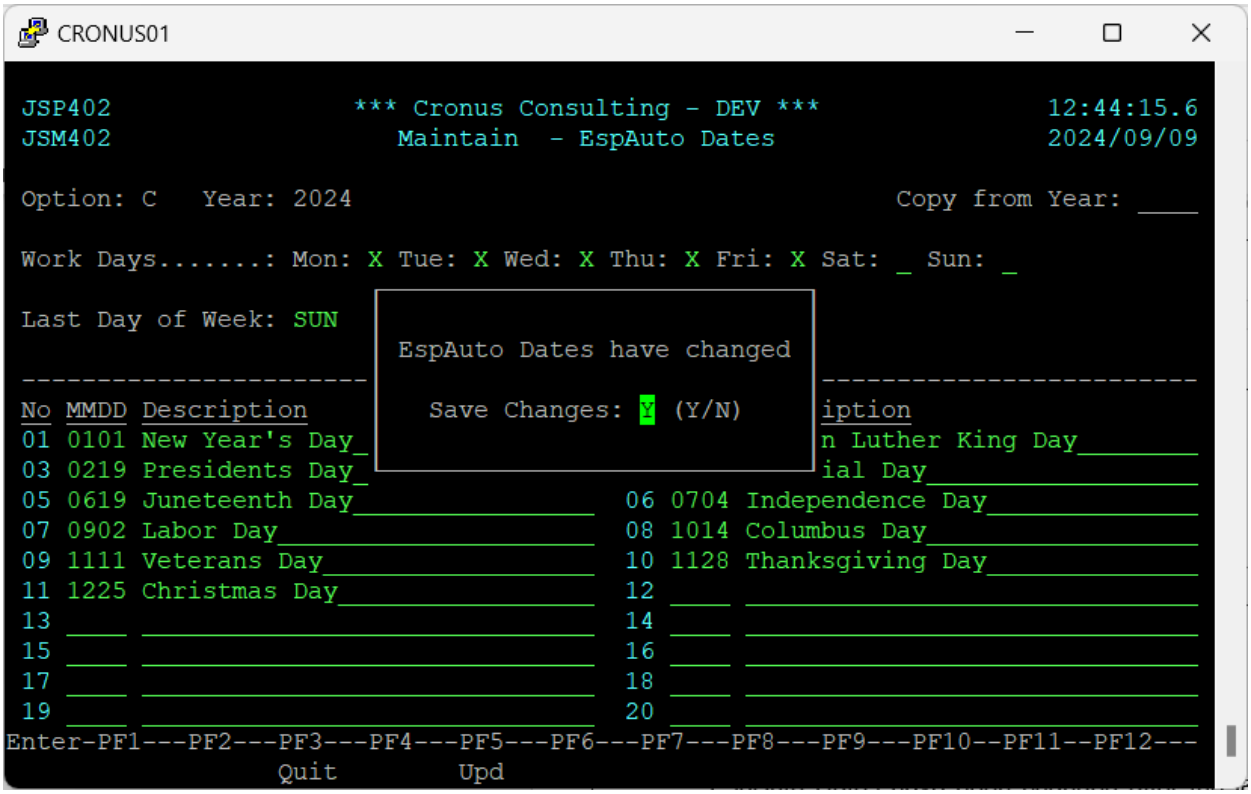
E - View Dates



If the "**Copy from Year"** field is specified when adding new EspAuto Dates with option "**A"**, the "**Work Days"**, **"Last Day of Week"** and **"Holidays"** will automatically be set to the same values as defined for the EspAuto Dates in the "**Copy from Year"** field.

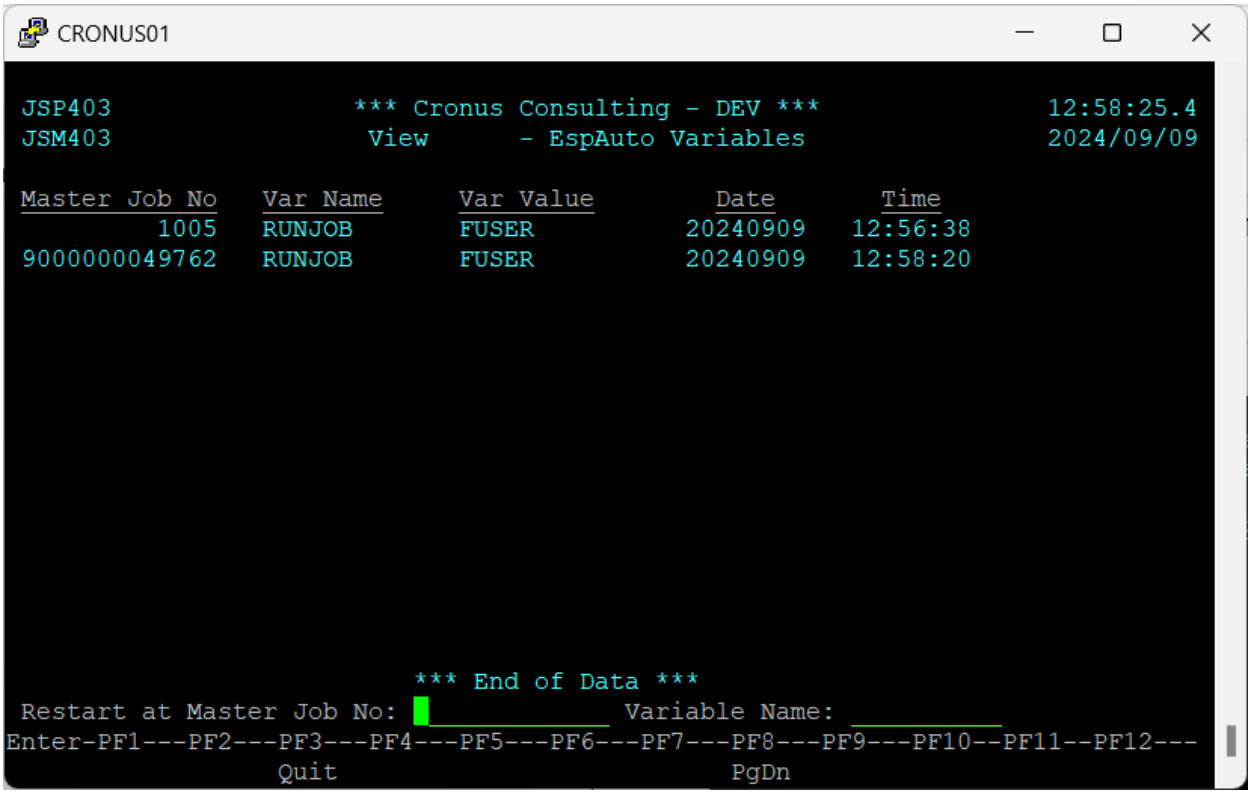
When changes are made to any of the EspAuto Dates, all scheduled jobs defined on function **JS410 Maintain - EspAuto Jobs per Schedule ID** will automatically be updated to reflect the changes made.

The current EspAuto Dates can be updated at any stage by pressing **PF5**. If **PF3** is pressed and the EspAuto Dates have been changed after the last **PF5** key press a window is displayed prompting the user if changes should be saved.



3.3 JS403 View - EspAuto Variables

This function is used to view EspAuto variables that are defined within the trigger conditions specified on **JS420**. Any variable that is created via the "**SET / ESET**" keyword within the conditional trigger logic will be displayed via this function.



Variables created during normal job execution are identified by the Master Job No and Variable name.

When schedule forecasts are generated using functions **JS425 View - Forecast Scheduled Jobs** and **JS426 Extract - Forecast Scheduled Jobs (CSV Format)** the Master Job No is created by adding the process id to the value 9000000000000 (In the example above variable **RUNJOB** has a Master Job No of **9000001471472** – which indicates that the process id was **1471472** when the forecast was generated). The process id that will be used to create the Master Job No is displayed on functions **JS425** & **JS426**. Note that if more than one schedule forecast is generated using the same session the previous forecasts variables will be overwritten.

3.4 JS405 Maintain - EspAuto Jobs

This function is used to maintain the run parameters for auto scheduled jobs. A job cannot be submitted via the auto scheduler if it has not been defined via this function.

Function Options:

A - Add Job
C - Change Job
D - Delete Job
E - View Job
L - Links
T - Triggered by Job

```
CRONUS01

JSP405                 *** Cronus Consulting - DEV ***              12:58:51.6
JSM405                     Maintain  - EspAuto Jobs                 2024/09/09

Option: C Sched User.: CRONUS__ Name: DBBACKUP Type: SCL_____ Links: 1
          Description: End of Day Backup_____________________________
          SCL User...: CRONUS__ Name: DBBACKUP Type: SCL_____
          Description: Backup Adabas DB 31

Execute Job................: Y            Abort if SCL does not exist: Y
Use Scanned Date for Parms.: Y            Pass Date to Triggered Jobs: Y
Submit Triggered Jobs......: Y            Lead Time...................: 04:00
Submit User ID.............: espbatch     Maximum Run Time (Minutes).: ___30

Auto Restart Return Code...: 80__ , 90__  Auto Restart Attempts......: 2_
RC Check - Return Code.....: 4___ : 8___  RC Check - Action..........: C (C/A)
                             12__ : 16__                               A

Last Completion Date/Time..: 2024-09-09 12:56:41.7
Last Completion Code.......: 0
Last Updated by User.......: EY712
Last Update Date/Time......: 2024-09-09 12:46
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
                  Quit        Upd
```

Required Fields:

- SCL User - The User library of the SCL to be submitted.
- SCL Name - The Name of the SCL to be submitted.
- SCL Type - The Type of the SCL to be submitted. If the **SCL User**, **SCL Name** & **SCL Type** fields are left blank they will default to the **Sched User**, **Name** & **Type** fields.

Note: If a SCL with the Name and Type specified exists in SCL User Library "**OVERRIDE**" then the SCL in User Library "**OVERRIDE**" will be submitted.

- Execute Job - Valid values are **Y**es and **N**o. If **N**o is specified the batch job will not be executed, however it will be removed from all jobs in the queue awaiting its completion and if any triggered jobs have been defined, they will be submitted.
- Abort if SCL does not exist - Valid values are **Y**es and **N**o.
  If this field is set to **Y**es and **Execute Job** has a value of **Y**es and the specified SCL does not exist, the job will abort.
  If this field is set to **N**o and Execute Job has a value of **Y**es and the specified SCL does not exist. The job status will be updated to **C**omplete at execution time without attempting to execute the SCL, however it will be removed from all jobs in the queue awaiting its completion and if any triggered jobs have been defined, they will be submitted.
- Use Scanned Date for Parms - Valid values are **Y**es and **N**o. If **Y**es is specified, the submission date will be used for parameter substitution in stead of the current system date.
- Pass Date to Triggered Jobs - Valid values are **Y**es and **N**o. The scanned date is passed to all jobs that are triggered from this job.
- Submit Triggered Jobs - Valid values are **Y**es and **N**o. If **Y**es is specified all defined triggered jobs will be scheduled on completion of the current Job.
- Lead Time - If a Lead Time is specified it will override the system default set with function **JS493 Maintain - EspAuto Setup**. The Lead Time specified is used to determine whether predecessor(s)/file event(s) are added. If the predecessor/file event has completed within the specified **Lead Time** window (scheduled Date/Time - Lead time) it will not be added. Thus, if Job **B** has a **predecessor** of **A** and job **B** is scheduled to run at **08H00** and has a Lead Time of **6 hours**, Job **A** will not be added as a predecessor if it completed between **02H00** and **08H00**. In addition, lead time checking can be turned on/off by setting the value of **LEADTIMECHK** to **Y**es or **N**o using function **JS493 Maintain - EspAuto Setup**.

- Submit User ID - If the Submit User ID has been specified, the batch job will be submitted as that User ID. If no User ID is specified, the job will be submitted with the same User ID that EspAuto is running as.
- Maximum Run Time (Minutes) - The Maximum Run Time in minutes. If the run time exceeds the specified maximum run time a notification will be sent. Note that should the job abend and be restarted, the max run time is still computed using the initial start time of the job.
  Notification must be defined using function **JS492 - Maintain Scheduled Job Notification**.
- Auto Restart Return Code - Defines the return code(s) for which a job should automatically be restarted. If a job completes with a return code that is equal to 1 of the return codes specified, the job is restarted automatically.
- Auto Restart Attempts - The number of times the system will attempt to restart the job. If no value is entered it will default to 4.
  The job is restarted after 30 seconds.
- RC Check – Return Code - Allows for the specification of 2 return code ranges that are checked when a job completes/aborts, if the job completes/aborts within one of the return code ranges its status will be set in accordance with the action "**A**bort/**C**omplete" specified. **If no RC Check value is specified for a triggered job the RC Check value(s) defined on the job that triggered the job are used.**

The rest of the fields are for information purposes only and are updated by the system.

The scheduled job can be updated at any stage by pressing **PF5**. If **PF3** is pressed and the scheduled job has been changed after the last PF5 key press a window is displayed prompting the user if changes should be saved.

Option "**L**inks" will display all scheduled links to the job (Scheduled, Predecessors, Predecessors To, Concurrency, Triggered By, Triggers, File Event Predecessors and File Event Triggers).

Option "**T**riggered by Job" only displays jobs that trigger the job.

3.5 JS410 Maintain - EspAuto Jobs per Schedule ID

The function is used to set up the auto scheduled run dates and times for a batch job. The Schedule ID allows a job to be scheduled will multiple date/time specifications. Only jobs defined with this function will automatically be scheduled via the Auto Scanner.

Function Options:

A - Add Scheduled Job

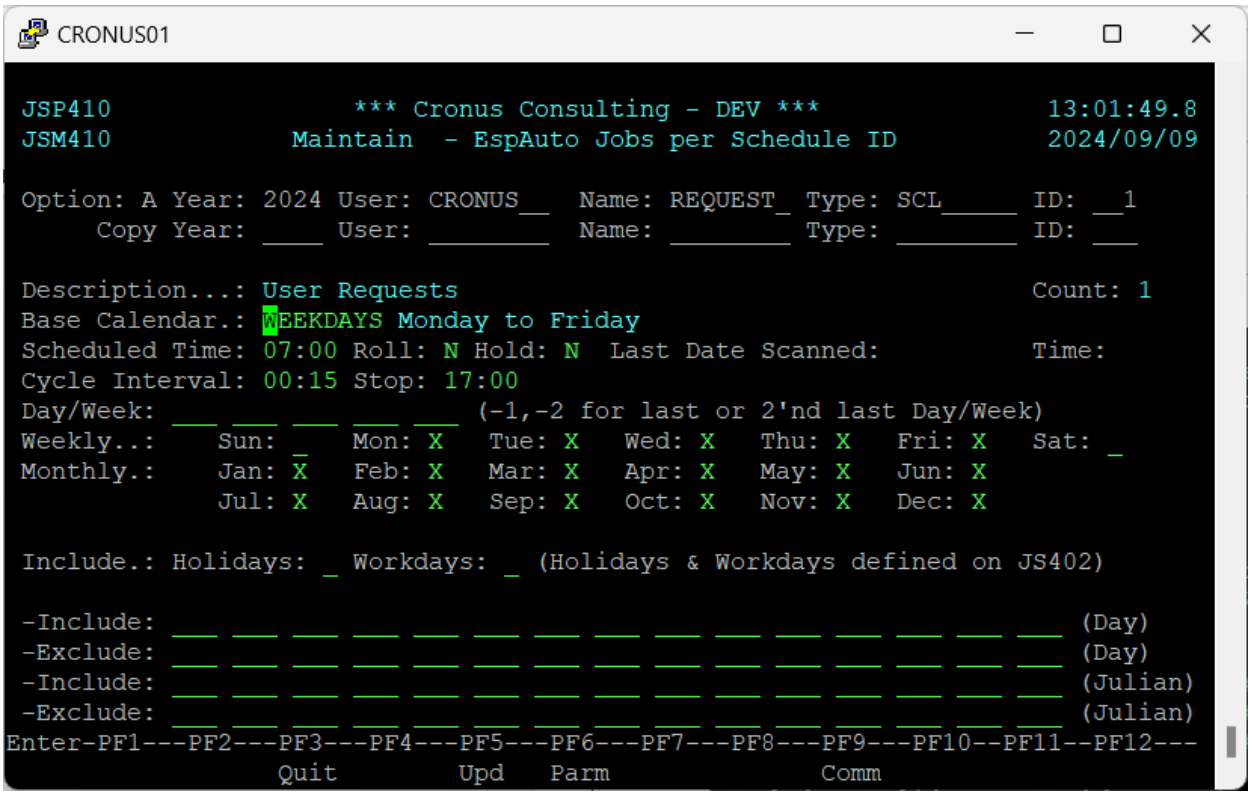
C - Change Scheduled Job

D - Delete Scheduled Job

E - View Scheduled Job

S - Show Scheduled Dates

X - Copy Scheduled Jobs



Required Fields:

- Base Calendar - The name of the Base Calendar to be used. A Job will only run on a given date if that day is specified on the base calendar. The

days defined on the base calendar can be overridden by using the **Roll**, **Include** and **Exclude** options on this screen.

- Scheduled Time - Time that the job is scheduled to run.
- Roll - The value of this field determines what action should be taken if a job cannot run on a specified day since the day was not specified on the selected Base Calendar.

  Valid values are:
  - **B** – Roll Backwards: If the date specified within this function is not defined on the specified base calendar, scheduling will take place on the first date that that has been defined on the base calendar prior to the selected date. A job will not be scheduled more than once for a given date due to a “Roll Backwards” action.
  - **F** – Roll Forwards: If the date specified within this function is not defined on the specified base calendar, scheduling will take place on the first subsequent base calendar date. A job will not be scheduled more than once for a given date due to a “Roll Forward” action.
  - **D** – Drop: The job will not be scheduled if the date is not defined on the specified base calendar
  - **N** – No Roll: Base calendar is not evaluated; jobs are scheduled according to the dates specified within this function
- Hold - Hold indicator.

  Valid values are:
  - **Y** – Job is submitted in hold status. Must be released to start execution.
  - **N** – Job is not submitted in hold.
  - **R** - Job is submitted in hold status. Must be released to start execution. Hold is removed after next execution.
- Cycle Interval - Cycle interval in hours and minutes. Cycle jobs repeat until the specified stop time.
- Cycle Stop - Cycle stop time. If no cycle stop time is specified, the cycle will stop at 23H59.
- Day/Week - Used to specify a specific day(s) on which the job should run. Entering a value of ‘**-1**’ specifies the last day of the month. A negative value calculates the run day working backwards from the last day of the month.

  Roll Indicator **N** or **D**: Run date is calculated using days

specified on Base Calendar.
Roll Indicator **F** or **B**: Run data is rolled forward/backward to 1'st date on Base Calendar.

- Weekly - Used to specify to Day(s) of the week on which the job should run.
- Monthly - Used to specify the months of the year that jobs are to run.
- Include Holidays - Evaluates Holidays defined on **JS402 Maintain - EspAuto Dates**. Valid values are: **Y** – Include Holidays, **N** – Exclude Holidays, **Blank** – Holidays are not evaluated for inclusion/exclusion.
- Include Workdays - Evaluates Workdays defined on **JS402 Maintain - EspAuto Dates**. Valid values are: **Y** – Include Workdays, **N** – Exclude Workdays, **Blank** – Workdays are not evaluated for inclusion/exclusion. Note that Holidays are evaluated before Workdays, thus a positive/negative result on evaluation of a Holiday will take precedence.
- Include (Day) - Multiple days in **format DD** can be specified. A job will always run on the specified Day, regardless of the Base Calendar, Roll Indicator and run Dates specified. Entering a value of '**-1**' specifies the last day of the month. Negative values calculate the run day working backwards from the last day of the month.
- Exclude(Day) - Multiple days in **format DD** can be specified. A job will not run on the specified Day, regardless of the Base Calendar, Roll Indicator and run Dates specified. Entering a value of '**-1**' specifies the last day of the month. Negative values calculate the run day working backwards from the last day of the month.
- Include (Julian) - Multiple dates in **Julian Day** format can be specified. A job will always run on the specified Julian Day, regardless of the Base Calendar, Roll Indicator and run Dates specified.
- Exclude (Julian) - Multiple dates in **Julian Day** format can be specified. A job will not run on the specified Julian Day, regardless of the Base Calendar, Roll Indicator and run Dates specified.

Dynamic parameters can be defined by pressing **PF6** and are available to all jobs that form part of the schedule. The specified parameters can then be used as dynamic variables within the submitted SCL's by prefixing the variable name with an ampersand "&".

In the example below variable “**RUNTYPE**” has been assigned a value of “**DAILY**”.

```
CRONUS01

                          Dynamic Parameters

 Year: 2024 User: REQUEST  Name: CRONUS   Type: SCL      ID: 1

    Parm Name            Parm Value
  1 RUNTYPE              DAILY
  2
  3
  4
  5
  6
  7
  8
  9
 10
 11
 12
 13
 14
 15

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
                  Quit  Ins                      PgDn
```

The rest of the fields are for information purposes only and are updated by the system.

The scheduled job can be updated at any stage by pressing **PF5**. If **PF3** is pressed and the scheduled job has been changed after the last **PF5** key press a window is displayed prompting the user if changes should be saved.

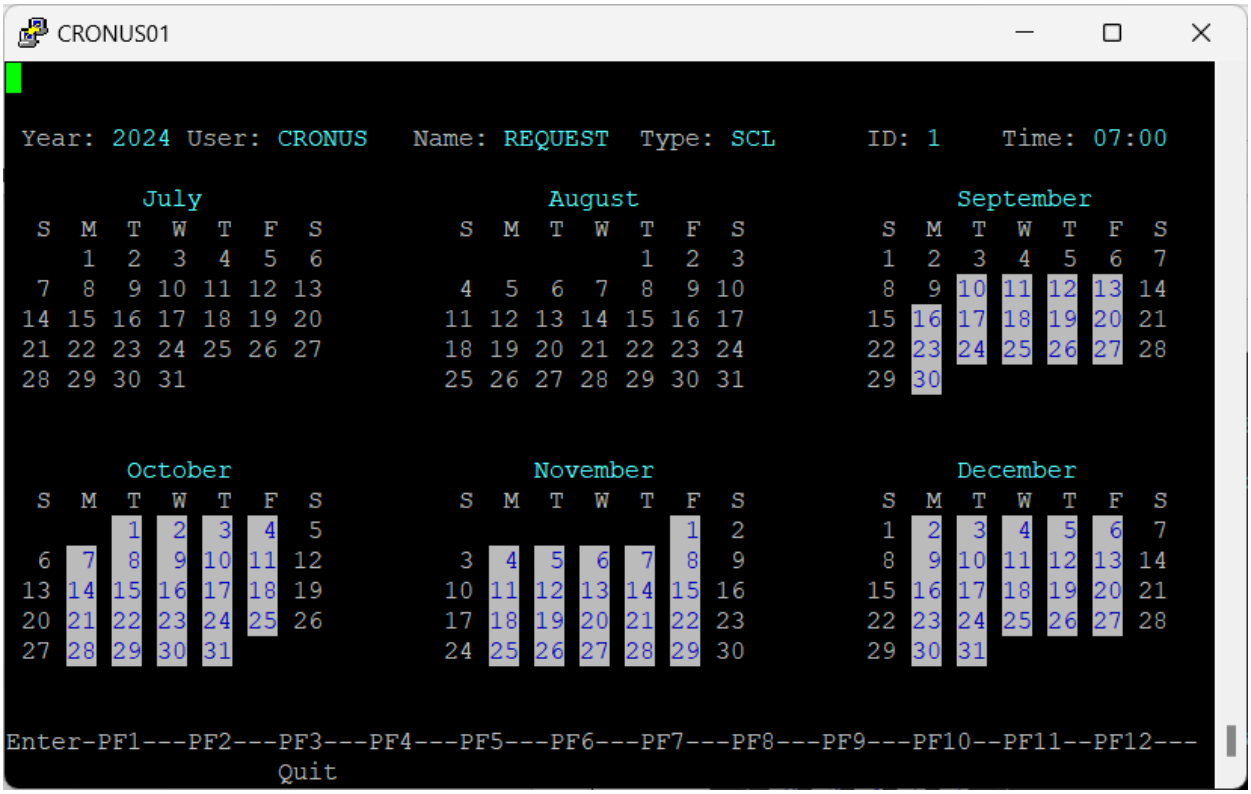
If the **Copy** fields are specified when adding a new scheduled job with option **A**, a new scheduled job will be created by making a copy of the scheduled job specified in the **Copy** fields.

Multiple scheduled jobs can be copied from one year to another by making use of option **X**, the scheduled jobs to be copied can be limited by specifying the User, Name, Type and Id, the wildcard character ‘*’ can be used within the User, Name & Type fields.

```
JSP410                *** Cronus Consulting - DEV ***                13:03:45.3
JSM410            Maintain  - EspAuto Jobs per Schedule ID           2024/09/09

Option: X Year: 2024 User: CRONUS__   Name: BACKUP*_ Type: SCL_____ ID: 1__
     Copy Year: 2025 User: _______    Name: ________ Type: ________ ID: ___
```

Note that all jobs that match the selection criteria (User, Name, Type & ID) for the year being copied to are deleted before the copy takes place irrespective of whether the job exists for the year being copied from. In the example provided all jobs that start with Scheduled Name "**BACKUP**" will be deleted for 2025, then all jobs if any that start with user "**BACKUP**" for 2024 will be copied to 2025.

The **S**how option will display a calendar highlighting the dates that the job is scheduled to run. Note that run dates are not highlighted for past dates. If past dates are still highlighted this indicates that the job was scheduled to run for the specified date – the most likely cause for this would be that the Auto Scanner did not run.



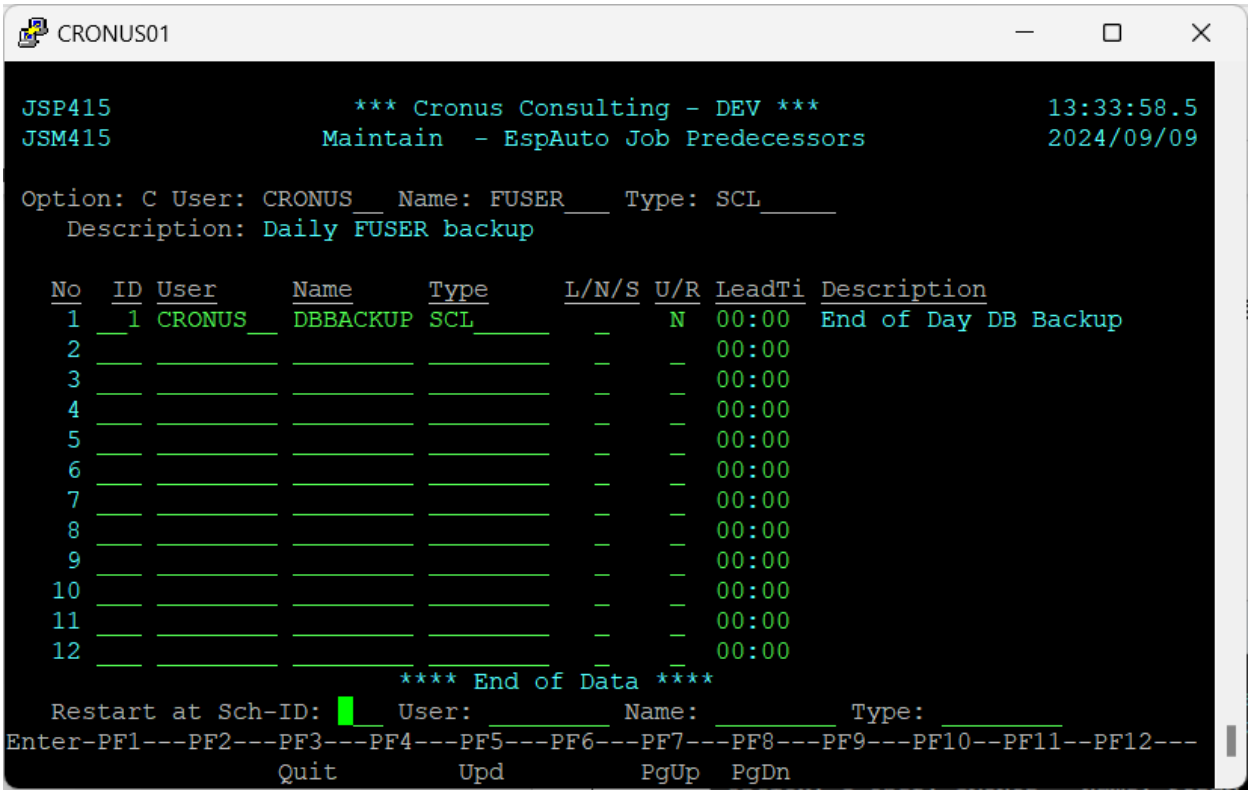
3.6 JS415 Maintain - EspAuto Job Predecessors

This function is used to maintain predecessors per scheduled job.

Function Options:

C - Change Predecessors

E - View Predecessors



If a scheduled job has predecessors defined for it the job will not start execution until the predecessors have completed execution. Different predecessors can be defined per Schedule Id.

(L/N/S):

- L - Job will only wait for completion of predecessor if it is currently loaded.
- **N** - This predecessor will only apply to the next run, thereafter the predecessor will automatically be removed.
- **S** - Ignore predecessor for next run, after the next run this field is automatically reset so that the predecessor is added for subsequent runs.

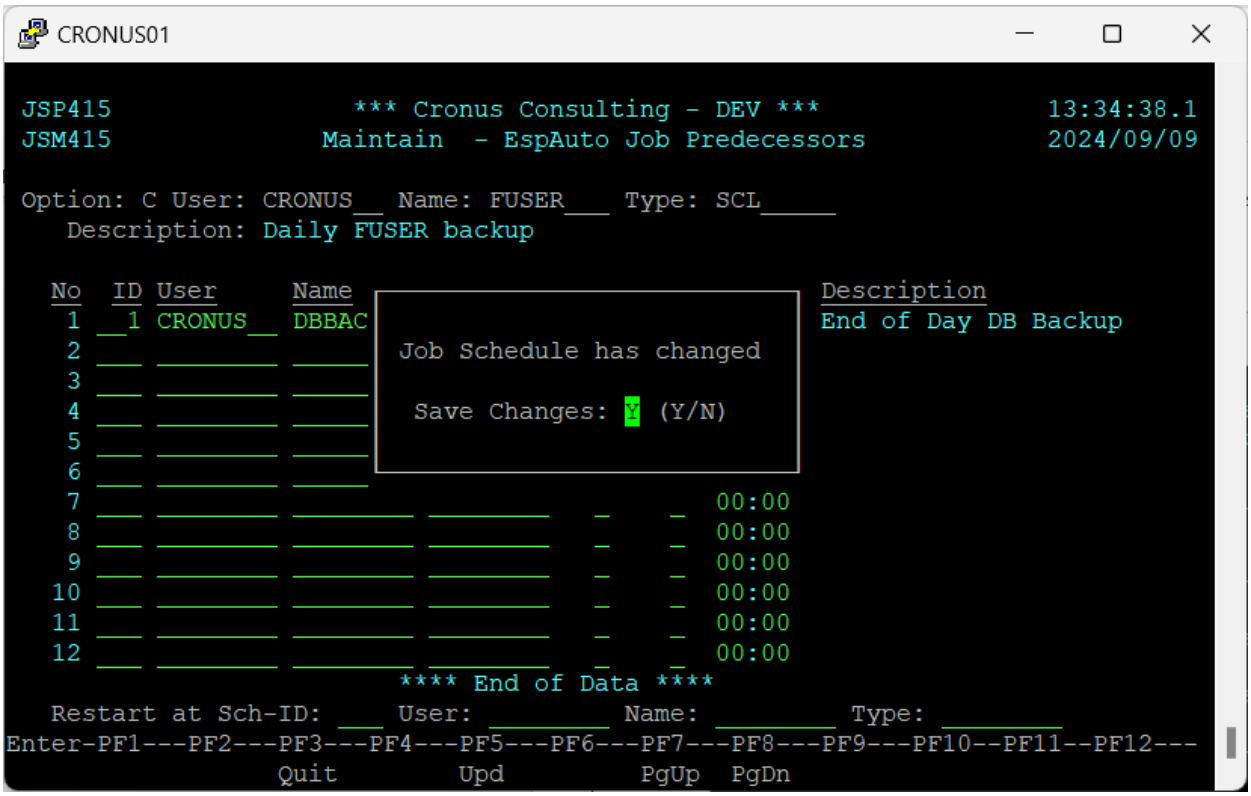
Unconditional Release (U/R):

- **Y** - Predecessor is removed from this job whether the job **C**ompletes or **A**borts.
- **N** - Predecessor is removed from this job when the job **C**ompletes successfully.

LeadTi:

If lead time is specified for the predecessor, it will take precedence over the lead time specified for the job on **JS405 Maintain - EspAuto Jobs**.

The predecessors can be updated at any stage by pressing **PF5**. If **PF3** is pressed and the predecessors have been changed after the last PF5 key press a window is displayed prompting the user if changes should be saved.



Note that jobs will inherit predecessors from scheduled jobs that are bypassed due to conditional trigger logic if "INHERETPRED" is set to "Y" on function "JS493 – Maintain - EspAuto Setup"

Example:

Job B has 2 predecessors:	Jobs B1 & B2
Job C has 1 predecessor:	Job B
Job B is bypassed:	Conditional trigger logic defined on function **JS420 Maintain - EspAuto Job Triggers**.
Job C inherits Job B's predecessors:	Jobs B1 & B2

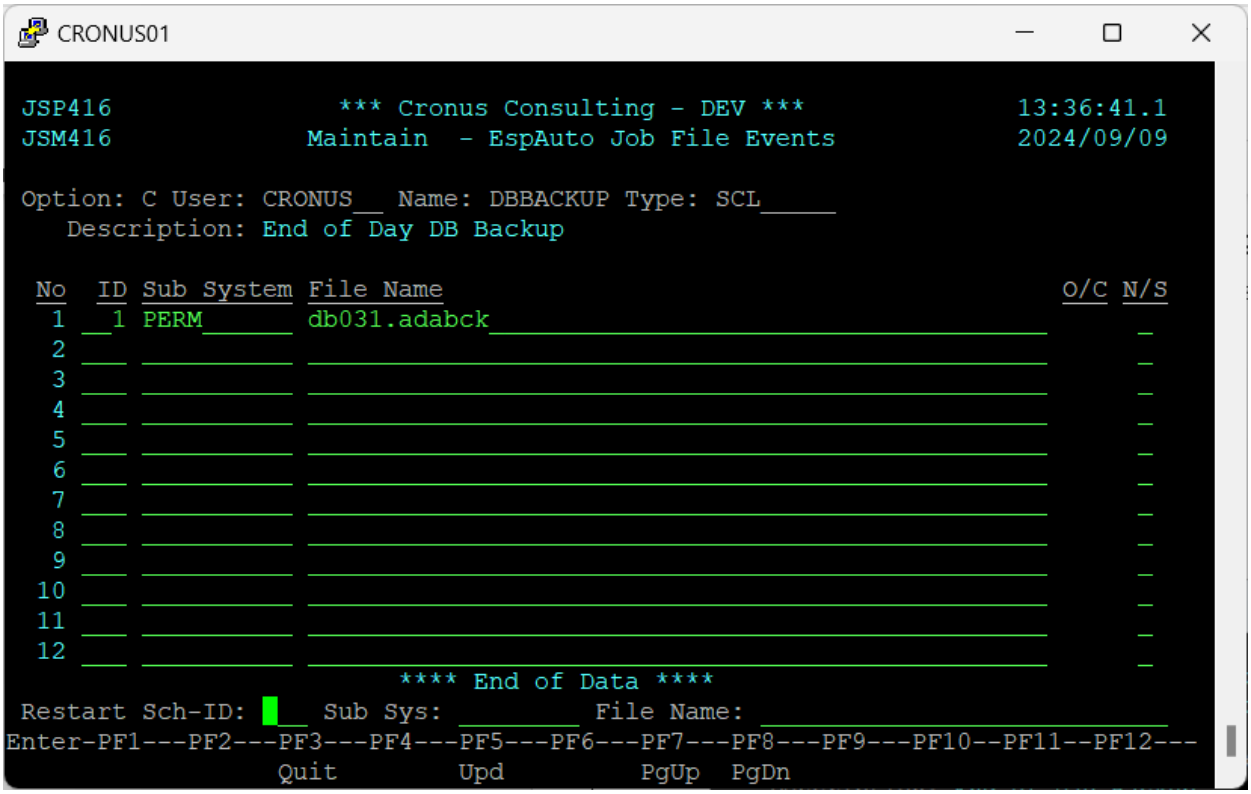
3.7 JS416 Maintain - EspAuto Job File Events

This function is used to maintain file events per scheduled job. File events must be defined using function **JS421 Maintain - File Events per Sub System** before they can be added.

Function Options:

C - Change File Events

E - View File Events

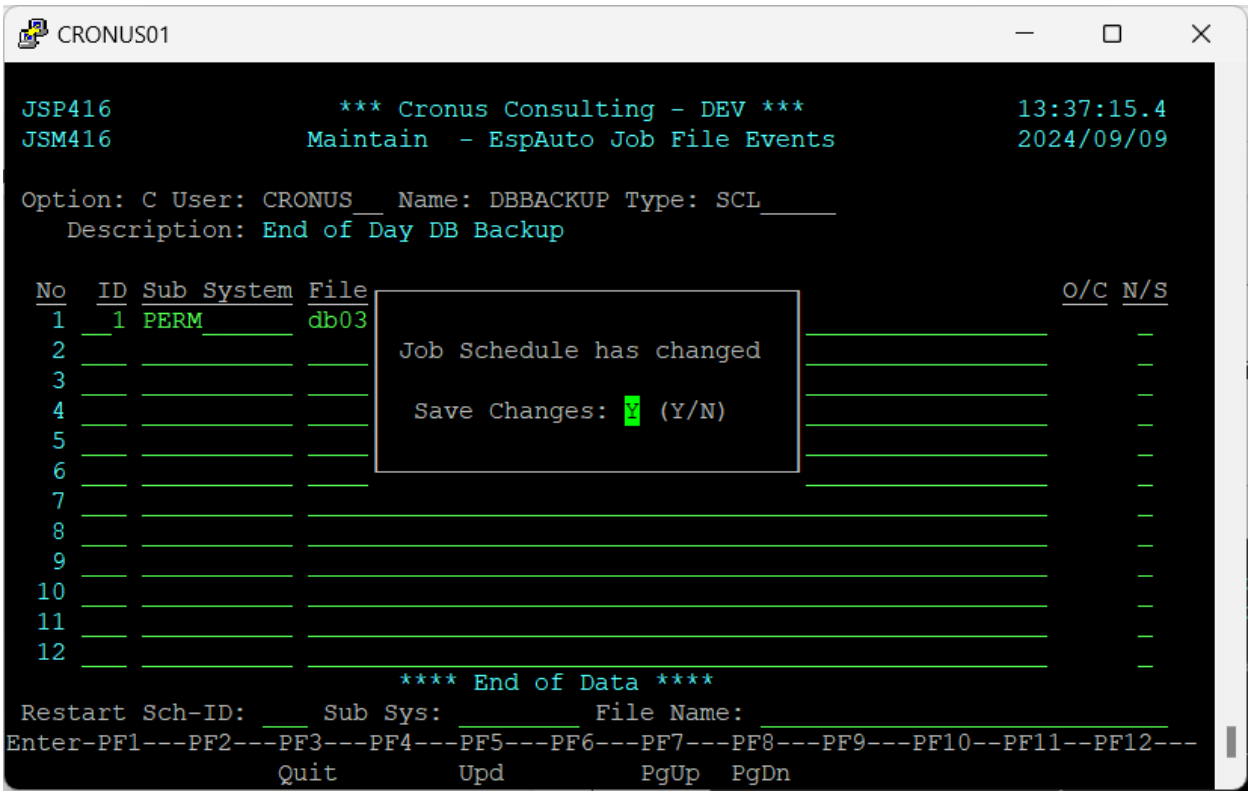


If a scheduled job has file events defined for it the job will not start execution until a file open event has occurred for each of the files specified. Different file events can be defined per Schedule Id.

Next/Skip (N/S):

- **N** - This file event will only apply to the next run, there after the file event will automatically be removed.
- **S** - Ignore file event for next run, after the next run this field is automatically reset so that the file event is added for subsequent runs.

The file events can be updated at any stage by pressing **PF5**. If **PF3** is pressed and the file events have been changed after the last PF5 key press a window is displayed prompting the user if changes should be saved.



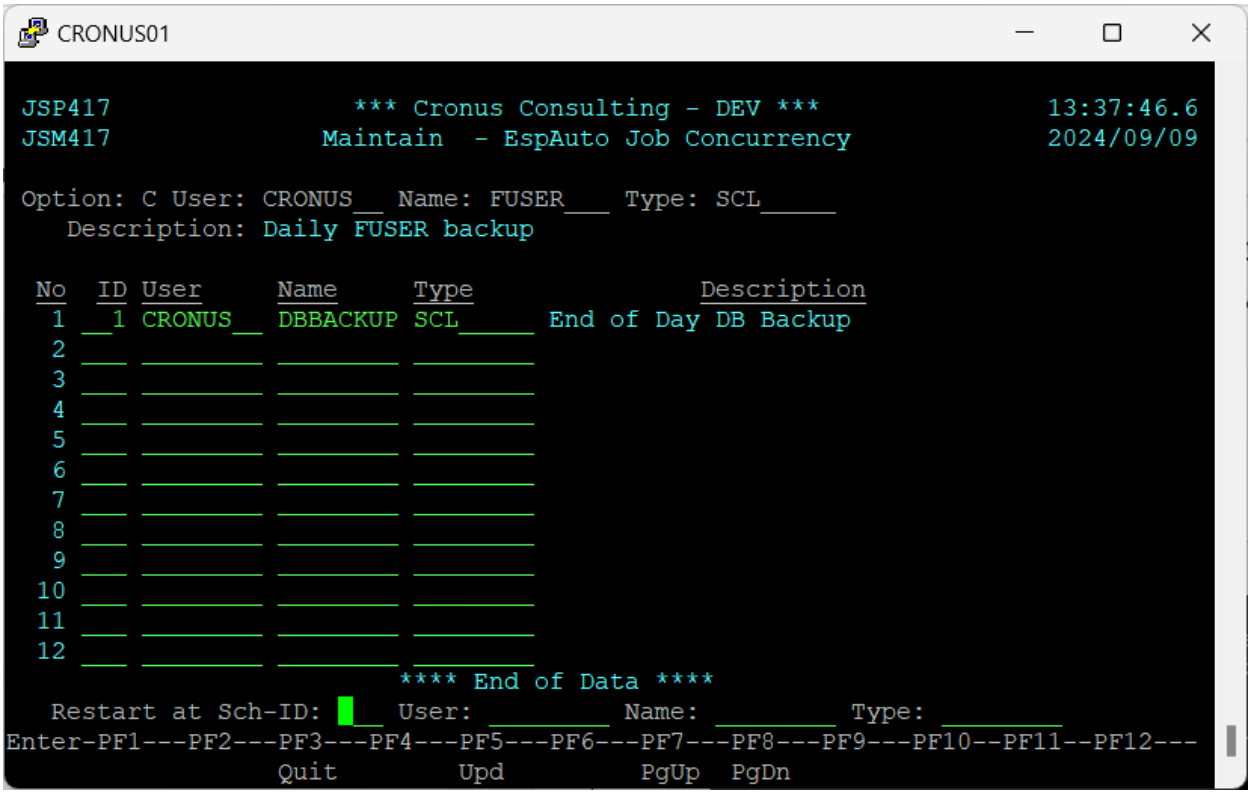
3.8 JS417 Maintain - EspAuto Job Concurrency

This function is used to maintain job concurrency.

Function Options:

C - Change Concurrency

E - View Concurrency



If a scheduled job has concurrent job(s) defined, the job will not start execution while the specified concurrent jobs have a status of submitted, executing or are in an error status. Different concurrent jobs can be defined per Schedule Id.

The concurrent jobs can be updated at any stage by pressing **PF5**. If **PF3** is pressed and the concurrent jobs have been changed after the last PF5 key press a window is displayed prompting the user if changes should be saved.

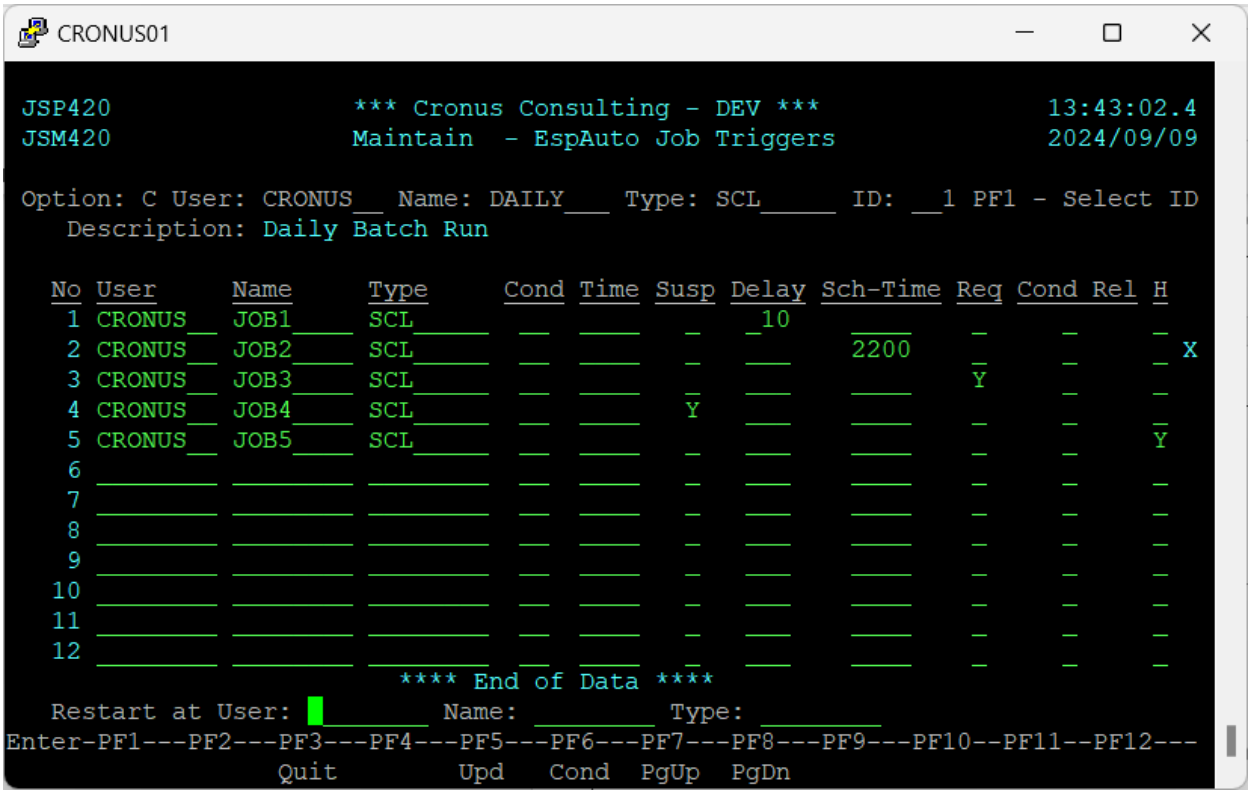
3.9 JS420 Maintain - EspAuto Job Triggers

This function is used to maintain triggers per scheduled job.

Function Options:

C - Change Triggers

E - View Triggers



Once the scheduled job has completed, all triggered jobs will be submitted after evaluation of any trigger conditions. Different triggered jobs can be defined per Schedule Id.

Optional Fields:

- **Cond** - The **Cond** and **Time** fields if entered will ensure that the job is not executed if the current system time does not comply with the condition / time specified. The time constraint is only evaluated once the job has no restrictions (Predecessors, File Events, etc.) prohibiting it from running. If the time constraint evaluates to false the jobs status is set to completed and it is removed as predecessor from all jobs awaiting its

completion The **Cond** field may contain: **LT** – Less than, **LE** – Less than or Equal or **NE** - Not Equal.

- **Time** - Time format is HHMM.
- **Suspend** - If suspend contains a value of **Y**es, then the job will not be triggered. Jobs triggered by the suspended job will not be triggered.
- **Delay** - Time delay before triggered job can start execution. This is computed by adding the number of minutes specified to the current system data/time. Maximum value allowed is 720 minutes (6 hours).
- **Sch-Time** - Scheduled time for triggered job – format is HHMM.
- **Req** - If the request field contains a value of **Y**es, the job will be triggered in **REQUEST** mode. If all prerequisites for a job triggered in **REQUEST** mode have been satisfied and the job is still in **REQUEST** mode, it will not be executed, however it will be removed from all jobs in the queue awaiting its completion and if any triggered jobs have been defined, they will be submitted.
- **Cond Rel** - If the conditional release field contains a value of **Y**es, the job will automatically be removed from the job queue if it still has outstanding requirements and all jobs with conditional release set to **N**o have completed.
- **H** - Hold flag. Valid values are:
  Y – Trigger job in hold status
  N – Job not triggered in hold status
  R – Trigger in hold status and remove hold status for subsequent runs.

The triggered jobs can be updated at any stage by pressing **PF5**. If **PF3** is pressed and the triggered jobs have been changed after the last PF5 key press a window is displayed prompting the user if changes should be saved.

Trigger Conditions:

Trigger conditions allow for additional control over when jobs should be triggered and at what time. The trigger condition screen also allows for the setup of user defined variables that are available throughout the scheduled run. User defined variable must be preceded by an “&”. The trigger conditions screen can be accessed by pressing **PF6** and entering the Scheduled User, Name and Type fields in the popup window.

```
CRONUS01

                         Define Trigger Conditions

Scheduled Id: 1    User: CRONUS    Name: JOB2      Type: SCL

 Test Keyword     Oper Start Value  End Value     Day Diff Action     Time Delay
 SET_ &RUNDATE__   EQ  TODAY_______ _____________   ___    __________ ____  ___
 IF__ TODAY_____   EQ  HOLIDAY_____ _____________   ___    NORUN_____ ____  ___
 IF__ TODAY_____   EQ  1___________ SAT__________   __1    SCHEDTIME_ 2000  ___
 IF__ TODAY_____   EQ  JAN_________ FEB__________   ___    __________ ____  ___
 AND_ TOMORROW__   EQ  SUN_________ _____________   ___    DROPREQ___ 2100  ___
 IF__ TODAY_____   EQ  LAST________ WORKDAY_______ ___    DELAY_____ ____  _30
 ____ ___________  __  _____________ _____________   ___    __________ ____  ___
 ____ ___________  __  _____________ _____________   ___    __________ ____  ___
 ____ ___________  __  _____________ _____________   ___    __________ ____  ___
 ____ ___________  __  _____________ _____________   ___    __________ ____  ___
 ____ ___________  __  _____________ _____________   ___    __________ ____  ___
 ____ ___________  __  _____________ _____________   ___    __________ ____  ___
 ____ ___________  __  _____________ _____________   ___    __________ ____  ___
 ____ ___________  __  _____________ _____________   ___    __________ ____  ___
 ____ ___________  __  _____________ _____________   ___    __________ ____  ___

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
                  Quit        Ins   Del
```

Valid Input values:

- **Test** - The **Test** column must contain one of the following values: **IF**, **ELSE**, **AND**, **OR**, **RES** and **ERES**, **SET** and **ESET**. **SET** and **ESET** are used to assign values to user defined variables. These variables are created at execution time.
- **Keyword** - Valid Keywords are: **TODAY**, **TOMORROW**, **YESTERDAY** and **SCANDATE**. **SCANDATE** contains the date the job entered the scheduled queue. Each of the other dates is determined according to the current system date. All dates are in format **YYYYMMDD**. In addition, user defined variables may also be specified. A user defined variable must be prefixed with a '**&**'.
- **Oper** - Valid operators are **EQ**, **NE**, **LE**, **LT**, **GT** and **GE**.
- **Start Value** - **SCANDATE**: Date that job entered the scheduled queue
  WEEKEND: Any Saturday or Sunday
  WORKDAY: Work days are defined on **JS402 Maintain - EspAuto Dates**
  WEEKDAY: Monday through Friday
  MONTHSTART: First day of month
  MONTHEND: Last day of Month
  HOLIDAY: Holidays defined on **JS402 Maintain - EspAuto**

		Dates
	Day of Week:	Day name in format Alpha 3 or 9. Ex. **SUN** or **SUNDAY**
	Month Name:	Month name in format Alpha 3 or 9. Ex. **APR** or **APRIL**
	Date:	Format **YYYYMMDD**
	Year:	Format **YYYY**
	Day:	Format **DD**
	FIRST:	May be used in conjunction with **Day of Week**, **WORKDAY**, **WEEKDAY** and **WEEKWORKDAY** in end value
	LAST:	May be used in conjunction with **Day of Week**, **WORKDAY**, **WEEKDAY** and **WEEKWORKDAY** in end value
	nn:	Where nn is a numeric value between 1 and 31. May be used in conjunction with **Day**, **Day of Week**, **WORKDAY**, **WEEKDAY** and **WEEKWORKDAY** in end value
• **End Value** -	**WEEKWORKDAY**:	Workdays are defined on **JS402 Maintain - EspAuto Dates**. Start value must be **FIRST**, **LAST** or **n** (where **n** corresponds to the workdays days defined on **JS402**)
	Day of Week:	Day name in format Alpha 3 or 9. Ex. **SUN** or **SUNDAY**. Start value must also be in **Day of Week** format
	Month Name:	Month name in format Alpha 3 or 9. Ex. **APR** or **APRIL**. Start value must also be in **Month Name** format
	Date:	Format **YYYYMMDD**
	Year:	Format **YYYY**. Start value must also be in **YYYY** format
	Day:	Format **DD**. Start value must also be in **Day** format
	nn:	Where **nn** is a numeric value between 1 and 31. Start value format must also be **nn**.

- **Day Diff** - Day differential is the number of days to add to the current system date. The day differential may only be specified if the action is: **SCHEDTIME**, **LATESUB** and **DROPREQ**.

- **Action** - **NORUN**: Do not submit triggered job if condition evaluates to TRUE

  SCHEDTIME: Time the triggered job will be scheduled to run. The Scheduled Time must be specified in the **Time** column

  DELAY: The delay in minutes (max. 720 minutes) will be added to the current system date/time to determine when the triggered job will be scheduled to run. The delay value must be specified in the **Time** column

  LATESUB: Send notification if job has not started execution at the time specified. The late submission time must be specified in the **Time** column. If a value is entered in the **Delay** column the number of minutes (max. 720 minutes) entered will be added to the current system date/time to set the late submission date/time

  DROPREQ: Drop requirements if job has not started execution at the time specified. The drop requirements time must be specified in the **Time** column. The “drop requirements” only applies to **predecessors** and **file events**.

  SUSPEND: Scheduled Job will not be executed, but predecessor and trigger actions will be executed

  REQUEST Submit job in **REQUEST** mode. If all prerequisites for a job triggered in **REQUEST** mode have been satisfied and the job is still in **REQUEST** mode, it will not be executed, however it will be removed from all jobs in the queue awaiting its completion and if any triggered jobs have been defined, they will be submitted.

  HOLD: Scheduled job will be submitted on hold

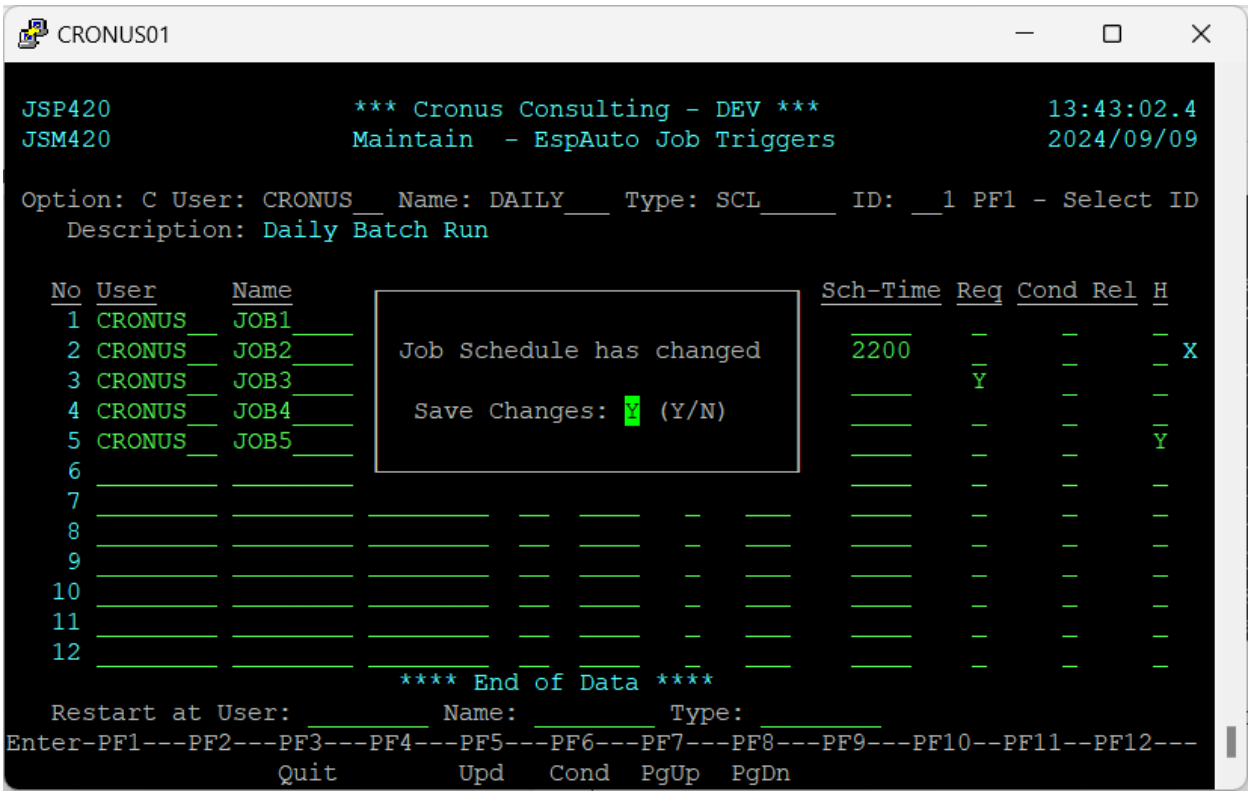
  IGNORE: No action

- **Time** - Must be in **HHMM** format for actions: **SCHEDTIME**, **LATESUB** and **DROPREQ**.
- **Delay** - Number of minutes to be added to current system date/time for actions: **LATESUB** and **DELAY**. Maximum allowable value is **720**.

Parenthesis may be used to group AND/OR conditional logic. The left parenthesis may only be specified in the **Keyword** column, and the right parenthesis can be specified in the start and end value columns.

Function keys **PF5** and **PF6** may be used to **Insert**/**Delete** lines.

If the trigger conditions contain any syntax errors the following screen will be displayed providing the option to **resume editing** or to **abort changes**.



Variables defined using the SET and ESET are created at execution time.

Resources are defined using the RES and ERES command. The ERES test must be used in place of the ELSE when a resource needs to be defined within the ELSE section of an IF/ELSE statement.

3.10 JS421 Maintain - File Events per Sub System

This function is used to maintain file events per sub system. File events must be defined using this function before they can be specified on functions: **JS416 Maintain - EspAuto Job File Events** and **JS422 Maintain - File Event Triggers**.

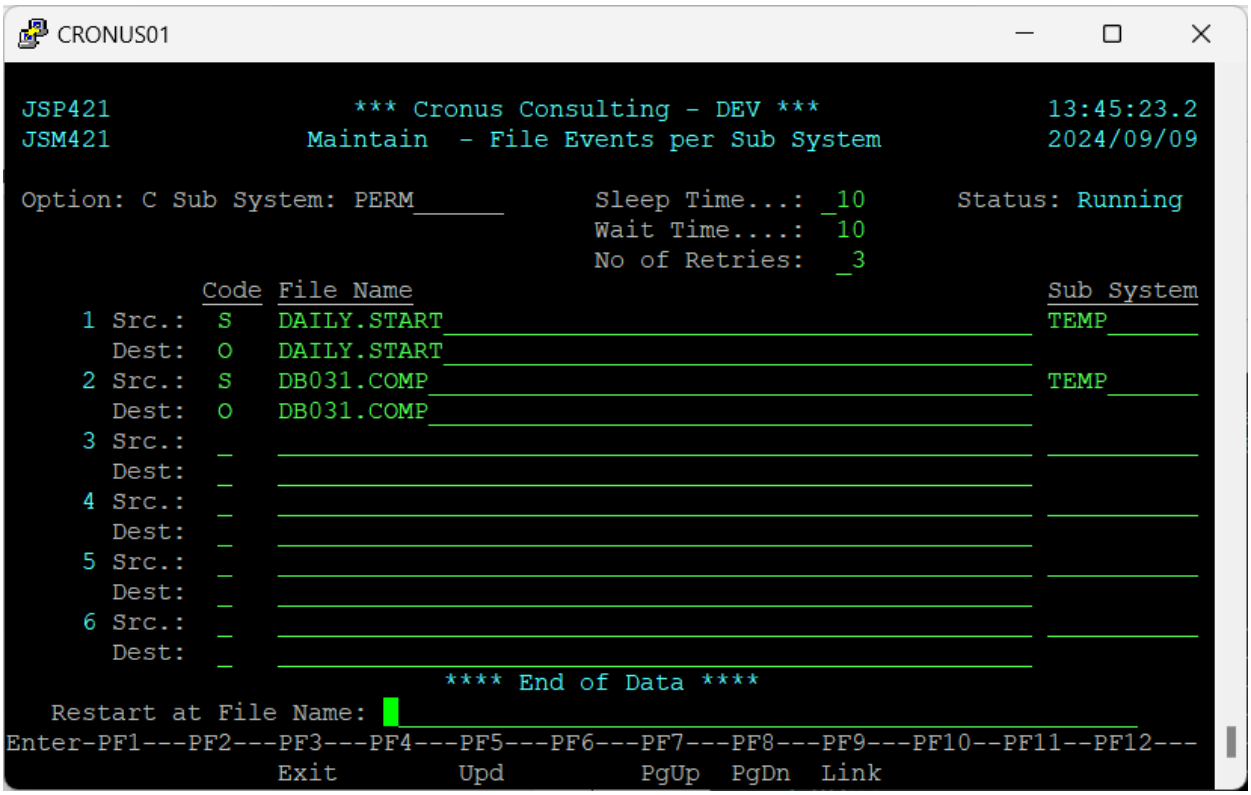
Function Options:

C - Change File Events

E - View File Events

S - Start EspFmon

T - Terminate EspFmon



Parameters:

- Sleep Time: Number of seconds the file monitor sleeps after processing configuration file.
- Wait Time: Number of seconds the file monitor sleeps during consecutive file size checks. If you occur instances where file events are processed while the file is still being transferred, the wait time should be increased.
- No of Retries: Number of times to test that the file size is static.

Action Codes:

Source Files

- (**S**)ingle file: A single file is expected. An asterisk '*' may be specified as the last character. If the file monitor detects more than one file with the same prefix it enters an error state.
- (**M**)ultiple files: One or more files expected. An asterisk '*' may be specified as the last character.

Destination Files

- (**N**)ew: Disposition of destination file is (N)ew. If the destination file exists, the file monitor enters an error state.
- (M)od Disposition of destination file is (M)od. Source files are appended to the destination file.
- (**O**)ld If the destination file exists it is overwritten with the source file. If multiple source files exist, the file monitor enters an error state.

File events can only be specified for previously defined sub systems that are setup using function **JS002 Maintain - EspBatch Codes** with Code Type: **SUBSYSTEM**.

The file events can be updated at any stage by pressing **PF5**. If **PF3** is pressed and the file events have been changed after the last PF5 key press a window is displayed prompting the user if changes should be saved. If the user selects to save the changes a new configuration file is generated to $CRONUS/espfmon/<Sub System>_<Environment Name>.CFG - e.g. PERM_DEV.CFG. The file monitor must be restarted before the new configuration file takes effect.

Dynamic variables defined using function **JS002 Maintain - EspBatch Codes** with **Code Type: SCLVAR** may be used as part of the work file name. A dynamic variable must be prefixed by a '&'. All dynamic variables are replaced on creation of the configuration file. Note that if the value of any dynamic variable used within a work file name is changed using function **JS002 Maintain - EspBatch Codes** then the effected configuration files must be manually updated using this function.

One or more files can be linked to a file event by positioning the cursor on a file event and pressing <PF9>. When the file event takes place, all linked files are also processed.

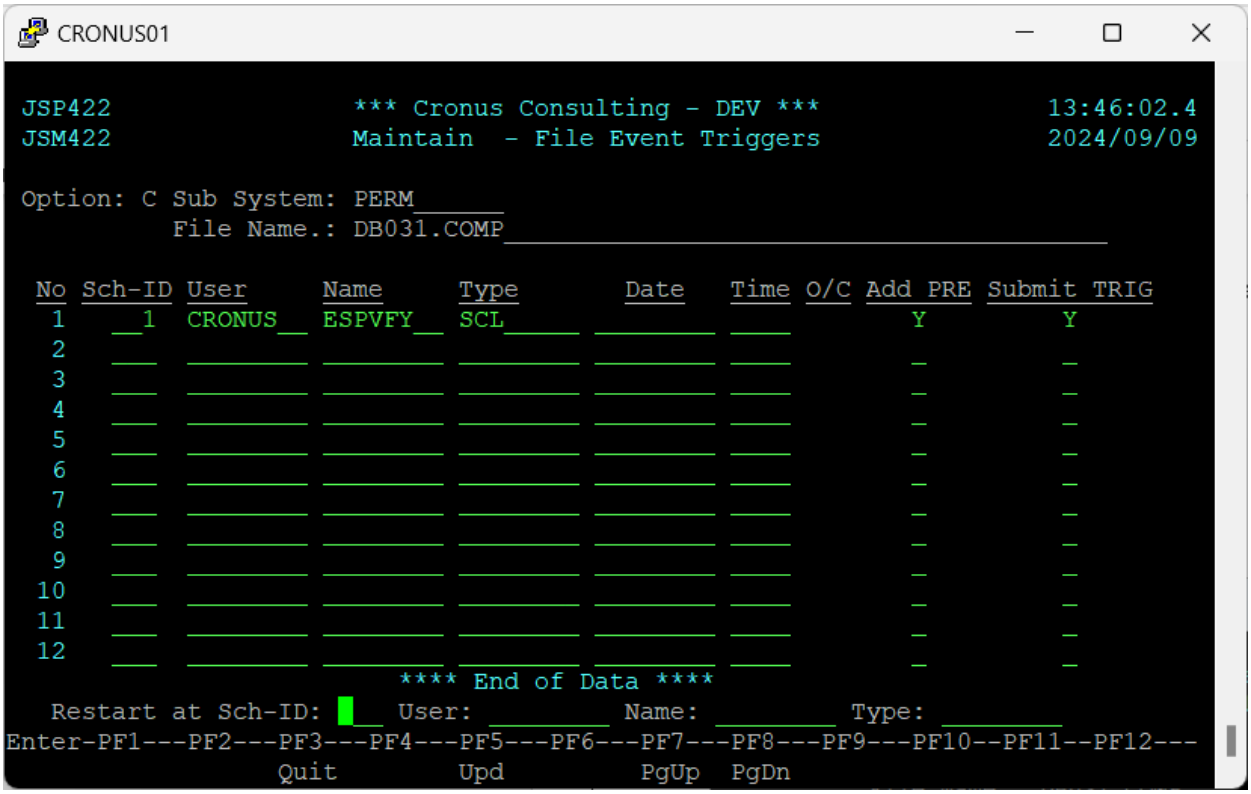
3.11 JS422 Maintain - File Event Triggers

This function is used to maintain file event triggers. The file event must be defined using function **JS421 Maintain - File Events per Sub System** before any trigger jobs can be specified.

Function Options:

C - Change Triggers

E - View Triggers



Required Fields:

- **Add PRE** - Valid values are **Y**es and **N**o – If "**Y**" is specified then the predecessors defined for this job will be added.
- **Submit TRIG** - Valid values are **Y**es and **N**o – If "**Y**" is specified then the triggered jobs defined for this job will be submitted on completion.

The file events can be updated at any stage by pressing **PF5**. If **PF3** is pressed and the file events have been changed after the last PF5 key press a window is displayed prompting the user if changes should be saved.

3.12 JS425 View - Forecast Scheduled Jobs

The function displays a forecast of all jobs that have been defined using function **JS410 Maintain - EspAuto Jobs per Schedule ID**.

Function Options:

D - View Drill Down

P - View Predecessors

T - View Triggered Jobs

```
CRONUS01

JSP425                 *** Cronus Consulting - DEV ***                13:50:33.3
JSM42502             View      - Forecast Scheduled Jobs              2024/09/09

  Sch Date Time User     Name     Type      ID Mode Lead Time Exe Trig Steps H
_ 20240909 1700 CRONUS   DAILY    SCL        1 SCAN   04:00    Y   Y         N
_ 20240909 1700 CRONUS   ESPVFY   SCL        1 SCAN   04:00    Y         16  N
_ 20240910 0700 CRONUS   REQUEST  SCL        1 SCAN   04:00    Y             N
_ 20240910 1700 CRONUS   DAILY    SCL        1 SCAN   04:00    Y   Y         N
_ 20240910 1700 CRONUS   ESPVFY   SCL        1 SCAN   04:00    Y         16  N
_ 20240911 0700 CRONUS   REQUEST  SCL        1 SCAN   04:00    Y             N
_ 20240911 1700 CRONUS   DAILY    SCL        1 SCAN   04:00    Y   Y         N
_ 20240911 1700 CRONUS   ESPVFY   SCL        1 SCAN   04:00    Y         16  N
_ 20240912 0700 CRONUS   REQUEST  SCL        1 SCAN   04:00    Y             N
_ 20240912 1700 CRONUS   DAILY    SCL        1 SCAN   04:00    Y   Y         N
_ 20240912 1700 CRONUS   ESPVFY   SCL        1 SCAN   04:00    Y         16  N
_ 20240913 0700 CRONUS   REQUEST  SCL        1 SCAN   04:00    Y             N
_ 20240913 1700 CRONUS   DAILY    SCL        1 SCAN   04:00    Y   Y         N
_ 20240913 1700 CRONUS   ESPVFY   SCL        1 SCAN   04:00    Y         16  N
                          ** Start of Data **            Process Id: 49762
Restart Date: _______ Time: ____ User: ________ Name: ________
Filter  Date: ________ Mode: ____ User: ________ Name: ________ ID: ___ H: _
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
                 Quit                          PgDn
```

A forecast is displayed of all scheduled jobs. The display can be customized by entering values in the filter fields.

The Predecessor and Triggered Jobs options only display the predecessors / file events and triggered jobs that are directly linked to the scheduled job / id - where as the drill down option will display all the predecessors / file events and triggered jobs in the current chain (up to a maximum of 4000 entries).

```
CRONUS01

JSP425                 *** Cronus Consulting - DEV ***                13:49:44.8
JSM42502             View      - Forecast Scheduled Jobs              2024/09/09

 Year: 2024 Job Name: CRONUS.DAILY.SCL          ID: 001          Lvl: 50__
 Mode: SCAN Date....: 20240909        Show Predecessors / File Events: Y

  Cnt FPT Lvl Sch User Sch Name Sch Type  ID Trig User Trig Name Trig Type
    1  F    1 /data/natd/wf/PERM/DB031.COMP
    2  T    1 CRONUS   JOB1     SCL      001 CRONUS    DAILY     SCL
    3  P    1 CRONUS   JOB1     SCL      001
    4  T    1 CRONUS   JOB2     SCL      001 CRONUS    DAILY     SCL
    5  P    1 CRONUS   JOB2     SCL      001
    6  T    1 CRONUS   JOB3     SCL      001 CRONUS    DAILY     SCL
    7  P    1 CRONUS   JOB4     SCL      001
    8  T    1 CRONUS   JOB5     SCL      001 CRONUS    DAILY     SCL

                            *** End of Data ***                Total.: 8
 Restart at User: ________ Name: ________ Type: ________       Errors:

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
                 Quit  Err                          PgDn
```

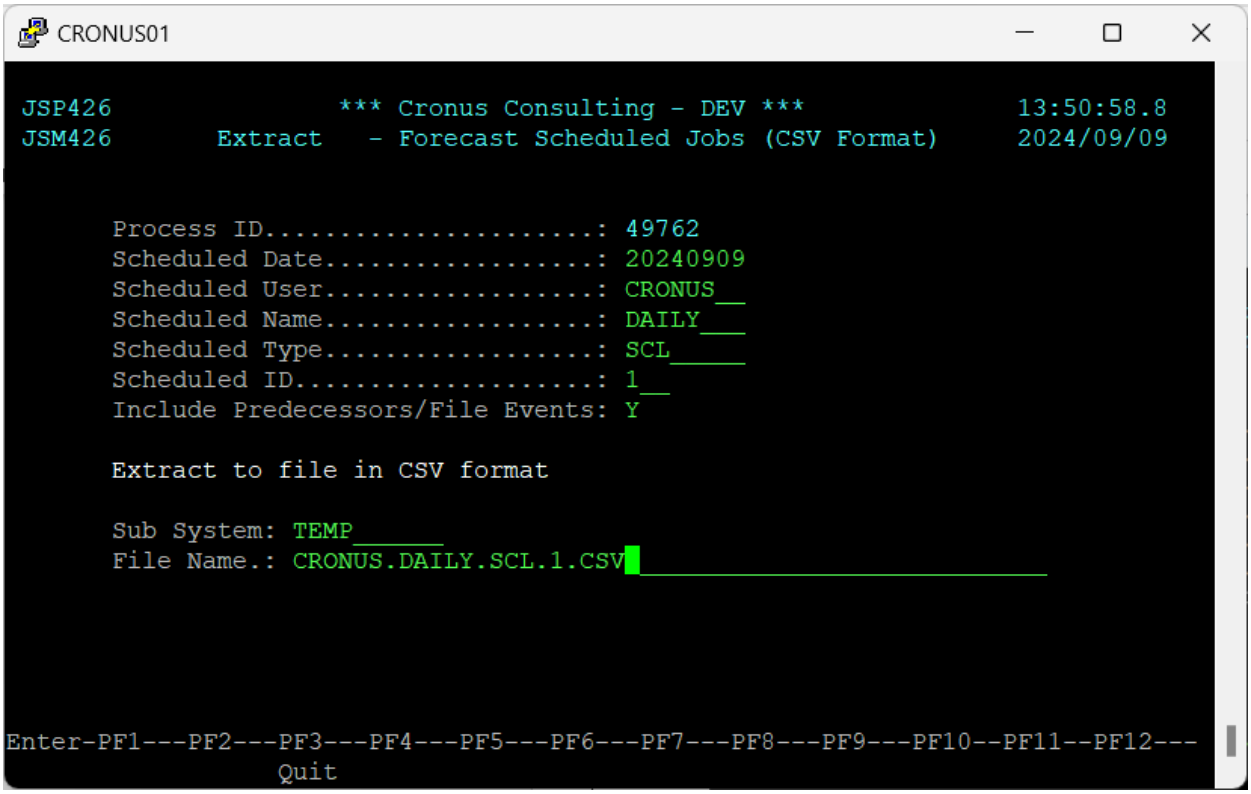
When using the drill down option, all trigger conditions specified on **JS420** will be evaluated, thus only predecessors and triggered jobs that are scheduled to run on the date specified will be displayed.

The level field at the top right of the screen allows the user to specify the amount of detail to be displayed, by specifying a level of **1,** only predecessors, file events and triggered jobs linked to the top-level job will be displayed. The Show Predecessors / File Events field can be set to **Y**es or **N**o, if it contains a value of **N**o, then the predecessors / file events will not be displayed.

The forecast function attempts to display jobs in the sequence that they will execute. If correct sequencing cannot be determined due to anticipated errors (normally as a result of jobs that have predecessors that do not form part of the defined schedule). These errors can be viewed by pressing PF4 – the number of errors is displayed at the bottom right of the screen.

3.13 JS426 Extract - Forecast Scheduled Jobs (CSV Format)

This function is used to extract a scheduled job including all its file events, predecessors and triggered jobs into CSV format. Only jobs that have been defined using function **JS410 Maintain - EspAuto Jobs per Schedule ID** can be extracted.



All trigger conditions specified on function **JS420** will be evaluated, thus only predecessors and triggered jobs that are scheduled to run on the date specified will be displayed.

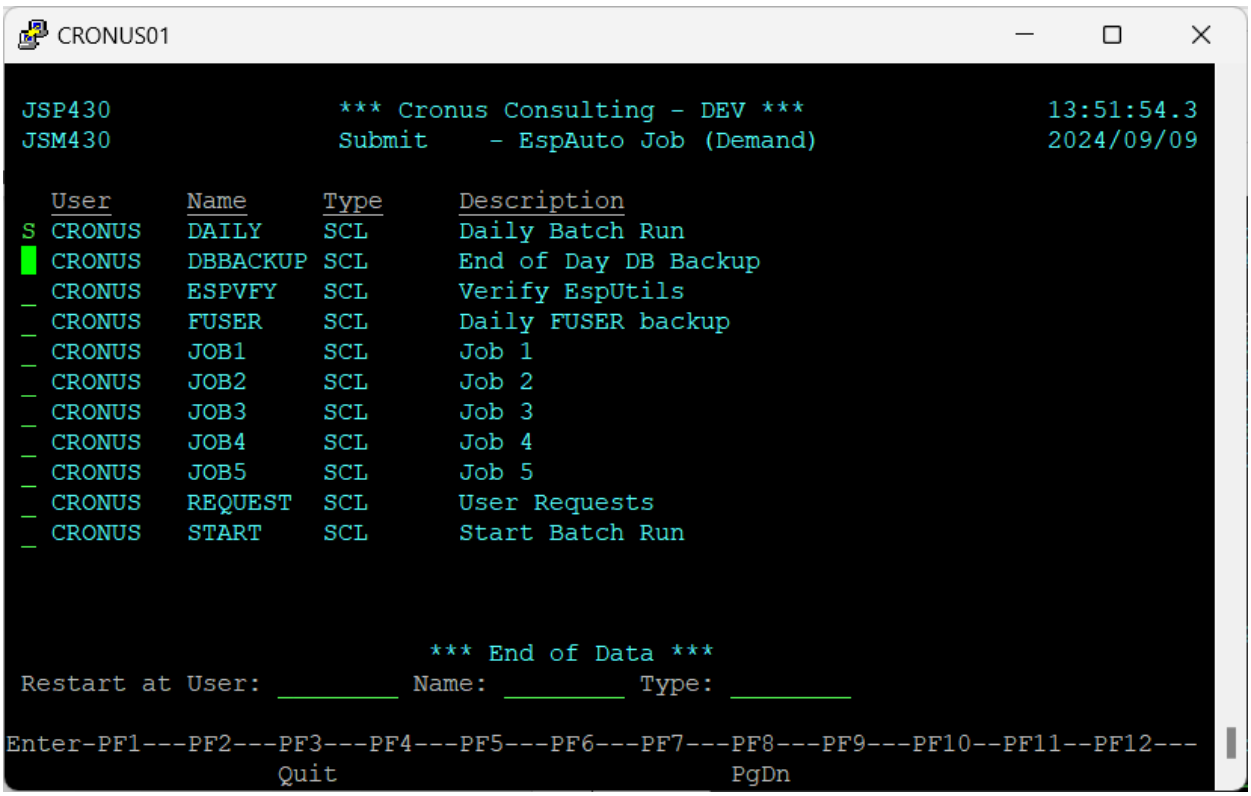
The Include Predecessors/File Events field can be set to **Y**es or **N**o, if it contains a value of No, then the predecessors / file events will not be extracted.

3.14 JS430 Submit - EspAuto Job (Demand)

The function is used to demand previously defined auto scheduled jobs.

Function Options:

S - Submit Job

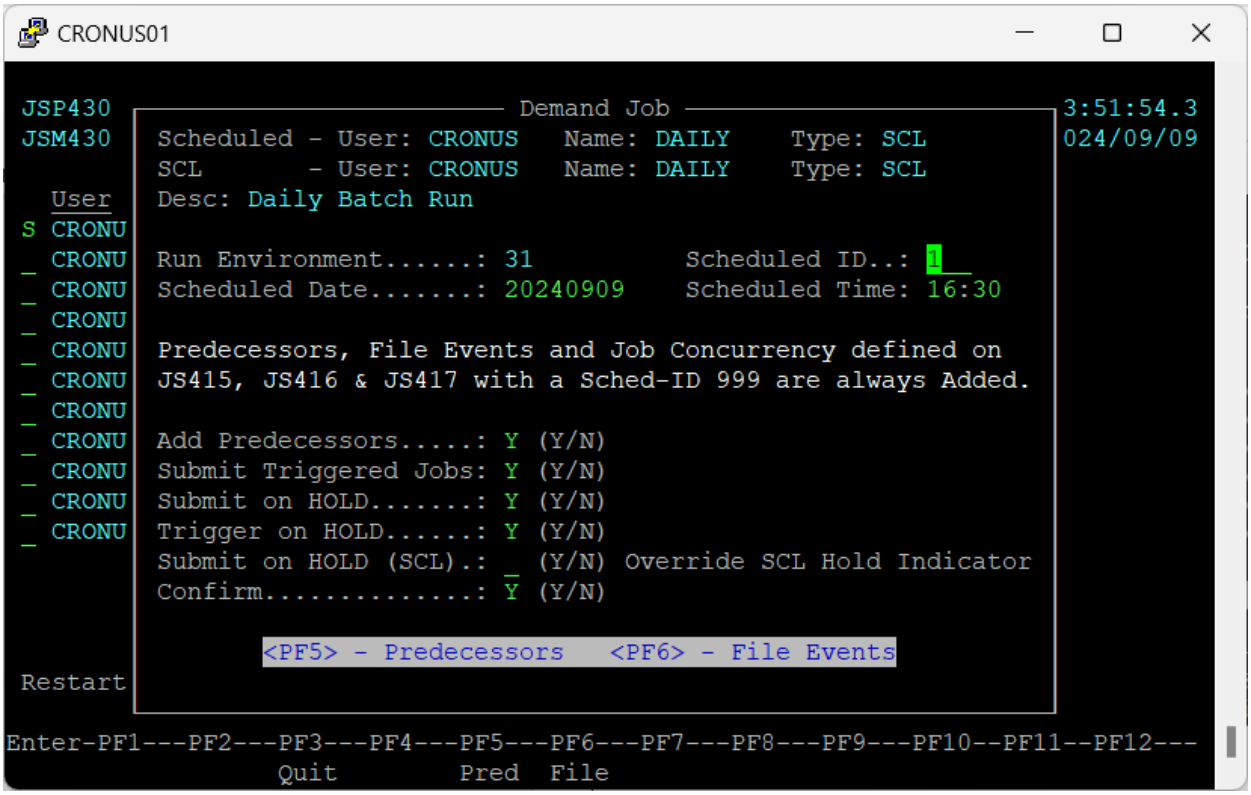


After selecting a job for submission, the following window will be displayed requiring submission options.

Submission Options:

- Schedule ID - Schedule ID to be used for submission.
- Scheduled Date - Scheduled Date to be used for submission.
- Scheduled Time - Scheduled Time to be used for submission.
- Add Predecessors - Indicates whether predecessors and file events must be added.
- Submit Triggered Jobs - Indicates whether trigger jobs must be submitted.
- Submit on HOLD - **Y**es or **N**o
- Trigger on HOLD - **Y**es or **N**o – Defines whether triggered jobs are submitted in hold.

- Submit on HOLD (SCL) - If specified the hold indicator defined within the SCL will be overwritten.
- Confirm - **Y**es to confirm submission.



Predecessors can be added by pressing **PF5**. Previously defined predecessors with a schedule id of 999 are always added.

File events can be added by pressing **PF6**. Previously defined file events with a schedule id of 999 are always added.

Concurrency defined with a schedule id of 999 will be added.

Note: If a SCL with the Name and Type specified on "**JS405 - Maintain - EspAuto Jobs**" exists in SCL User Library "**OVERRIDE**" then the SCL in User Library "**OVERRIDE**" will be submitted.

3.15 JS434 View - EspAuto Job Links

The function is used to list all scheduled job links (Scheduled, Predecessors, Triggers).

Function Options:

L - View EspAuto Job Links

```
CRONUS01

JSP434                *** Cronus Consulting - DEV ***                13:53:48.4
JSM434                 View      - EspAuto Job Links                2024/09/09

  User     Name     Type     Links Description
L CRONUS   DAILY    SCL          6  Daily Batch Run
  CRONUS   DBBACKUP SCL          3  End of Day DB Backup
_ CRONUS   ESPVFY   SCL          2  Verify EspUtils
_ CRONUS   FUSER    SCL          2  Daily FUSER backup
_ CRONUS   JOB1     SCL          3  Job 1
_ CRONUS   JOB2     SCL          3  Job 2
_ CRONUS   JOB3     SCL          3  Job 3
_ CRONUS   JOB4     SCL          3  Job 4
_ CRONUS   JOB5     SCL          2  Job 5
_ CRONUS   REQUEST  SCL          1  User Requests
_ CRONUS   START    SCL          1  Start Batch Run


                          *** End of Data ***                        Link: A
 Restart at User: ________ Name: ________ Type: ________
 Filter on User.: ________ Name: ________ Type: ________
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
                  Quit                           PgDn
```

After a job is selected a window is displayed that shows all links. In the example below, job **CRONUS.DAILY.SCL** is scheduled to run at **17H00** with Schedule ID **1**. It also triggers jobs **CRONUS.JOB1.SCL, CRONUS.JOB2.SCL, CRONUS.JOB3.SCL, CRONUS.JOB4.SCL** and **CRONUS.JOB5.SCL** with Schedule ID's **1**.

```
                          Scheduled Jobs Links

 Scheduled Year: 2024 User: CRONUS   Name: DAILY    Type: SCL

   No Description                                ID User     Name     Type
    1 Scheduled - Time: 1700                      1
    2 Triggers                                    1 CRONUS   JOB1     SCL
    3 Triggers                                    1 CRONUS   JOB2     SCL
    4 Triggers                                    1 CRONUS   JOB3     SCL
    5 Triggers                                    1 CRONUS   JOB4     SCL
    6 Triggers                                    1 CRONUS   JOB5     SCL
```

3.16 JS435 View - EspAuto Job History by Scheduled Date/Time

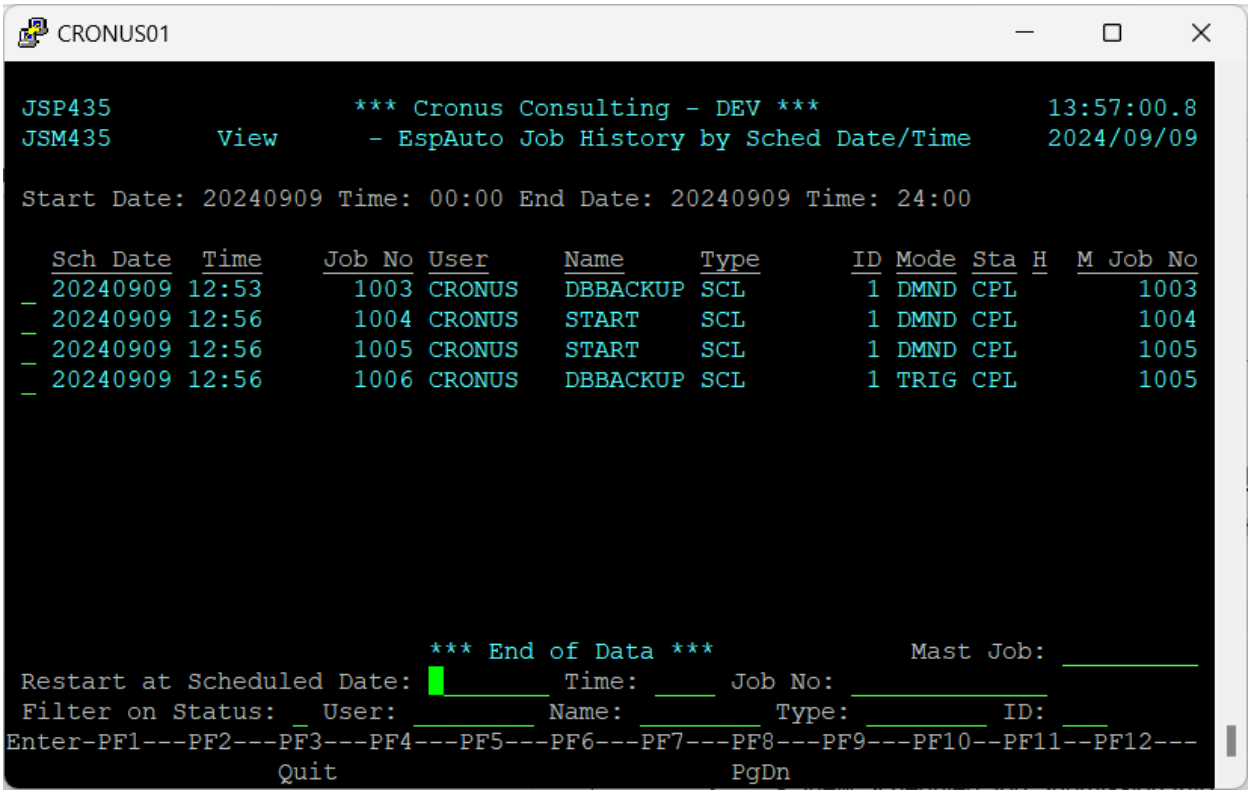
This function displays the history of auto scheduled jobs. Jobs are displayed in Scheduled Date, Scheduled Time, and Job Number sequence.

Function Options:

I - View EspBatch Submission Info

L - View EspAuto Job History Log

P - View Scheduled Job Submission Info



After a job has been selected using option '**L**' an audit trail of the job is displayed that consists of:

- The method that was used to auto schedule the Job including the User Id.
- Any predecessors that were added / removed (manually or by the system).
- Any file events that were added / removed (manually or by the system).
- Job concurrency.
- Any modifications to the submit Date / Time including the User Id.
- Start Date and Time
- Completion Date and Time
- If the job aborted, was restarted, etc.
- Job Notification

```
CRONUS01

JSP435                 *** Cronus Consulting - DEV ***                13:58:42.5
                                   Job History
Job No..: 1007         SCH User: CRONUS   Name: DBBACKUP Type: SCL      ID: 1
M Job No: 1007         SCL User: CRONUS   Name: DBBACKUP Type: SCL
Batch No: 21406
  Date     Time Program  Description
20240909 13:58 JSN43001 Demanded by User ID: EY712
20240909 13:58 JSN430   Default Env: 31 Run Env: 31
20240909 13:58 JSP498   Submit as User ID: espbatch
20240909 13:58 JSP498   Submitted - Batch No: 21406
20240909 13:58 JZN010   Executing - Batch No: 21406
20240909 13:58 JTERMA   Completed - Batch No: 21406
20240909 13:58 JTERMN   Completion Notification:
20240909 13:58 JTERMN   - 2024-09-09 @ 13H58
20240909 13:58 JTERMN   - info@cronus.co.za


                          *** End of Data ***
Restart at Date: _______ Time: ____

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
                  Quit                          PgDn
```

Option **I** displays the EspBatch job. Refer to the EspBatch manual for more information relating to options that can be performed on EspBatch Job Steps.

Option **P** displays the EspAuto job submission parameters.

```
                                EspAuto Job Detail
Job No.......: 1007          Scheduled User: CRONUS    SCL User: CRONUS
Master Job No: 1007          Scheduled Name: DBBACKUP  SCL Name: DBBACKUP
Trigger By...:               Scheduled Type: SCL       SCL Type: SCL
Batch No.....: 21406         Scheduled ID..: 1         Run ID..: 44969

Scanned Date/Time..: 20240909 1358336 Start Date/Time.....: 20240909 1358349
Scheduled Date/Time: 20240909 1358    Completion Date/Time: 20240909 1358363
Latesub Date/Time..:                  Remove req Date/Time:

Submit Triggered Jobs.: N        Request Mode..: N    Trigger on Hold: N
Use Scanned Date......: Y        Hold..........: N    Time Condition.:
Execute Job...........: Y        Status........: CPL  Condition Time.:
Abort if no SCL.......: Y        Return Code...: 0    Cond Release...: N
Submit User ID........: EY712    Scheduled Mode: DMND Master Sub UDB.: 31
Max Run Time (Minutes): 30

Auto restart Attempts.:                Auto Restart Return Code:
RC Check - Return Code:      :         RC Check Action.........:
                             :
```

3.17 JS436 View - EspAuto Job History by Start Date/Time

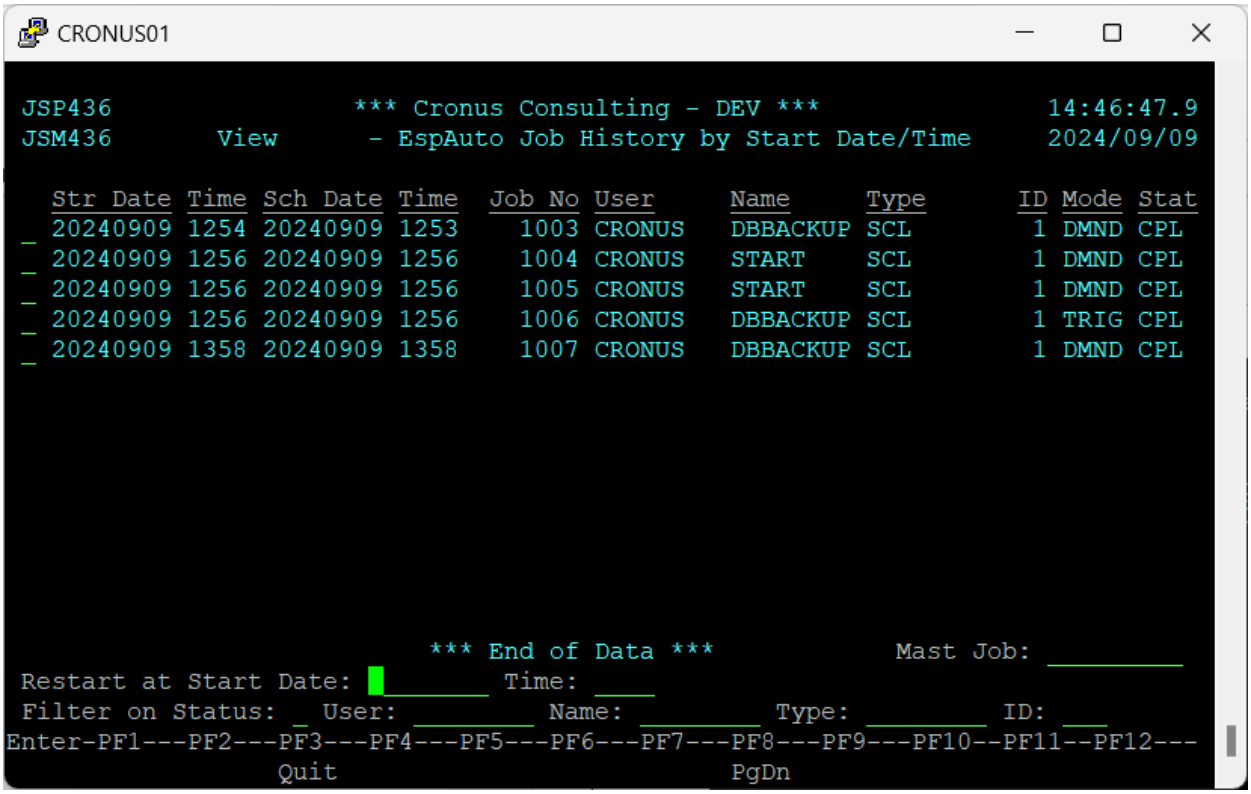
This function displays the history of auto scheduled jobs. Jobs are displayed in Start Date and Start Time sequence.

Function Options:

I - View EspBatch Submission Info

L - View EspAuto Job History Log

P - View Scheduled Job Submission Info



After a job has been selected using option '**L**' an audit trail of the job is displayed that consists of:

- The method that was used to auto schedule the Job including the User Id.
- Any predecessors that were added / removed (manually or by the system).
- Any file events that were added / removed (manually or by the system).
- Job concurrency.
- Any modifications to the submit Date / Time including the User Id.
- Start Date and Time
- Completion Date and Time
- If the job aborted, was restarted, etc.
- Job Notification

```
CRONUS01

JSP436                 *** Cronus Consulting - DEV ***                14:46:47.9
                                   Job History
Job No..: 1007         SCH User: CRONUS   Name: DBBACKUP Type: SCL      ID: 1
M Job No: 1007         SCL User: CRONUS   Name: DBBACKUP Type: SCL
Batch No: 21406
  Date     Time Program  Description
20240909 13:58 JSN43001 Demanded by User ID: EY712
20240909 13:58 JSN430   Default Env: 31 Run Env: 31
20240909 13:58 JSP498   Submit as User ID: espbatch
20240909 13:58 JSP498   Submitted - Batch No: 21406
20240909 13:58 JZN010   Executing - Batch No: 21406
20240909 13:58 JTERMA   Completed - Batch No: 21406
20240909 13:58 JTERMN   Completion Notification:
20240909 13:58 JTERMN   - 2024-09-09 @ 13H58
20240909 13:58 JTERMN   - info@cronus.co.za



                          *** End of Data ***
Restart at Date: _______ Time: ____

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
                  Quit                          PgDn
```

Options **I** displays the EspBatch job. Refer to the EspBatch manual for more information relating to options that can be performed on EspBatch Job Steps.

Option **P** displays the EspAuto job submission parameters.

```
                                EspAuto Job Detail
Job No.......: 1007          Scheduled User: CRONUS    SCL User: CRONUS
Master Job No: 1007          Scheduled Name: DBBACKUP  SCL Name: DBBACKUP
Trigger By...:               Scheduled Type: SCL       SCL Type: SCL
Batch No.....: 21406         Scheduled ID..: 1         Run ID..: 44969

Scanned Date/Time..: 20240909 1358336 Start Date/Time.....: 20240909 1358349
Scheduled Date/Time: 20240909 1358    Completion Date/Time: 20240909 1358363
Latesub Date/Time..:                  Remove req Date/Time:

Submit Triggered Jobs.: N        Request Mode..: N    Trigger on Hold: N
Use Scanned Date......: Y        Hold..........: N    Time Condition.:
Execute Job...........: Y        Status........: CPL  Condition Time.:
Abort if no SCL.......: Y        Return Code...: 0    Cond Release...: N
Submit User ID........: EY712    Scheduled Mode: DMND Master Sub UDB.: 31
Max Run Time (Minutes): 30

Auto restart Attempts.:                Auto Restart Return Code:
RC Check - Return Code:      :         RC Check Action.........:
                             :
```

3.18 JS437 View - EspAuto Job Statistics

This function displays history of execution times per scheduled job.

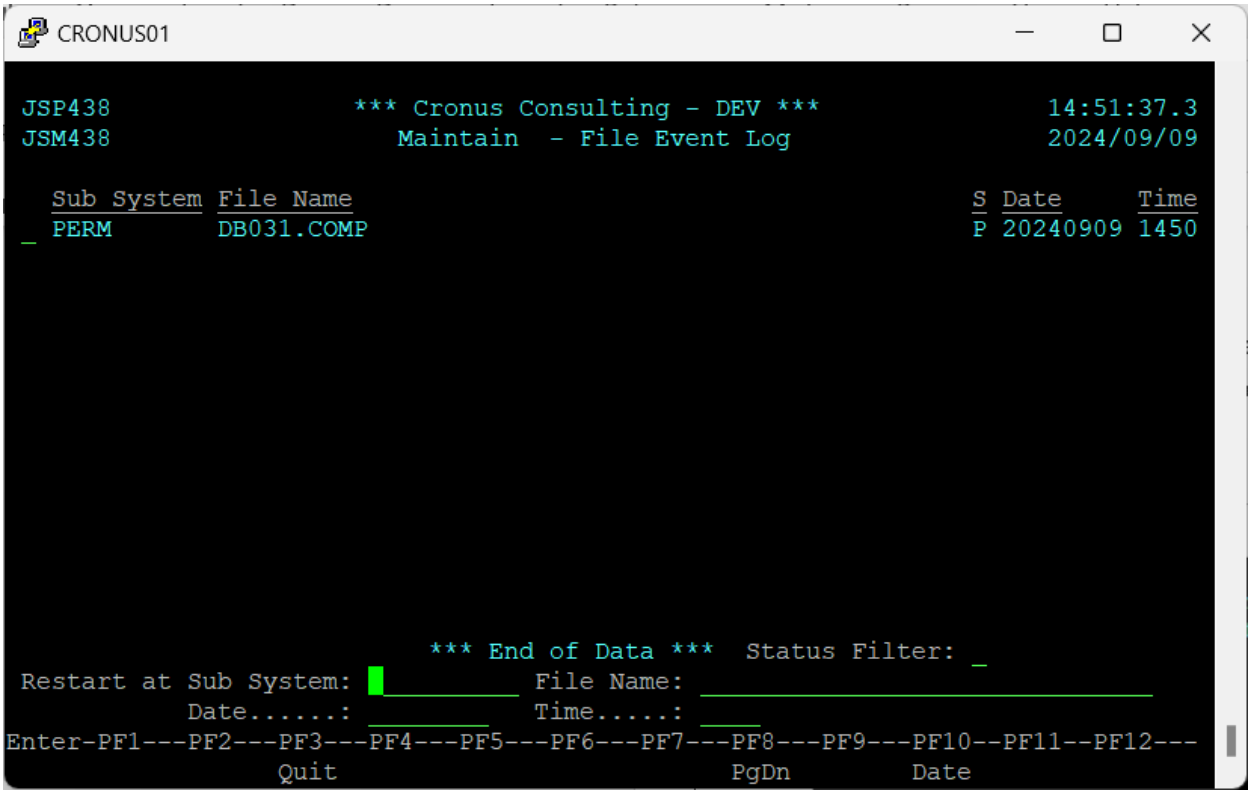
```
CRONUS01

JSP437                 *** Cronus Consulting - DEV ***                14:48:35.3
JSM437                View      - EspAuto Job Statistics             2024/09/09

SCL User: CRONUS__ SCL Name: DBBACKUP SCL Type: SCL_____

Description: End of Day DB Backup

  Job No Batch No Submit Time and Date   Status      CC Total Time  Exec Time
    1007    21406 13.58.33 MON 09SEP2024 COMPLETED    0 00:00:01.3 00:00:01.3
    1006    21404 12.56.38 MON 09SEP2024 COMPLETED    0 00:00:01.2 00:00:01.2
    1003    21402 12.54.01 MON 09SEP2024 COMPLETED    0 00:00:01.3 00:00:01.3

                            *** End of Data ***
Restart at Date: _______ (YYYYMMDD) Time: ____ (HHMM)

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
                  Quit                           PgDn
```

The display consists of the following information:

- Job No - Internal Job umber generated in EspAuto
- Batch No - Internal Batch number generated in EspBatch
- Submit Time and Date - Submission Date/Time
- Status - Status of the job
- CC - Completion Code
- Total Time - Total elapsed from start to completion of job
- Exec Time - Total of execution time off all job steps

3.19 JS438 View - File Event Log

This function displays a log of all file events that have taken place. The log can be viewed in sub system/file name/date sequence or date/sub system/file name sequence. PF10 is used to toggle between date and file sequence.



Display Information:

- Sub System - Sub System of source file as defined on **JS421 Maintain - File Events per Sub System**.
- File Name - File Name of source file as defined on **JS421 Maintain – File Events per Sub System**.
- (S)tatus - Status of file event.
  - I - Processing file.
  - P - Processing completed.
  - E - An error occurred while processing the file. When an error occurs file(s) are moved to the FMONERR sub system. When an error occurs, the file monitor goes into an error state and must be stopped and restarted before processing continues. Errors are caused by one of the

following:

1. File is specified as (S)ingle and file monitor detects multiple files. File name suffixed with an asterisk.
2. Source file sub system does not exist.
3. Destination sub system does not exist.
4. Disposition for destination file is specified as (N)ew, and destination file already exists.
5. Multiple source files exist, and destination disposition is not specified as (M)od.
6. File/directory permissions do not allow for the source file to be copied to its destination.

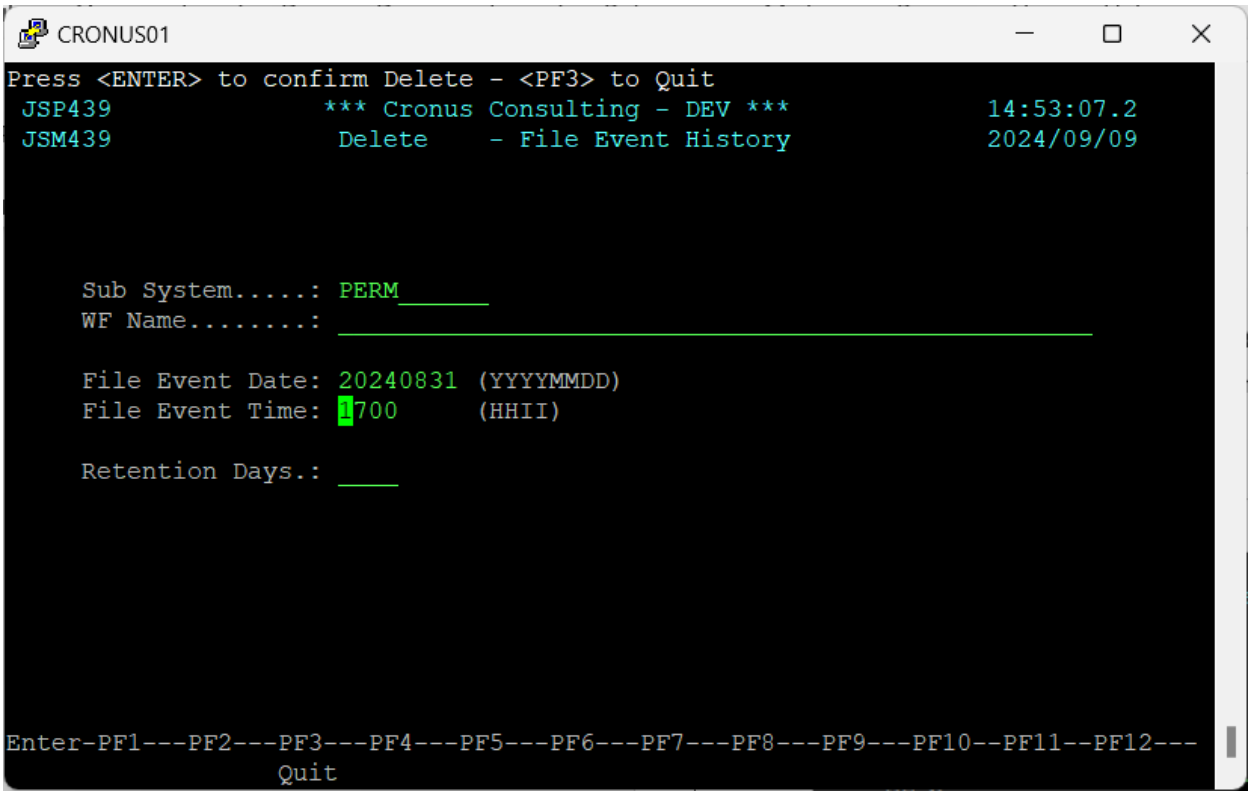
C - Completed.

R - File restored to source directory.

- Date — Date that file event occurred.
- Time — Time that file event occurred.

3.20 JS439 Delete - File Event History

This function is used to delete File Event History. A report is generated that contains a list of all File Event history that was deleted.



The parameters determine which File Event history is deleted.

Either the File Event Date or Retention Days must be specified, the rest of the parameters are optional.

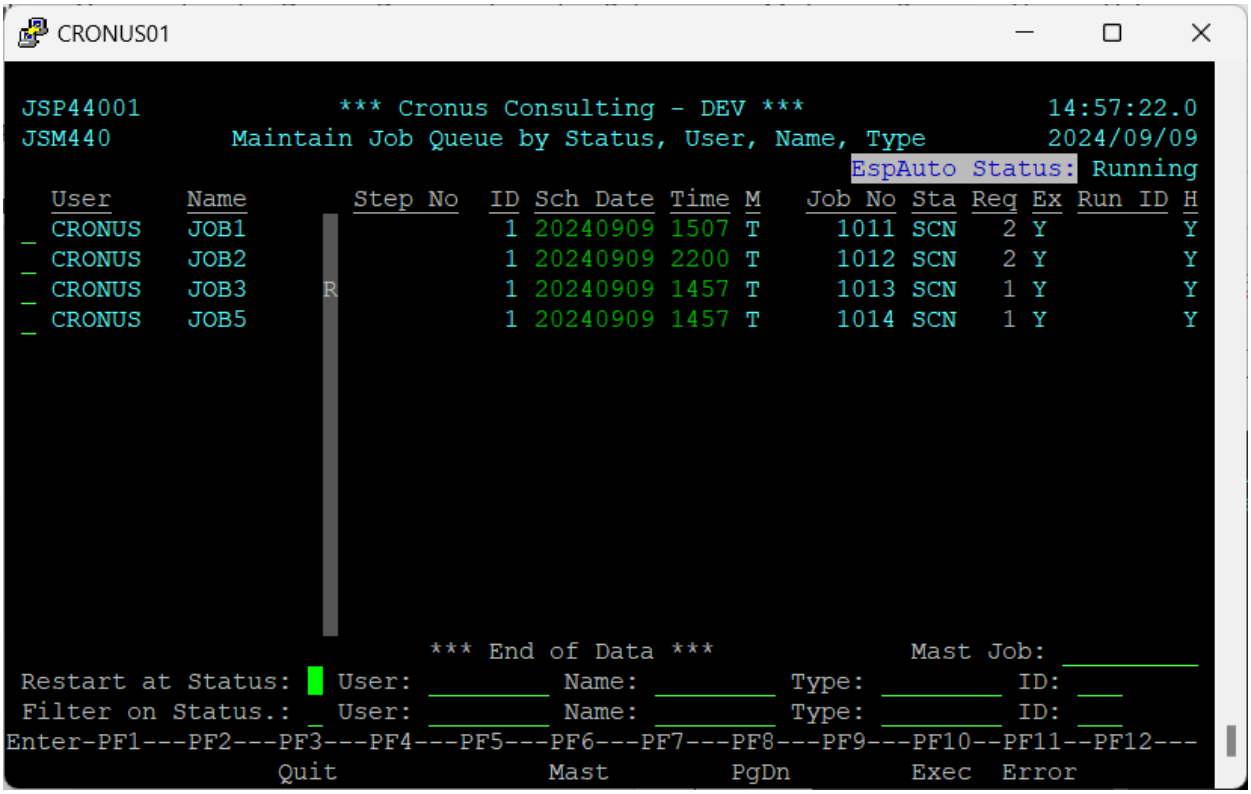
If the File Event Date/Time is specified all File Event History until the specified File Event Date/Time is deleted.

3.21 JS440 Maintain - EspAuto Job Queue

This function displays the auto scheduled job queue. On function selection a popup window is displayed providing the user with a choice of 4 sort orders. The selected sort order determines the sequence in which scheduled jobs are displayed.

Function Options:

C - Complete Scheduled Job (Status: **Scanned** - Predecessors and Triggers are Processed)
D - Delete Scheduled Job (Status: **Scanned** and **Error** - Predecessors and Triggers not Processed)
F - Force Complete Scheduled Job (Status: **Scanned** and **Error** – Option to process Predecessors and Triggers)
H - Update HOLD status
I - View EspBatch Job Steps
L - View EspAuto Job History Log
M - Change Mode (Request/Requestable)
P - View Scheduled Job Submission Info
R - View/Update Requirements
S - View Successors
T - View Triggered Jobs
V - View Comments
X - Update Job Execution



PF6 - Toggle field that are displayed.

PF10 - Toggle display between all jobs and jobs that are currently executing.

PF11 - Toggle display between all jobs and jobs that are currently aborted.

Job **JOB2** is currently in **REQUEST** mode, this is indicated by a **R** next to the Job Name.

Display Information:

- User - Scheduled User Library.
- Name - Scheduled Job Name.
- Type - Scheduled Job Type.
- Step No - Current step and total number of steps within the SCL being executed.
- ID - Schedule ID.
- Sch Date - Scheduled Date.
- Time - Scheduled Time.
- M - The method used to submit the Job (**D** – Demand, **T** – Trigger, **S** – Scan, **C** – Cycle & **F** – File Trigger).
- Job No - EspAuto job number.
- Sta - Job's Status (**SCN** – Scanned, **SUB** – Submitted, **EXE** – Executing, & **ERR** – Aborted).

- Req - The number of requirements preventing the job to start running.
- Ex - Indicates whether the job is set to execute. If the value is set to **N**o, the job will not execute, however all triggered jobs will be submitted, and it will be removed from all jobs awaiting its completion.
- Run Id - The EspBatch Run Id – Only contains a value for submitted, executing and aborted jobs.
- H - A value of **Y**es indicates that the job is currently on hold.
- Mast Job No - The EspAuto job number if the initiating job.
- Trig Job - the EspAuto job number of the job that triggered the job.

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3.22 JS445 Report - Auto Scheduled Jobs

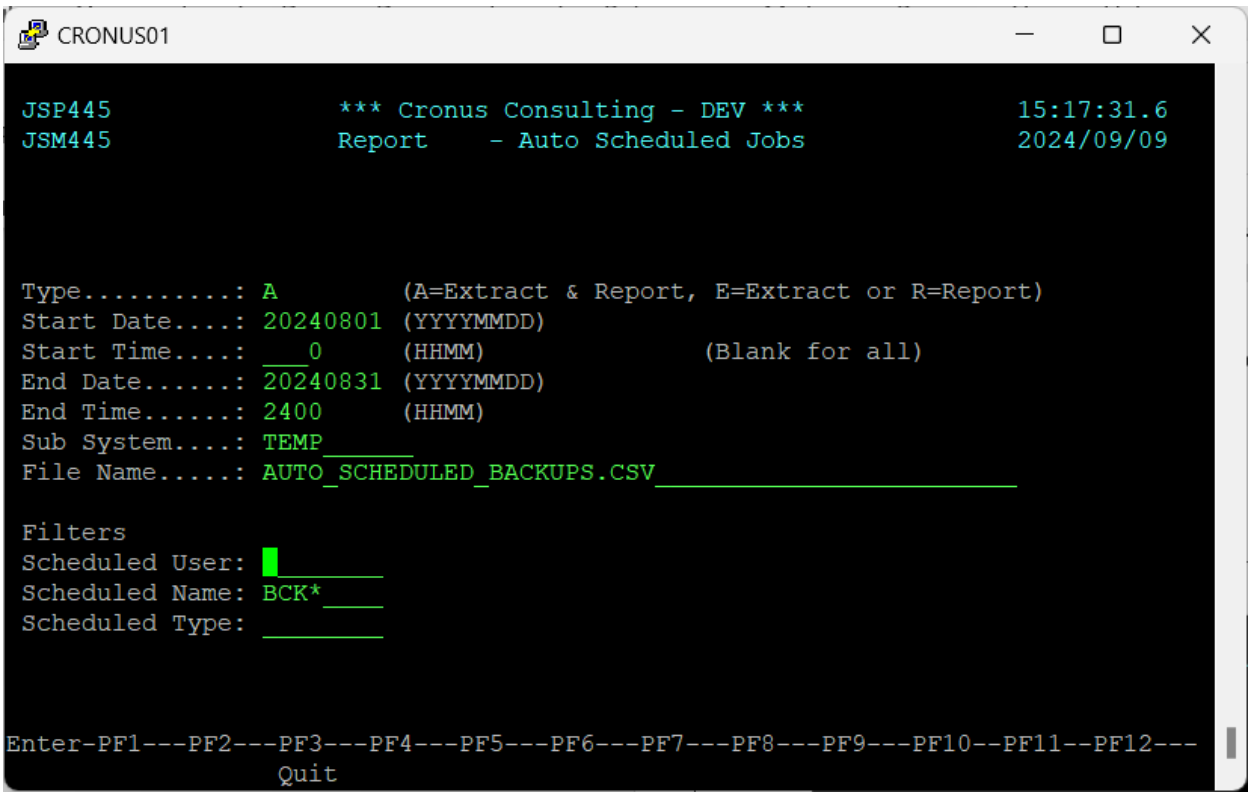
This function will produce a report of all completed auto scheduled jobs for the period specified.

The type option provides the ability to produce a report, extract or both:

R - Report

E - Extract

A - Report and Extract

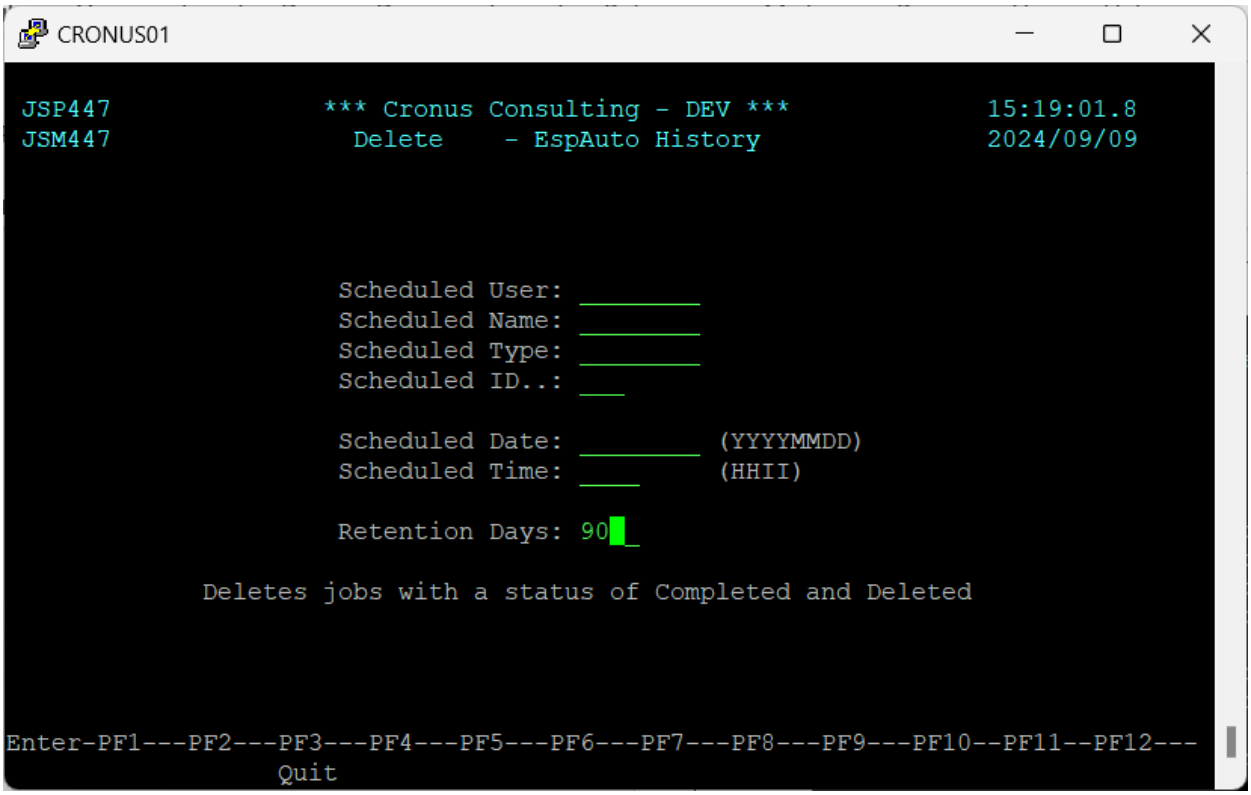


The parameters determine which jobs are contained within the report produced.

For types **A** (Extract & Report) and **E** (Extract) the Sub System and File Name must be supplied.

3.23 JS447 Delete - EspAuto History

This function is used to delete EspAuto History. A report is generated that contains a list of all EspAuto job history that was deleted.



The parameters determine which EspAuto job history is deleted.

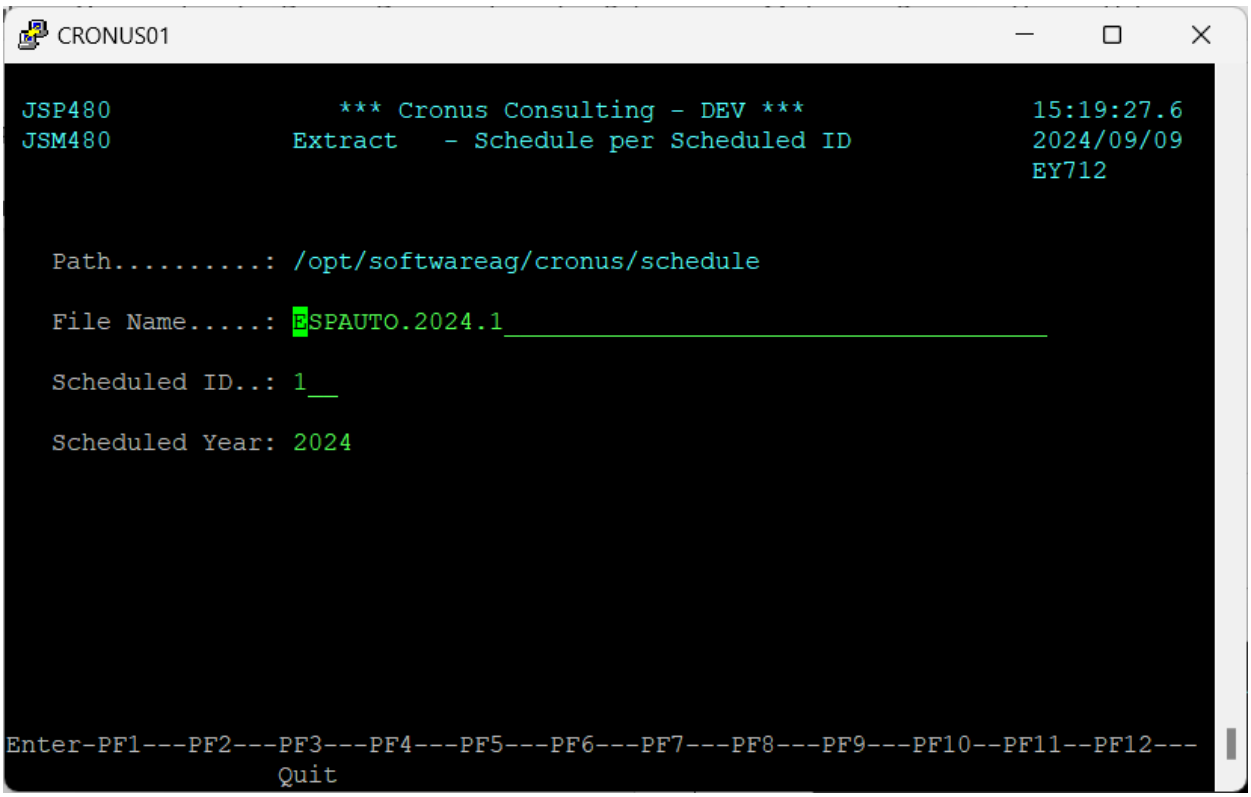
Either the Scheduled Date or Retention Days must be specified, the rest of the parameters are optional.

If the Scheduled Date/Time is specified all EspAuto Job History until the specified Scheduled Date/Time is deleted.

3.24 JS480 Extract - Schedule per Scheduled ID

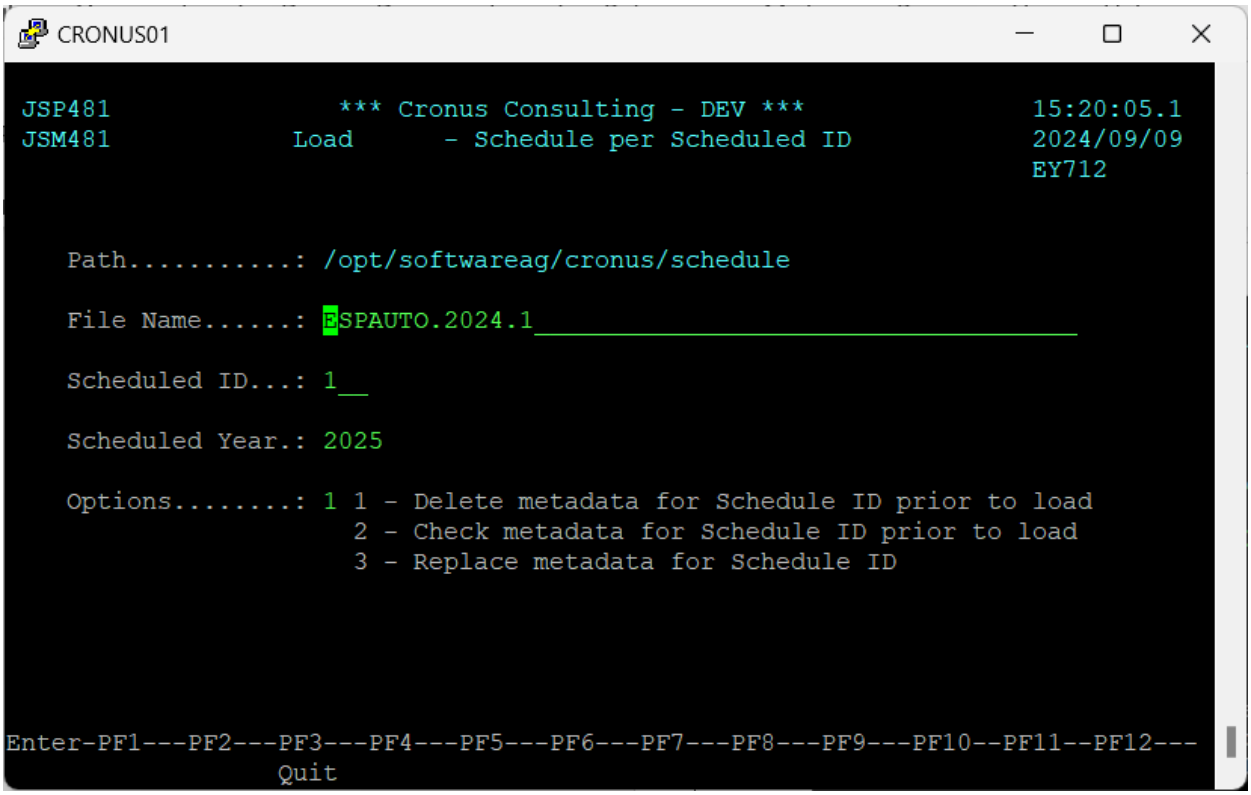
This function is used to extract all relevant metadata for the specified Scheduled ID and Year. The extract will contain the following metadata:

- Base Calendars (JS400)
- EspAuto Jobs (JS405)
- EspAuto Jobs per Schedule ID (JS410)
- Predecessors (JS415)
- File Events (JS416)
- Job Concurrency (JS417)
- Triggered Jobs (JS420)
- File Event master definitions (JS421)
- File Event triggers (JS422)



3.25 JS481 Load - Schedule per Scheduled ID

The function is used to load the metadata extracted via function **JS480 Extract - Schedule per Scheduled ID**.



Three options are provided for when loading the metadata:

1. Delete metadata for Schedule ID prior to load: This option will delete all existing metadata for the specified Scheduled ID and Year prior to loading the new metadata.
2. Check metadata for Schedule ID prior to load: This option will first verify that no metadata exists for the specified Scheduled ID and Year – If any metadata exists the load process will not take place.
3. Replace metadata for Schedule ID: This option will replace existing metadata entries with those contained on the load file.

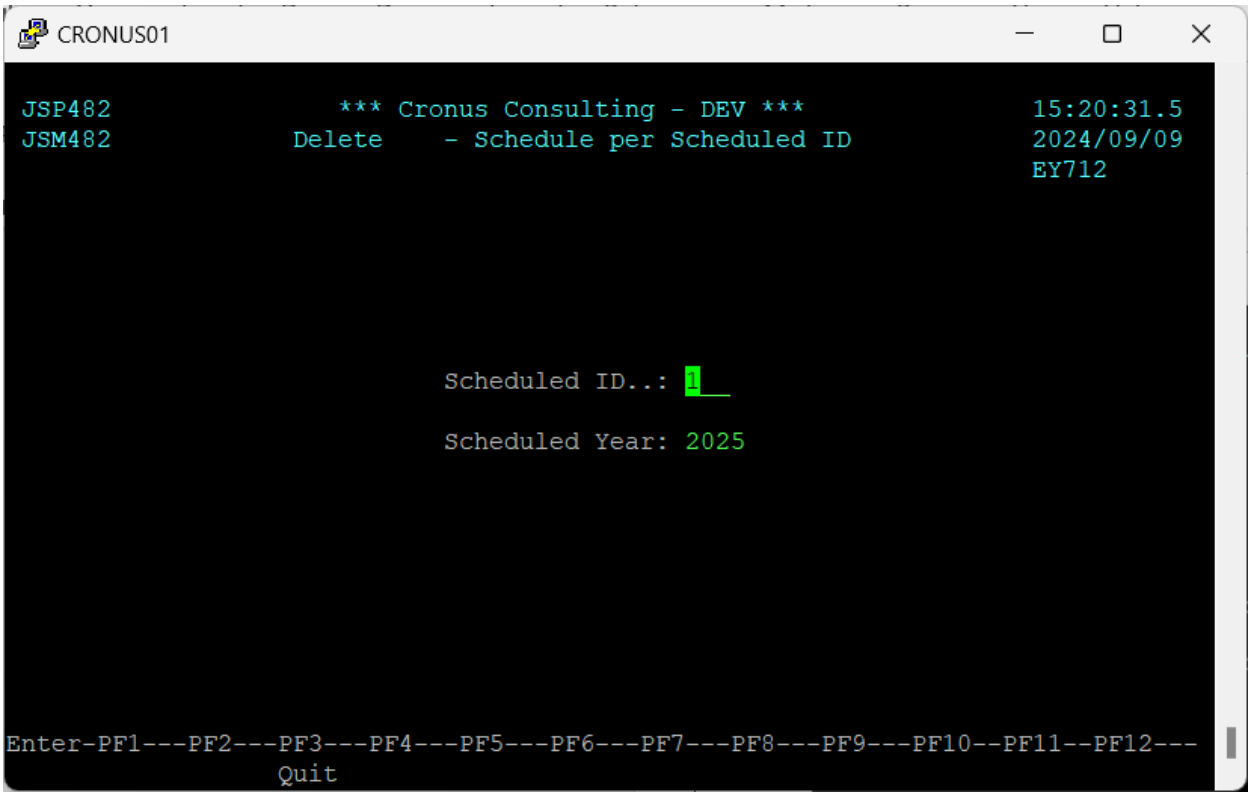
Note that when copying schedules to a different year, the base calendars must be modified manually to ensure correct run dates.

3.26 JS482 Delete - Schedule per Scheduled ID

This function will delete all metadata for the specified Scheduled ID and Year.

The following metadata is not deleted:

- Base Calendars (JS400)
- EspAuto Jobs (JS405)



3.27 JS490 Maintain - Support Groups

This function is used to maintain support groups. Support groups are used when notifying a user or group of users of the following events (Job Completed, Job Abended, Job Restarted, Job Overdue). Only support groups defined using this function can be used on function **JS492 Maintain - Scheduled Job Notification**.

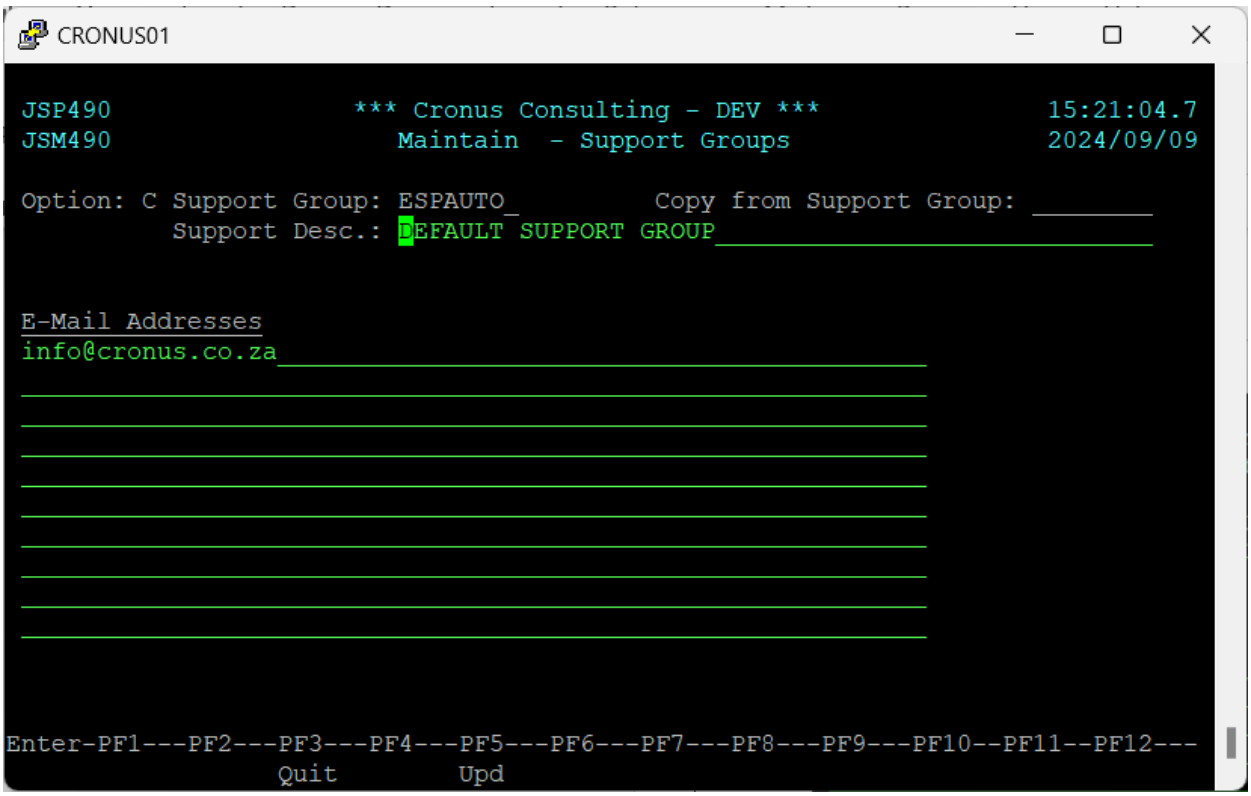
Function Options:

A - Add Support Group

C - Change Support Group

D - Delete Support Group

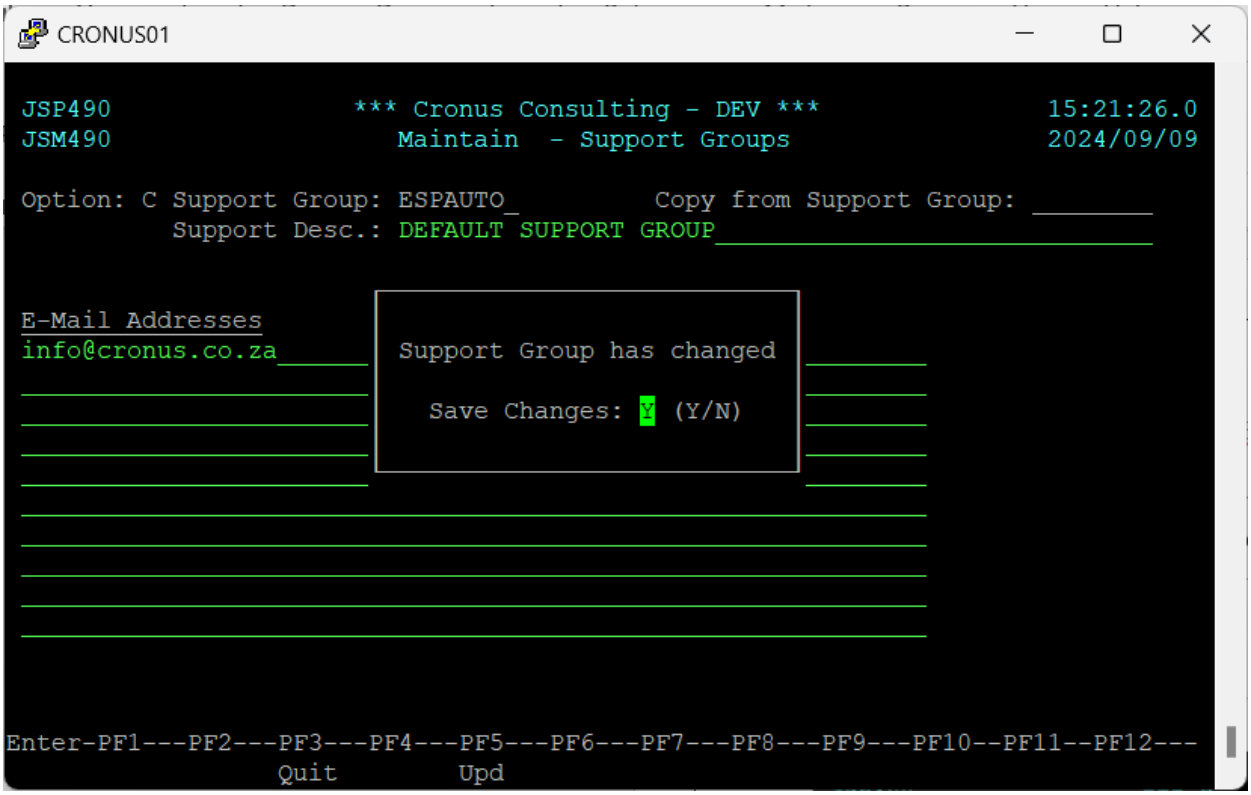
E - View Support Group



A maximum of 10 e-mail addresses can be specified per support group.

If the "**Copy from Support Group"** field is specified when adding a new support group with option "**A"**, a new support group will be created by making a copy of the support group specified in the **Copy from Support Group** field.

The current support group can be updated at any stage by pressing **PF5**. If **PF3** is pressed and the support group has been changed after the last **PF5** key press a window is displayed prompting the user if changes should be saved.



3.28 JS491 Maintain - Support Levels

This function is used to maintain support levels. Support levels are used to determine when the notification must be sent. The notification will be sent on the following day at the specified time, if notification should take place immediately then the Time and Day+ fields must be omitted. Only support levels defined using this function can be used on function **JS492 Maintain - Scheduled Job Notification**.

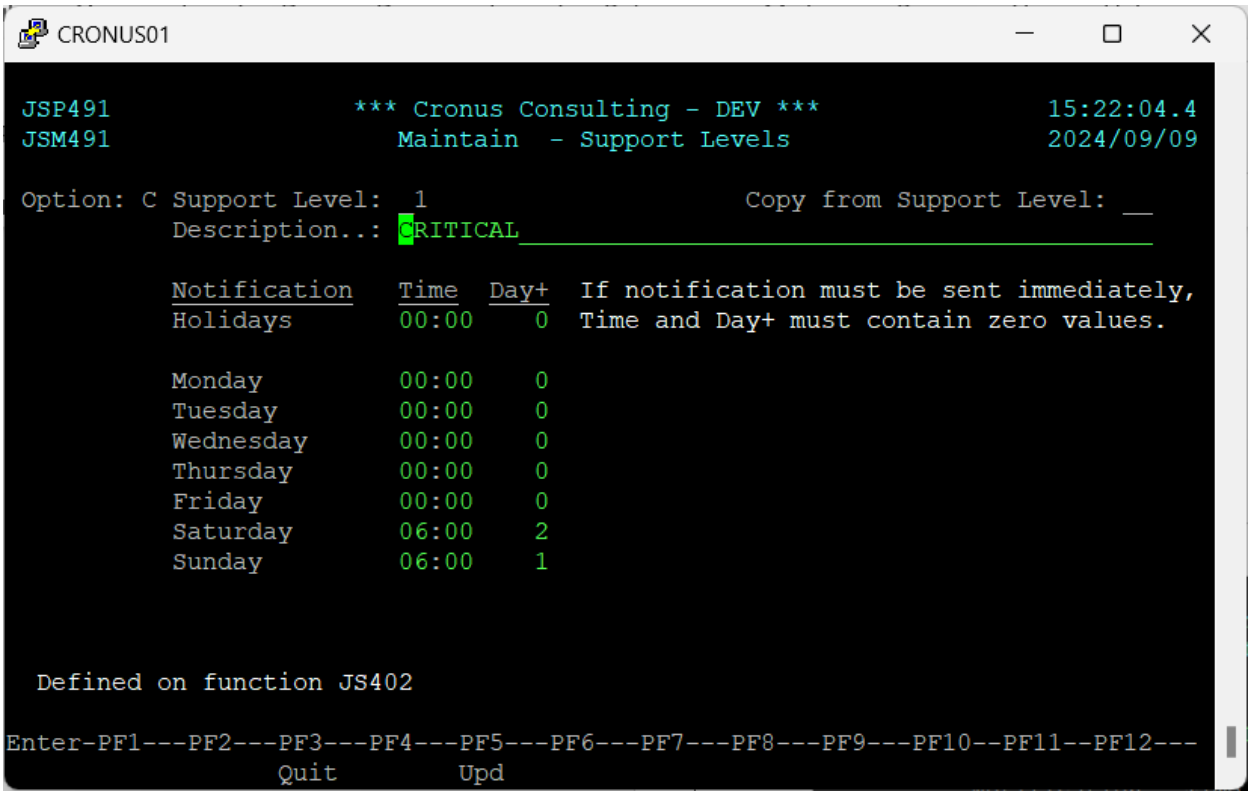
Function Options:

A - Add Support Level

C - Change Support Level

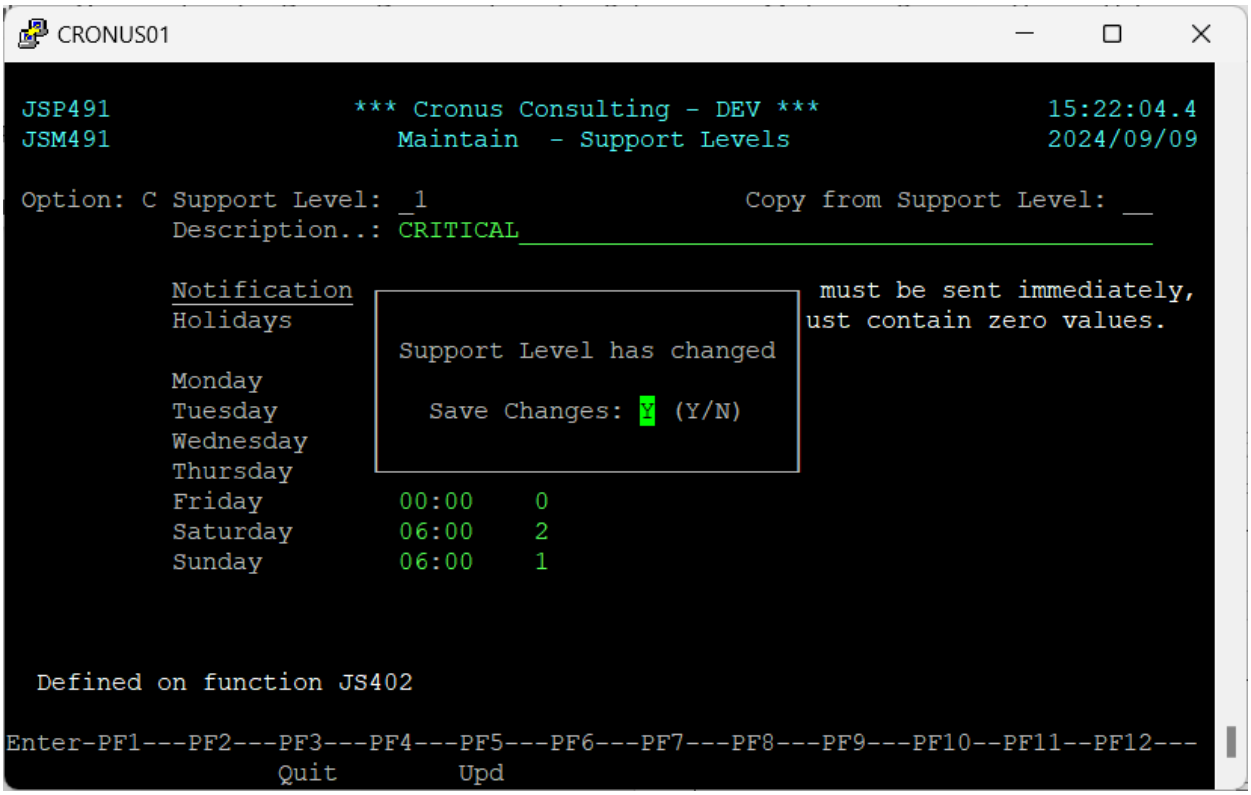
D - Delete Support Level

E - View Support Level



If the "**Copy from Support Level"** field is specified when adding a new support level with option "**A"**, a new support level will be created by making a copy of the support level specified in the **Copy from Support Level** field.

The current support level can be updated at any stage by pressing **PF5**. If **PF3** is pressed and the support level has been changed after the last **PF5** key press a window is displayed prompting the user if changes should be saved.



3.29 JS492 Maintain - Scheduled Job Notification

This function is used to maintain scheduled job notification. Notification can be sent for scheduled jobs that abort, complete, are overdue or have been auto restarted.

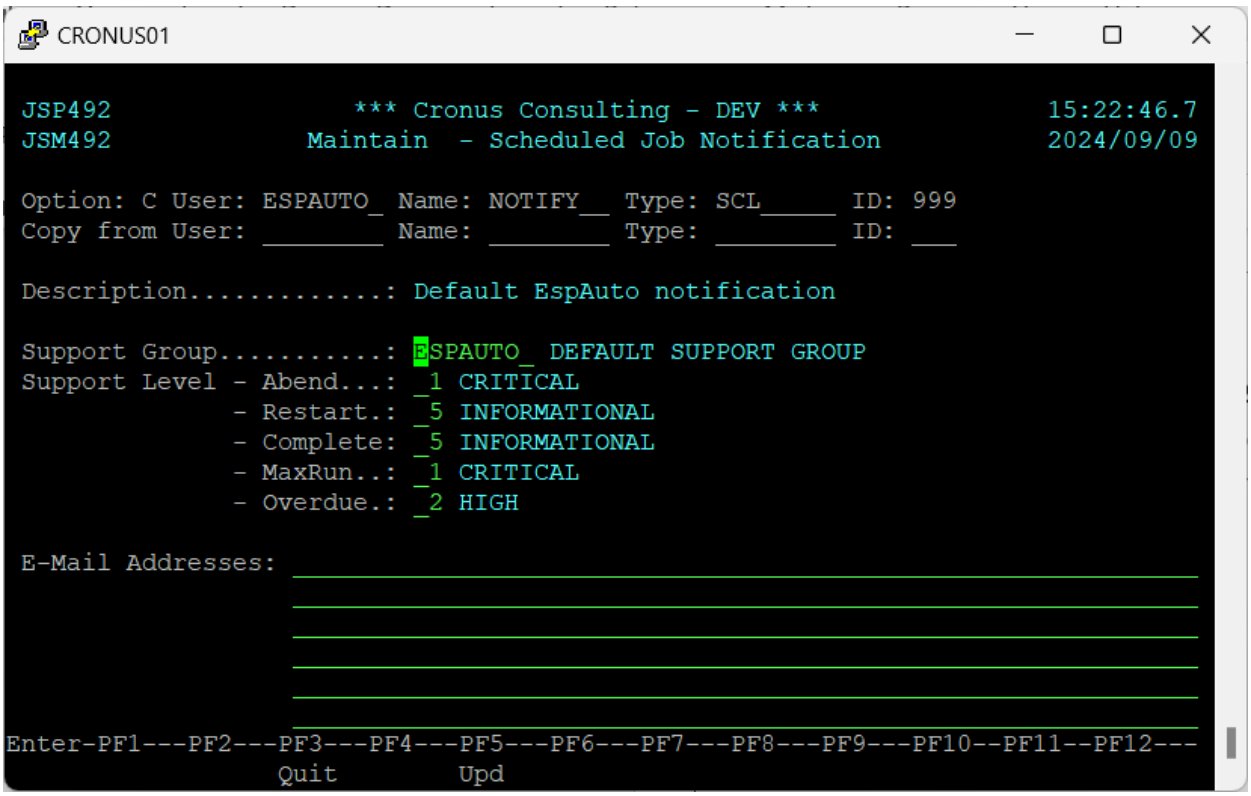
Function Options:

A - Add Notification

C - Change Notification

D - Delete Notification

E - View Notification



If the support level is omitted for Abend, Restart, Complete, MaxRun or Overdue no notification will take place.

The job notification to be used is determined as follows:

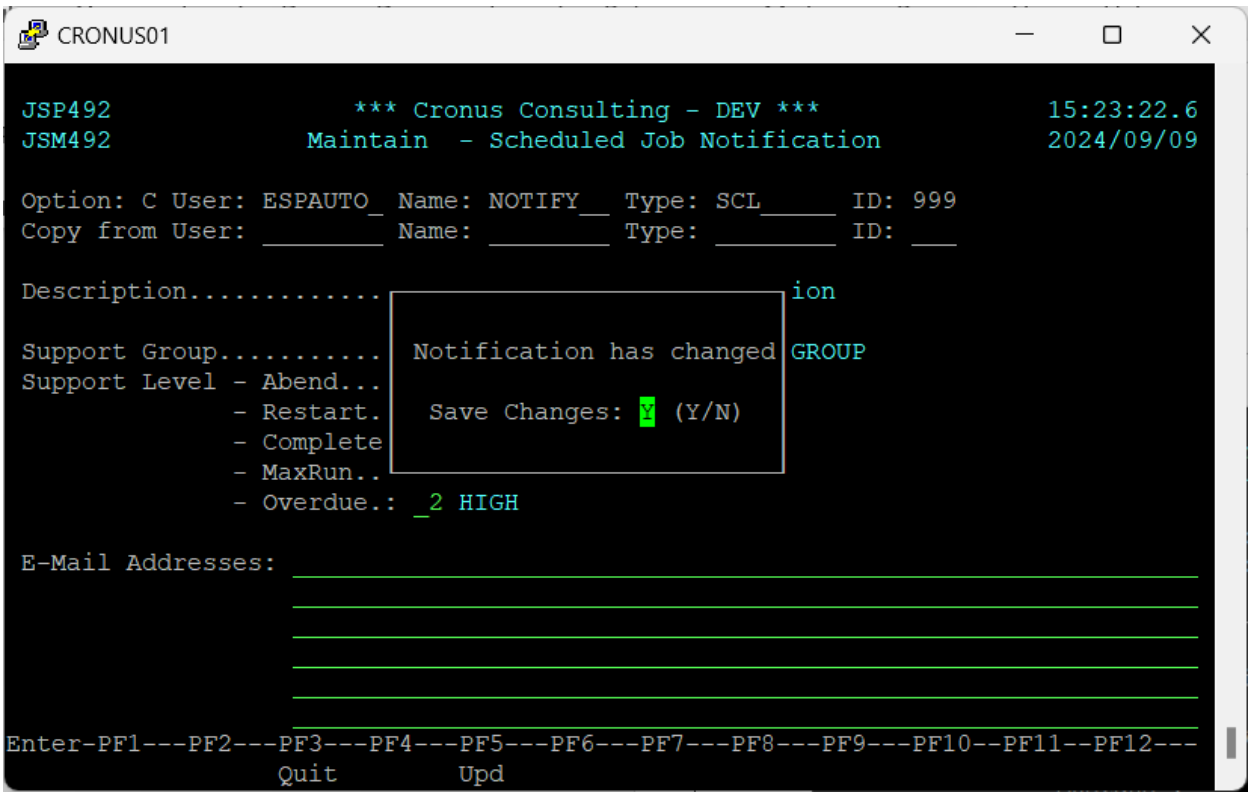
1. Check if entry exists with scheduled jobs **User**, **Name**, **Type** & **Schedule ID**
2. Check if entry exists with scheduled jobs **User**, **Name**, **Type** & **Schedule ID=999**.
3. Check if entry exists with scheduled jobs **User**, **Name**, **Type=*** & **Schedule ID**.
4. Check if entry exists with scheduled jobs **User**, **Name**, **Type=*** & **Schedule ID=999**.
5. Check if entry exists with scheduled jobs **User=***, **Name**, **Type** & **Schedule ID**.
6. Check if entry exists with scheduled jobs **User=***, **Name**, **Type** & **Schedule ID=999**.
7. Check if entry exists with scheduled jobs **User=***, **Name**, **Type=*** & **Schedule ID**.
8. Check if entry exists with scheduled jobs **User=***, **Name**, **Type=*** & **Schedule ID=999**.
9. Check if entry exists with **User=ESPAUTO**, **Name=NOTIFY**, **Type=SCL** and **Schedule ID=999**.

If no match is found for the above-mentioned conditions 1 to 8 then the Scheduled Jobs Name is truncated character by character from right to left in an attempt to find a matching value specified in the Name field.

The notification will be sent to the e-mail addresses specified on the support group and e-mail addresses specified on this function.

If the "**Copy from User, Name, Type & ID"** fields are specified when adding a new scheduled job notification with option "**A"**, a new notification will be created by making a copy of the notification specified in the **Copy from User, Name, Type & ID** fields.

The current scheduled job notification can be updated at any stage by pressing **PF5**. If **PF3** is pressed and the notification has been changed after the last **PF5** key press a window is displayed prompting the user if changes should be saved.



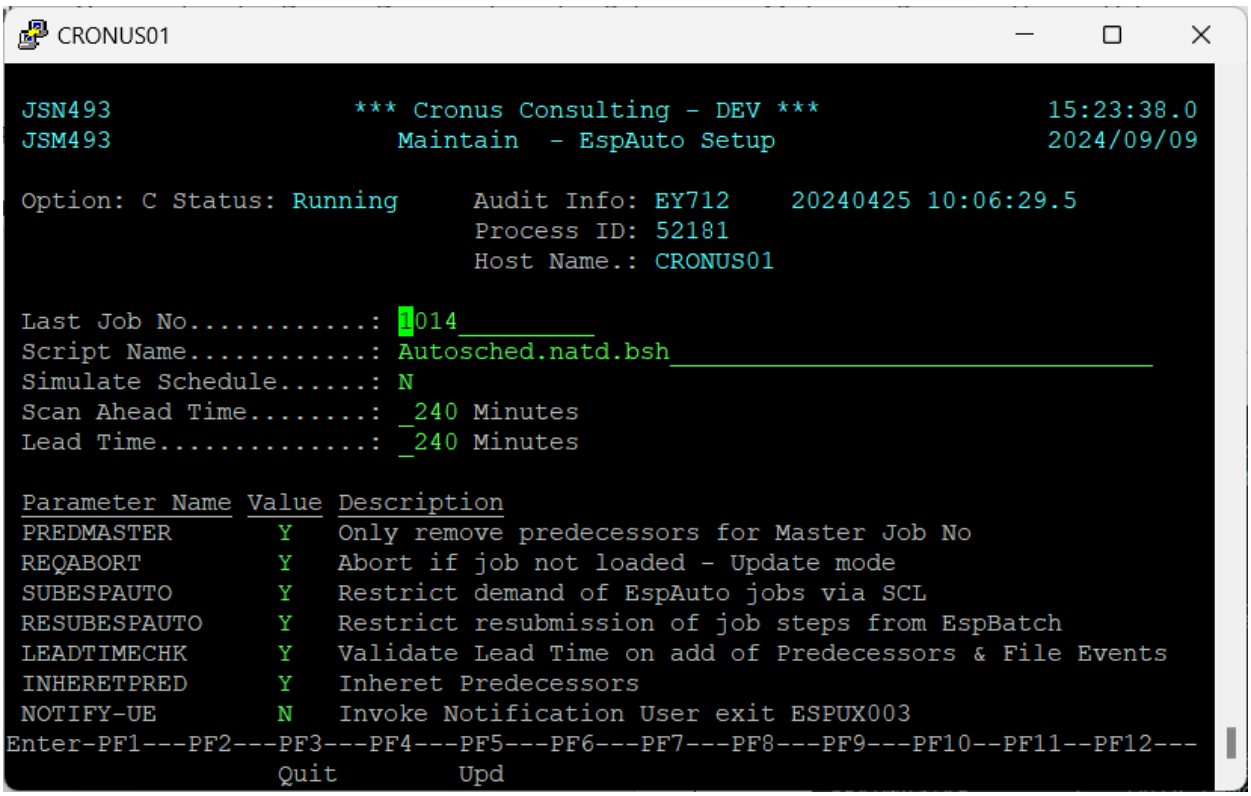
3.30 JS493 Maintain - EspAuto Setup

This function is used to define global values that are used throughout EspAuto and should not be assigned to all users.

Function Options:

C - Change Setup

E - View Setup



Parameters:

- Audit Info: User Id, Date & Time that the EspAuto Setup was updated.
- Last Job No: Last job no used for job submission
- Script Name: Name of EspAuto startup script
- Simulate Schedule: Valid values are **Y**es and **N**o. When set to **Y**es, EspAuto wil run in simulate mode, this provides the ability to validate the defined schedules without executing any batch jobs.
- Scan Ahead Time: Time in minutes used by Auto Scanner to determine which jobs must be loaded. In the screen shot above the scan ahead time is set to 240

minutes – if the Auto Scanner runs at 06H00 then all jobs scheduled between 06H00 and 10H00 will be loaded into the **EspAuto Job Queue**

- Lead Time: Time in minutes used to determine whether predecessors and file events must be added for a given scheduled job. This can be overwritten on function **JS405 Maintain - EspAuto Jobs**.
- PREDMASTER: Valid values are **Y**es and **N**o. If yes is specified predecessors will only be removed from jobs that have the same Master Job number as the job that has completed.
- REQABORT: Valid values are **Y**es and **N**o. If yes is specified and an attempt is made to update a scheduled jobs mode via EspAuto API **JSP461** or **JSP471** and the scheduled job is not currently in the EspAuto job queue the SCL job step will abort.
- SUBESPAUTO: Valid values are **Y**es and **N**o. Restricts/allows EspAuto scheduled jobs to be requested from within an EspBatch Job step using API's **JSP460** or **JSP470** if the SCL is not running under the control of EspAuto.
- RESUBESPAUTO: Valid values are **Y**es and **N**o. Restricts/allows resubmission of abended jobs from EspBatch. If set to **Y**es abended batch jobs submitted via EspAuto cannot be restarted via EspBatch functions JS050*.
- LEADTIMECHK: Valid values are **Y**es and **N**o. If yes is specified, then lead time checking will take place when adding predecessors and file events.
- INHERETPRED: Valid values are **Y**es and **N**o. If set to **Y**es jobs will inherit predecessors from scheduled jobs that are bypassed due to conditional trigger logic defined on **JS420 Maintain – EspAuto Job Triggers**.
- NOTIFY: Valid values are **Y**es and **N**o. If yes is specified, then the EspAuto user exit **ESPUX003** is invoked on all job notification.

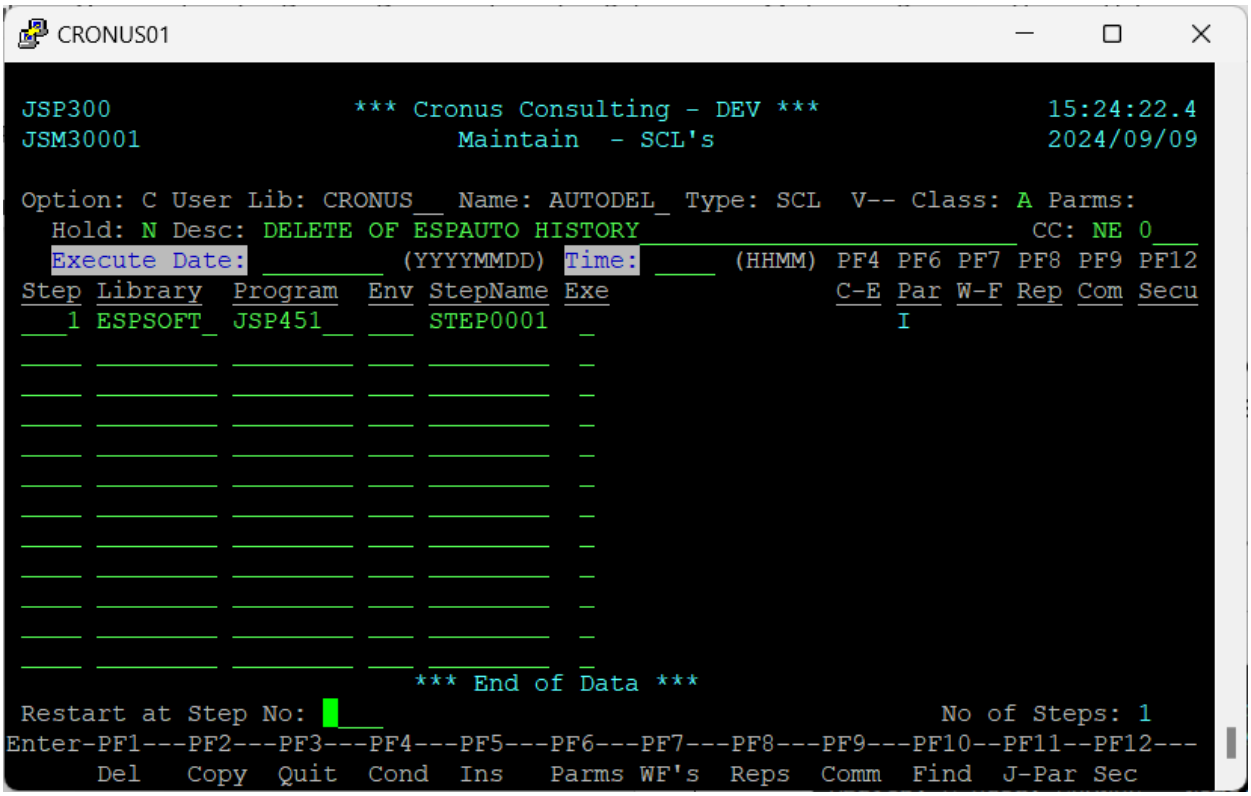
The current setup can be updated at any stage by pressing **PF5**. If **PF3** is pressed and the setup has been changed after the last **PF5** key press a window is displayed prompting the user if changes should be saved.

4. ESPAUTO API'S

4.1 JSP451

This API is used to delete EspAuto history from within a SCL step. The library must be specified as **ESPSOFT** and the program name is **JSP451**. Parameters are defined using **PF6**.

A report is generated that contains a list of all EspAuto job history that was deleted.



Only jobs with a status (Completed or Deleted) will be deleted.

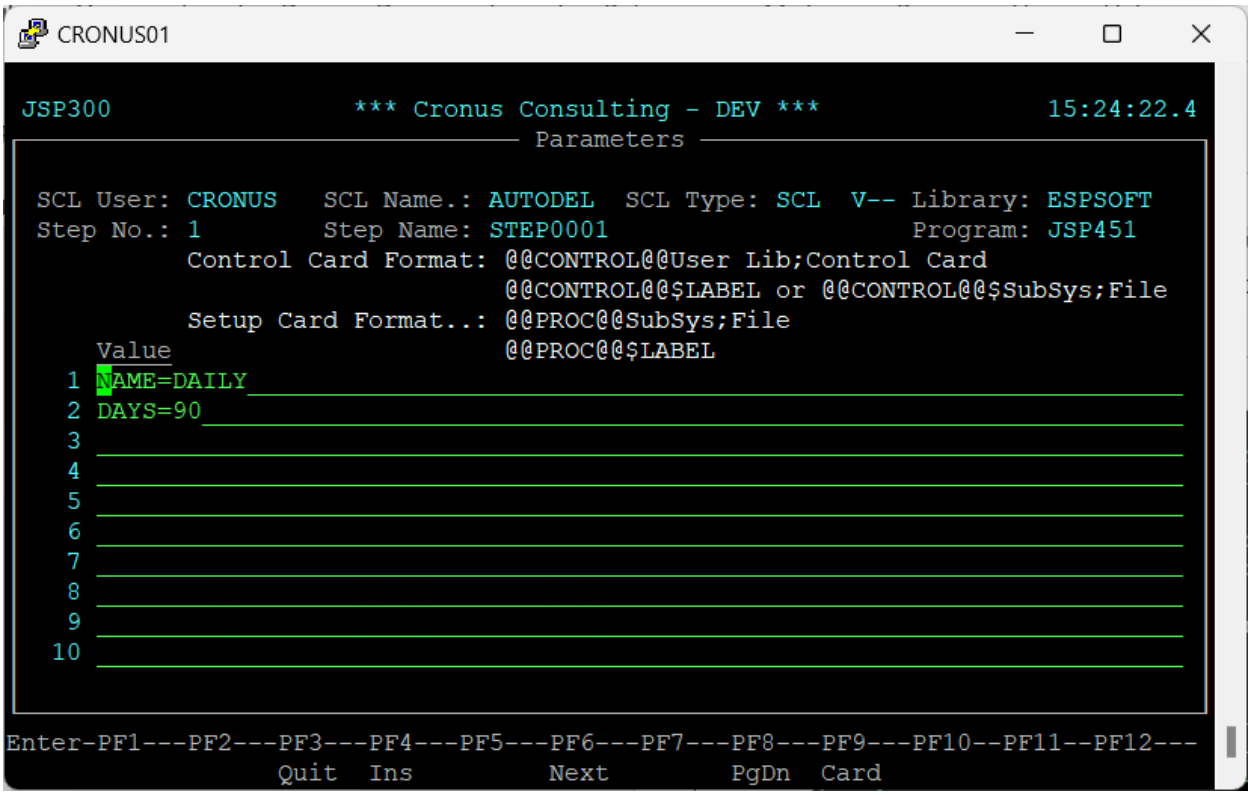
Required parameters (Parameter syntax PARMNAME=VALUE):

- DAYS: Number of days of history to retain **(Max 9999 Days)**
- DATE: All history until to the specified date is deleted **(Format: YYYYMMDD)**

Either **DAYS** or **DATE** must be specified.

Optional parameters (Parameter syntax PARMNAME=VALUE):

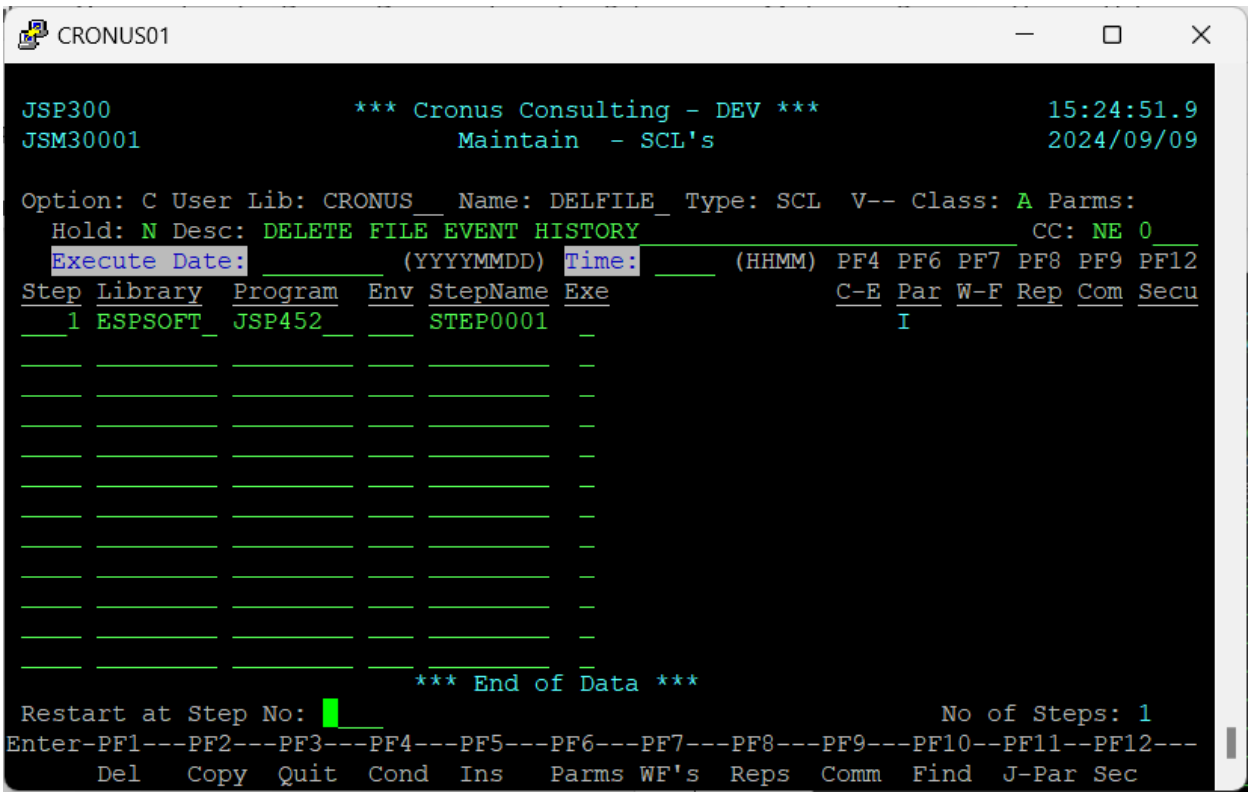
- USER: Scheduled User library (Blank for all)
- NAME: Scheduled Name (Blank for all)
- TYPE: Scheduled Type (Blank for all)
- ID: Scheduled Id (Blank for all)
- TIME: All history until the specified date/time is deleted **(Format: HHII)**



4.2 JSP452

This API is used to delete File Event history from within a SCL step. The library must be specified as **ESPSOFT** and the program name is **JSP452**. Parameters are defined using **PF6**.

A report is generated that contains a list of all File Event history that was deleted.



Required parameters (Parameter syntax PARMNAME=VALUE):

- DAYS: Number of days of history to retain **(Max 9999 Days)**
- DATE: All history until to the specified date is deleted **(Format: YYYYMMDD)**

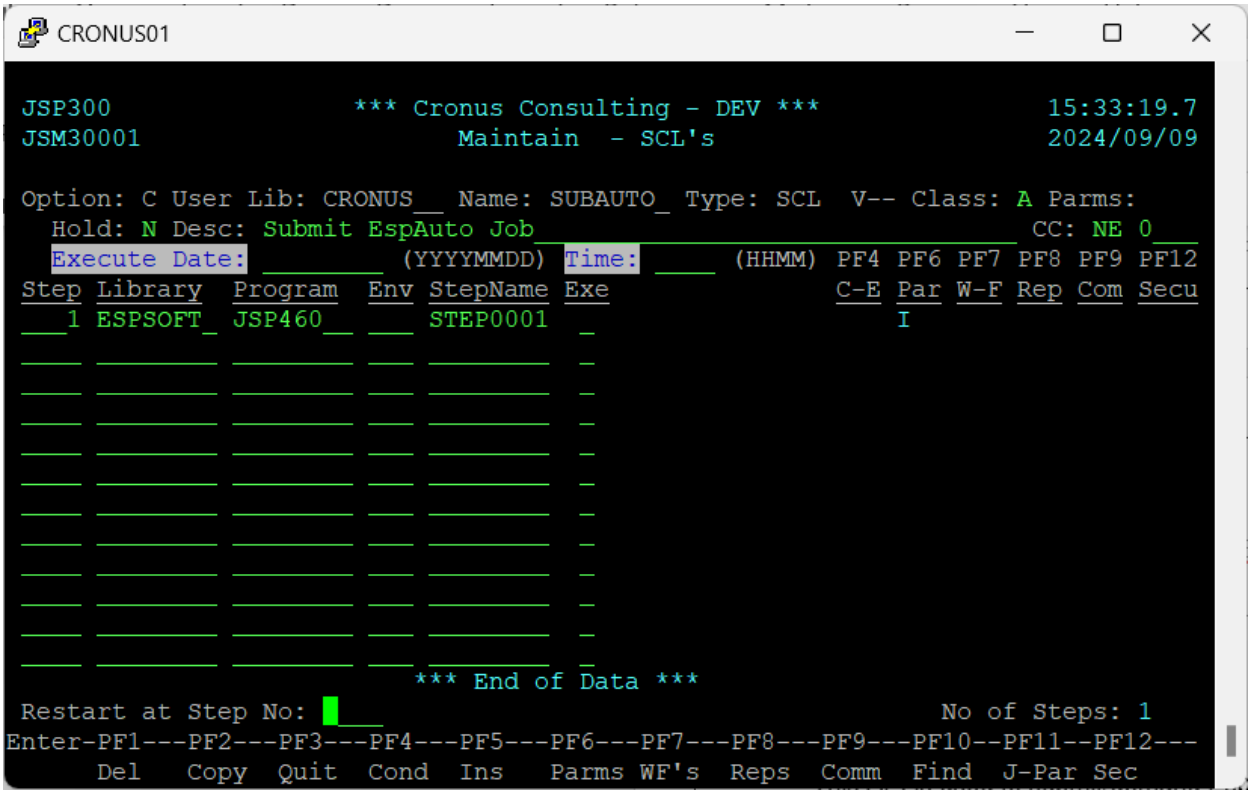
Either **DAYS** or **DATE** must be specified.

Optional parameters (Parameter syntax PARMNAME=VALUE):

- SUBSYSTEM: Sub System (Blank for all)
- NAME: Work File Name (Blank for all)
- TIME: All history until the specified date/time is deleted **(Format: HHII)**

4.3 JSP460

This API is used to submit/demand EspAuto jobs from within a SCL step. The library must be specified as **ESPSOFT** and the program name is **JSP460**. Parameters are defined using **PF6** and are limited to one job submission per SCL step.



Required parameters:

- Parameter 1: Scheduled User
- Parameter 2: Scheduled Name
- Parameter 3: Scheduled Type
- Parameter 4: Scheduled ID

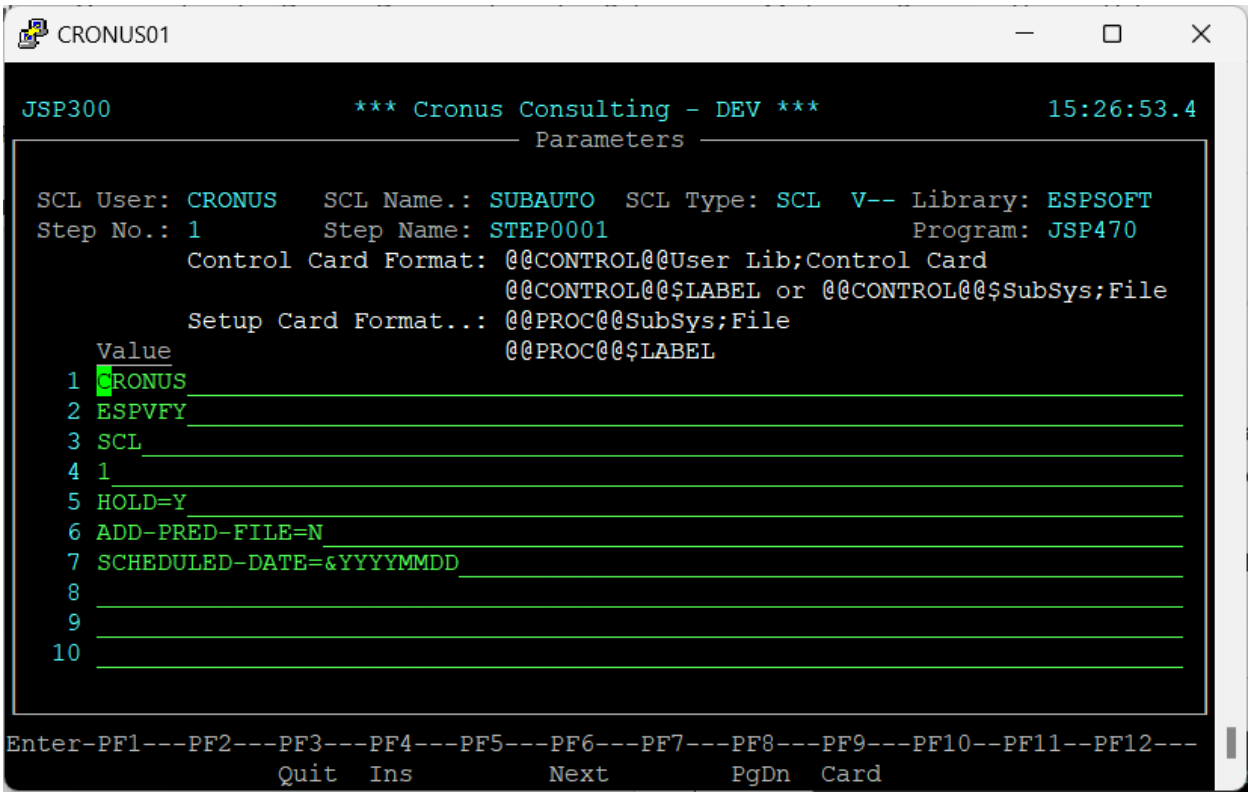
Optional Parameters (Parameter syntax PARMNAME=VALUE):

- HOLD: Submit on Hold - **Y**es or **N**o
  - Default: **N**o
- ADD-PRED-FILE Add predecessors/File events - **Y**es or **N**o
  - Default: **N**o
- SUB-TRIG-JOBS Submit Triggered Jobs - **Y**es or **N**o
  - Default: **Trig setting (JS405)**

- SCHEDULED-DATE Jobs scheduled date - Format: **YYYYMMDD**
  - Default: System date
- SCHEDULED-TIME Jobs scheduled time - Format: **HHII**
  Default: System time

Predecessors and file events that are added with a schedule id of 999 on functions **JS415** & **JS416** will be added irrespective of the value of the **Include predecessors / File Events parameter**.

Triggered jobs will be released according to the value of the **Submit Triggered Jobs** field on function **JS405**.

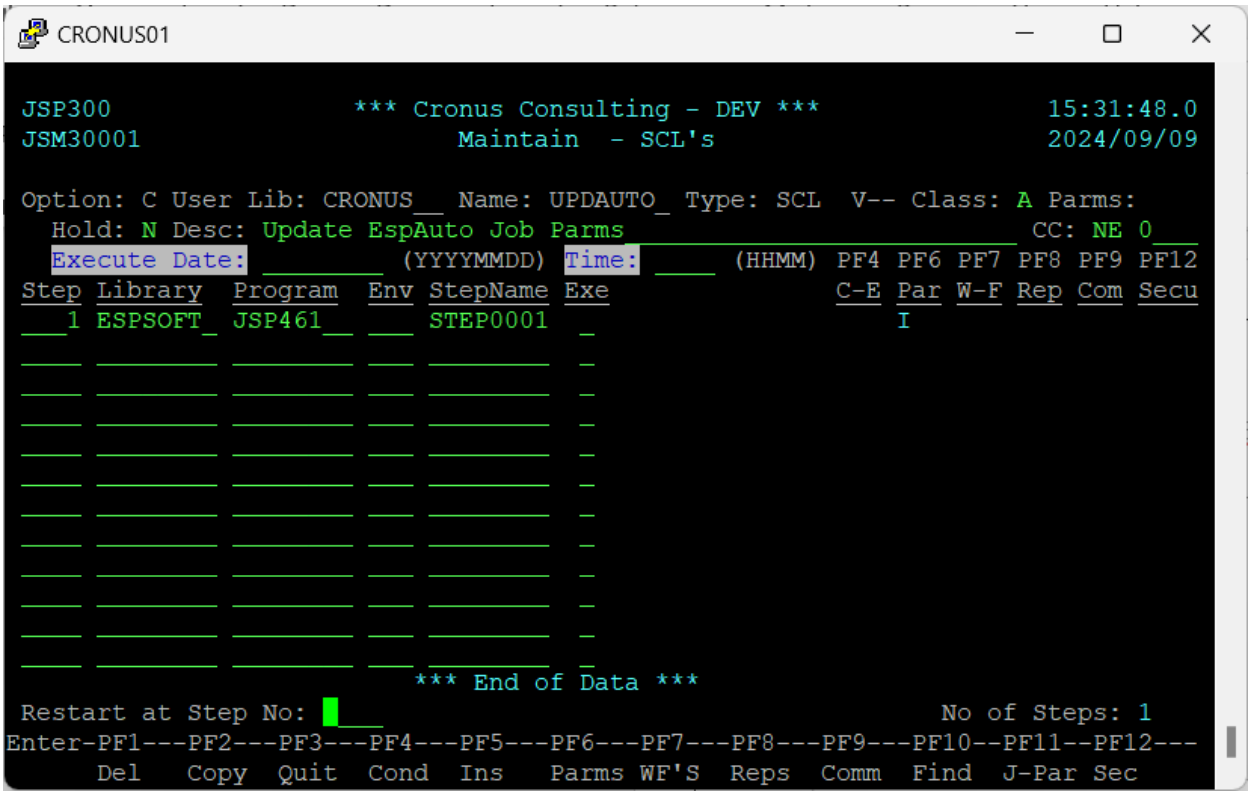


The value of **SUBESPAUTO** defined using function **JS493 Maintain - EspAuto Setup** determines whether EspAuto jobs can be demanded from within an SCL if the current job is not running under control of EspAuto.

- Value **Y**es - EspAuto jobs can be demanded using API **JSP460**
- Value **N**o - EspAuto jobs may not be demanded using API **JSP460**

4.4 JSP461

This API is used to update EspAuto jobs from within a SCL step. The library must be specified as **ESPSOFT** and the program name is **JSP461**. Parameters are defined using **PF6** and are limited to one scheduled job per SCL step.



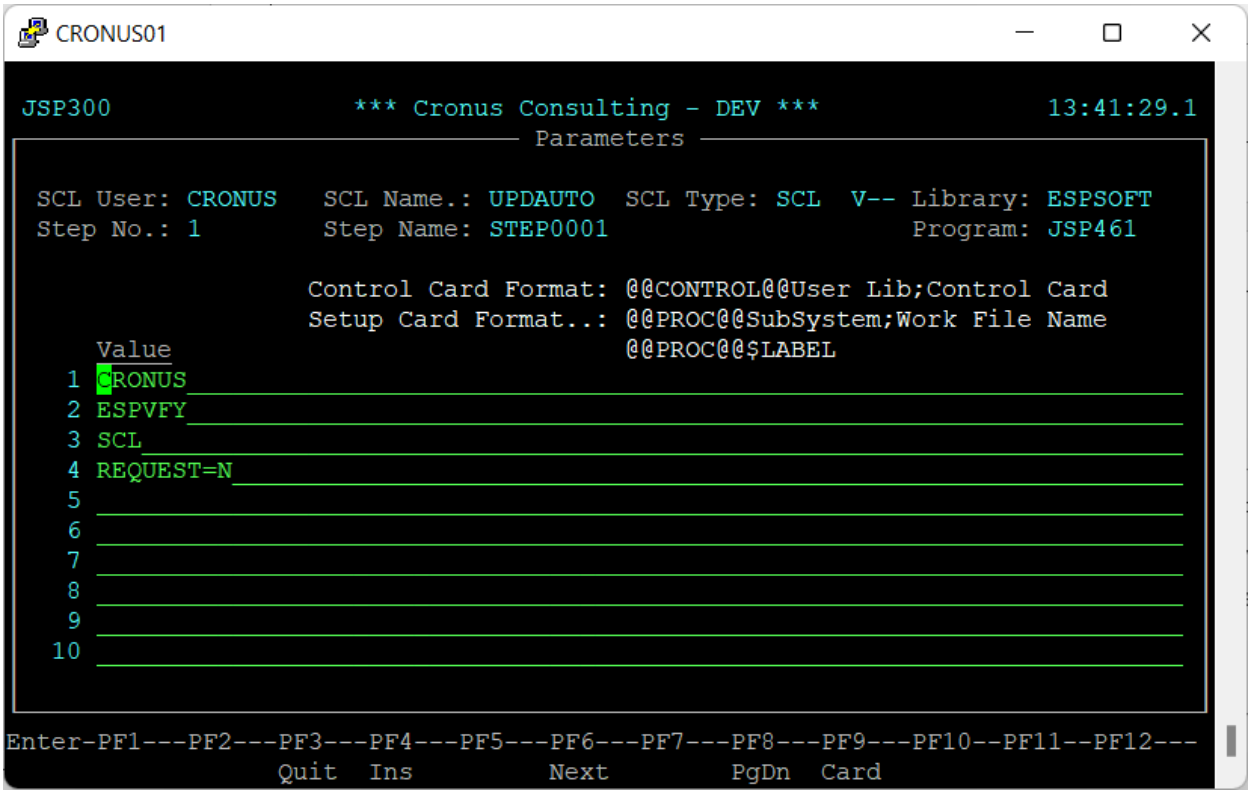
Required parameters:

- Parameter 1: Scheduled User
- Parameter 2: Scheduled Name
- Parameter 3: Scheduled Type

Optional Parameters (Parameter syntax PARMNAME=VALUE):

- REQUEST: Change mode - **Y**es or **N**o
- HOLD Place job on hold - **Y**es or **N**o
- LATESUB-TIME Change late sub time - **HHII**
- LATESUB-DELAY Add minutes to late sub time - **Numeric 3 (Max 720)**
- COMPLETE Complete Job - **Y**es

The REQUEST mode will be updated according to the value passed in the REQUEST mode parameter. A value of **REQUEST=Y**es will change the job mode to REQUEST and a value of **REQUEST=N**o will remove the REQUEST mode status. Ex. to remove REQUEST mode from a job the value of the fourth parameter must be: REQUEST=N



If all prerequisites for a job in **REQUEST** mode have been satisfied and the job is still in R**EQUEST** mode, it will not be executed, however it will be removed from all jobs in the queue awaiting its completion and if any triggered jobs have been defined, they will be submitted.

The value of **REQABORT** defined using function **JS493 Maintain - EspAuto Setup** determines whether the EspBatch job step will abort if the EspAuto scheduled job is not loaded when attempting to update the jobs mode.

- Value **Y**es - Abort EspBatch job step if EspAuto job is not loaded
- Value **N**o - Complete EspBatch job step if EspAuto job is not loaded

HOLD:

If a scheduled job is placed on HOLD to job will not start execution until the HOLD is removed.

LATESUB-TIME:

This parameter allows you to update a jobs late submission time which will send notification if job has not started execution at the time specified. The late submission time must be specified in HHII format.

LATESUB-DELAY:

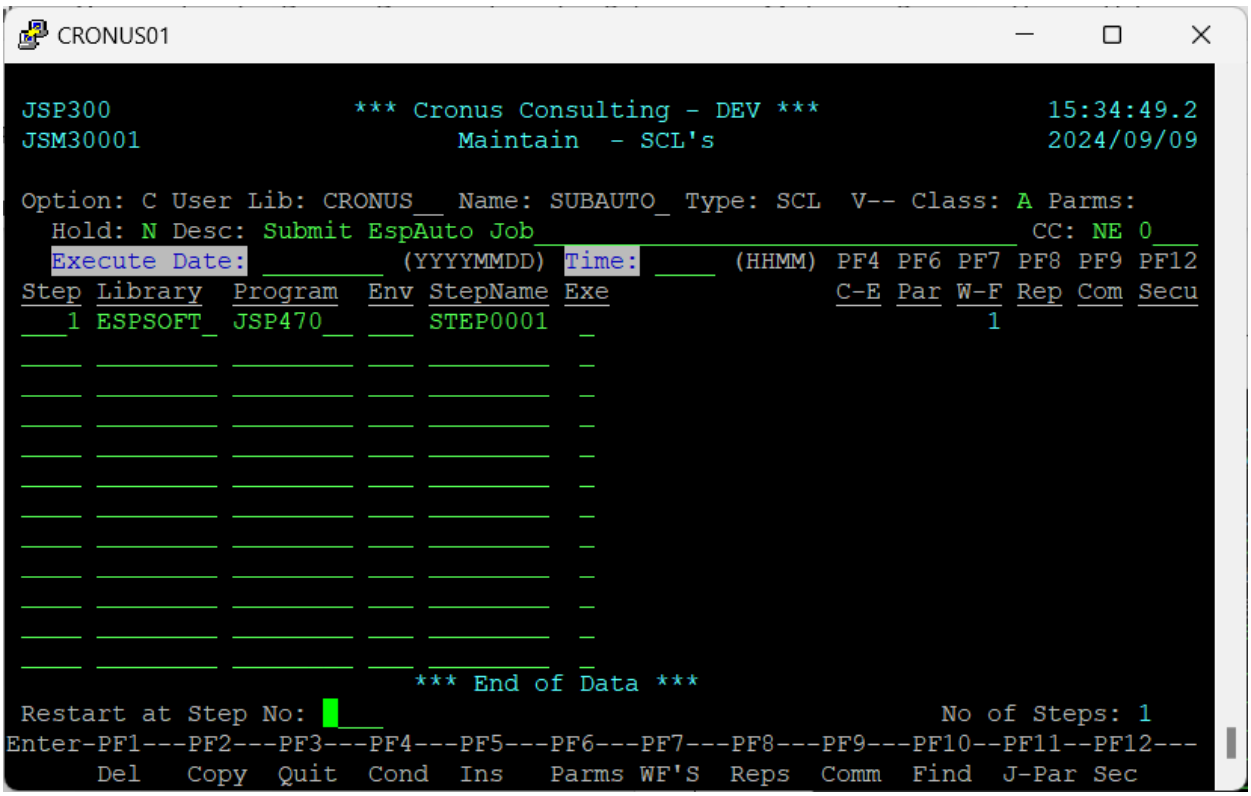
This parameter allows you to update a jobs late submission time which will send notification if job has not started execution at the time specified. The late submission delay must be specified in minutes (max. 720 minutes). The number of minutes specified will be added to the current system time to set the new late submission time.

COMPLETE:

The job status is changed to COMPLETED without executing the job, only jobs with a status of SCANNED will be completed, if the jobs status is not SCANNED no action will be performed. If a job is COMPLETED predecessors and triggers are processed.

4.5 JSP470

This API is used to demand EspAuto jobs from within a SCL step. The library must be specified as **ESPSOFT** and the program name is **JSP470**. Parameters are contained within the work file 1 specified under the work file definitions using **PF7**. Multiple jobs can be scheduled - each scheduled job must be defined on a separate line.



Required parameters:

- Parameter 1: Scheduled User
- Parameter 2: Scheduled Name
- Parameter 3: Scheduled Type
- Parameter 4: Scheduled ID

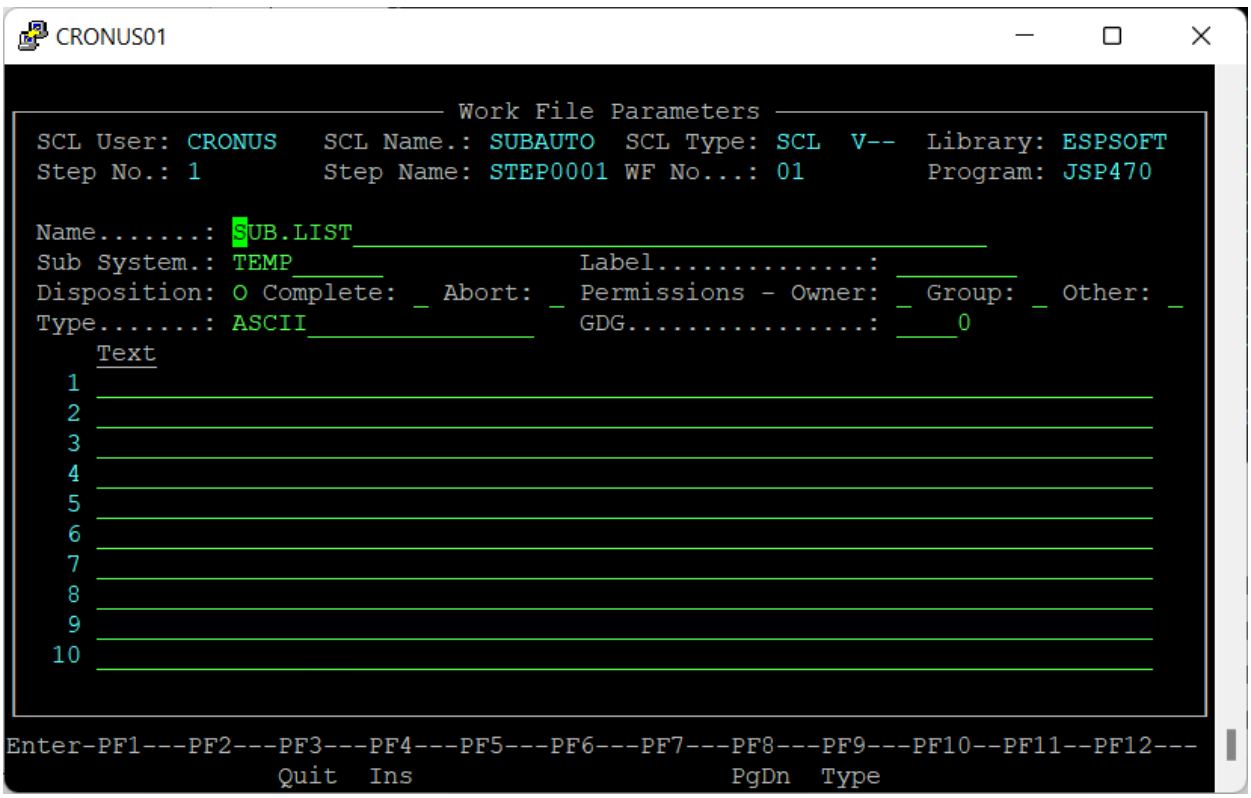
Optional Parameters (Parameter syntax PARMNAME=VALUE):

- HOLD: Submit on Hold - **Y**es or **N**o
  - Default: **N**o
- ADD-PRED-FILE Add predecessors/File events - **Y**es or **N**o
  - Default: **N**o

- SCHEDULED-DATE Jobs scheduled date - Format: **YYYYMMDD**
  - Default: System date
- SCHEDULED-TIME Jobs scheduled time - Format: **HHII**
  Default: System time

Predecessors and file events that are added with a schedule id of 999 on functions **JS415** & **JS416** will be added irrespective of the value of the **Include predecessors / File Events parameter**.

Triggered jobs will be released according to the value of the **Submit Triggered Jobs** field on function **JS405**.



Work File layout:

- Scheduled User Alphanumeric 8 Required
- Scheduled Name Alphanumeric 8 Required
- Scheduled Type Alphanumeric 8 Required
- Scheduled Id Numeric 3 Required
- Submit on HOLD Alphanumeric 1 **Y**es or **N**o
- Include Predecessors / File Events Alphanumeric 1 **Y**es or **N**o
- Scheduled Date Numeric 8 Format **YYYYMMDD**
- Scheduled Time Numeric 4 Format **HHII**

The parameters must be comma separated within the specified work file.

Example work file layout:

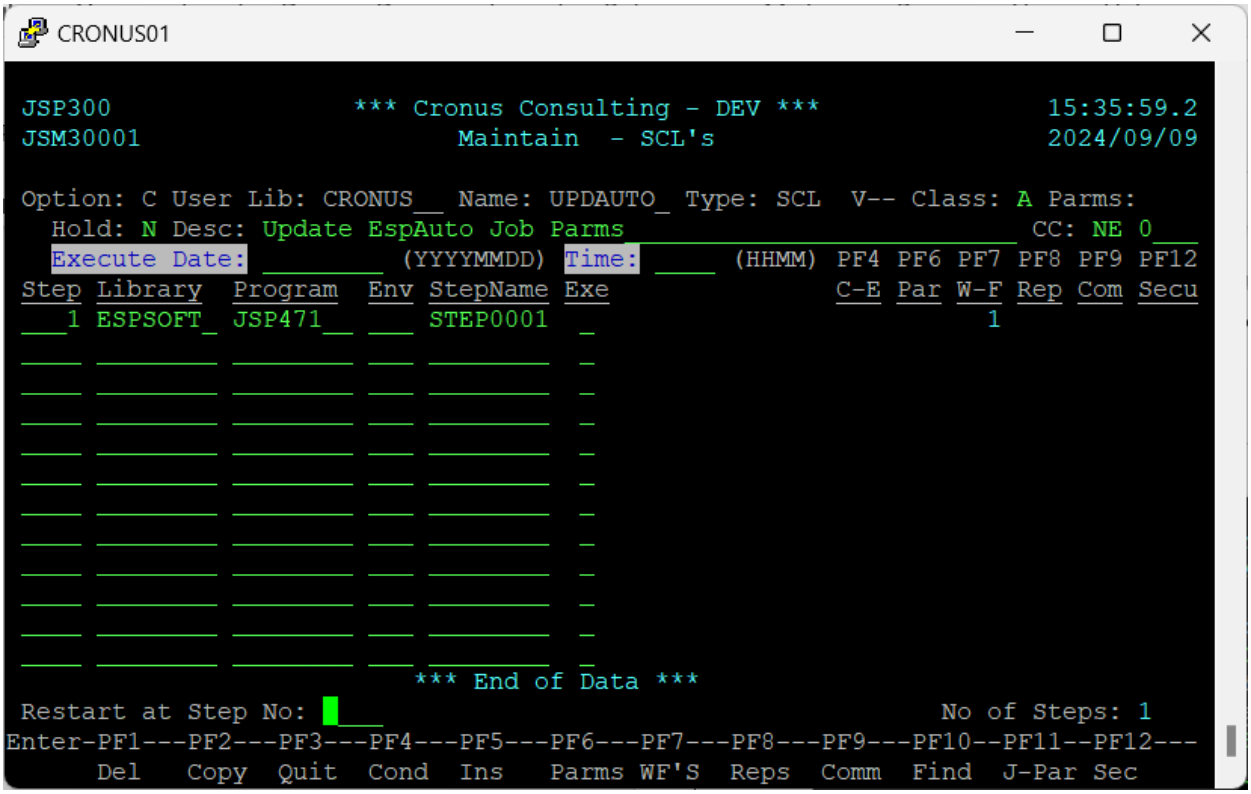
```
CRONUS,JOB1,SCL,1,ADD-PRED-FILE=Y,SCHEDULED-DATE=20071231,SCHEDULED-TIME=2315
CRONUS,JOB2,SCL,1,HOLD=Y
```

The value of Code Type: **SCL** Code Value: **SUBESPAUTO** defined using function **JS493 Maintain - EspAuto Setup** determines whether EspAuto jobs can be demanded from within an SCL if the current job is not running under control of EspAuto.

- Value **Y**es - EspAuto jobs can be demanded using API **JSP470**
- Value **N**o - EspAuto jobs may not be demanded using API **JSP470**

4.6 JSP471

This API is used to update EspAuto jobs from within a SCL step. The library must be specified as **ESPSOFT** and the program name is **JSP471**. Parameters are contained within the work file 1 specified under the work file definitions using **PF7**. Multiple jobs can be updated - each scheduled job must be defined on a separate line.



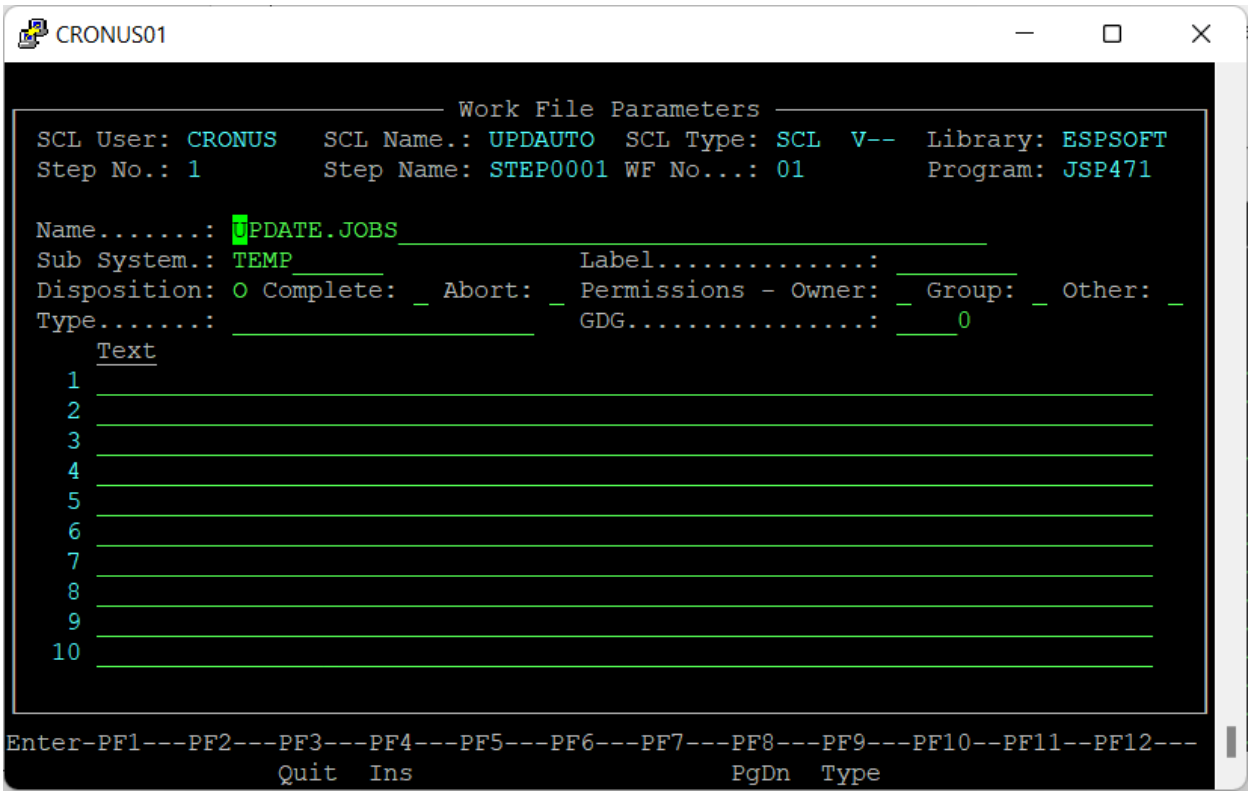
Required parameters:

- Parameter 1: Scheduled User
- Parameter 2: Scheduled Name
- Parameter 3: Scheduled Type

Optional Parameters (Parameter syntax PARMNAME=VALUE):

- REQUEST: Change mode - **Y**es or **N**o
- REQUEST-NO-ABORT Change mode - **Y**es or **N**o
- HOLD Place job on hold - **Y**es or **N**o
- LATESUB-TIME Change late sub time - **HHII**
- LATESUB-DELAY Add minutes to late sub time - **Numeric 3 (Max 720)**
- COMPLETE Complete Job - **Y**es

The REQUEST mode will be updated according to the value passed in the REQUEST mode parameter. A value of **REQUEST=Y**es will set change the job mode to REQUEST and a value of **REQUEST=N**o will remove the REQUEST mode status. Ex. to remove REQUEST mode from a job the parameter must be specified as: REQUEST=N



If all prerequisites for a job in **REQUEST** mode have been satisfied and the job is still in R**EQUEST** mode, it will not be executed, however it will be removed from all jobs in the queue awaiting its completion and if any triggered jobs have been defined, they will be submitted.

The value of Code Type: **SCL** Code Value: **REQABORT** defined using function **JS493 Maintain - EspAuto Setup** determines whether the EspBatch job step will abort if the EspAuto scheduled job is not loaded when attempting to update the jobs mode.

- Value **Y**es - Abort EspBatch job step if EspAuto job is not loaded
- Value **N**o - Complete EspBatch job step if EspAuto job is not loaded

HOLD:

If a scheduled job is placed on HOLD to job will not start execution until the HOLD is removed.

LATESUB-TIME:

This parameter allows you to update a jobs late submission time which will send notification if job has not started execution at the time specified. The late submission time must be specified in HHII format.

LATESUB-DELAY:

This parameter allows you to update a jobs late submission time which will send notification if job has not started execution at the time specified. The late submission delay must be specified in minutes (max. 720 minutes). The number of minutes specified will be added to the current system time to set the new late submission time.

COMPLETE:

The job status is changed to COMPLETED without executing the job, only jobs with a status of SCANNED will be completed, if the jobs status is not SCANNED no action will be performed. If a job is COMPLETED predecessors and triggers are processed.

The parameters must be comma separated within the specified work file.

Example work file layout:

```
CRONUS,JOB2,SCL,REQUEST=N
CRONUS,JOB3,SCL,HOLD=Y
```

The value of Code Type: **SCL** Code Value: **REQABORT** defined using function **JS493 Maintain - EspAuto Setup** determines whether the EspBatch job step will abort if the EspAuto scheduled job is not loaded when attempting to update the jobs mode.

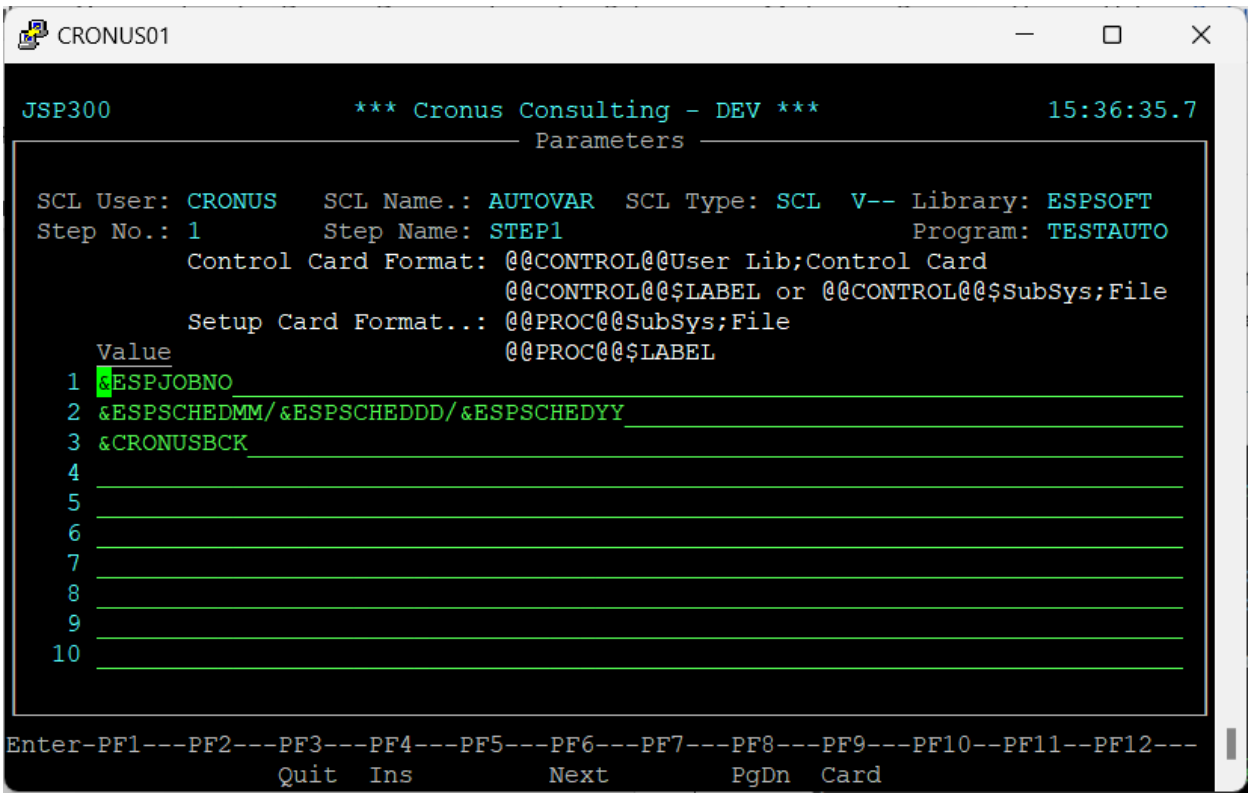
- Value **Y**es - Abort EspBatch job step if EspAuto job is not loaded
- Value **N**o - Complete EspBatch job step if EspAuto job is not loaded

5. ESPAUTO VARIABLES

EspAuto variables can be used within a SCL and are evaluated at submission time. Note that all variables must be preceded with an ampersand “&” sign. Variables defined using functions **JS410** & **JS420** can be also be referenced using the same syntax. Refer to the EspBatch manual **DYNAMIC VARIABLE SUBSTITION** for additional information.

EspAuto variables defined within an SCL are not expanded if the SCL is submitted outside of EspAuto.

Site specific variables can be created within user exit **ESPPARMU**. The provided user exit is a natural sub-program, thus allowing for creation of user defined variables writing natural code. When upgrading EspAuto - **ESPPARMU** must be replaced by the site specified version if used.



In the example above **ESPJOBNO**, **ESPSCHEDMM**, **ESPSCHEDDD** and **ESPSCHEDYY** are EspAuto product variables. **CRONUSBCK** is a variable that was set using function **JS420**.

EspAuto variables:

Function Name	Format Returned	Description
ESPMJOBNO	Numeric 13	EspAuto Master Job No
ESPJOBNO	Numeric 13	EspAuto Job No
ESPSCHEDUSER	Alphanumeric 8	Scheduled User Library
ESPSCHEDNAME	Alphanumeric 8	Scheduled Name
ESPSCHEDTYPE	Alphanumeric 8	Scheduled Type
ESPSCHEDID	Numeric 3	Scheduled ID
ESPSCLUSER	Alphanumeric 8	SCL User Library
ESPSCLNAME	Alphanumeric 8	SCL Name
ESPSCLTYPE	Alphanumeric 8	SCL Type
ESPSCHEDYYYY	YYYY	Scheduled Year
ESPSCHEDYY	YY	Scheduled Year
ESPSCHEDMM	MM	Scheduled Month
ESPSCHEDDD	DD	Scheduled Day
ESPSCHEDHH	HH	Scheduled Hour
ESPSCHEDMIN	MM	Scheduled Minutes
ESPSYSYYYYMMDD	CCYYMMD	System Date
ESPSYSYYYY	YYYY	System Year
ESPSYSYY	YY	System Year
ESPSYSMM	MM	System Month
ESPSYSDD	DD	System Day
ESPSYSHH	HH	System Hour
ESPSYSMIN	MM	System Minutes

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6. AUTO SCANNER

The auto scanner provides the mechanism to automate job that are defined within EspAuto using function **JS410 Maintain - EspAuto Jobs per Schedule ID**. The Auto Scanner must be defined using the Unix/Linux **cron** daemon process or an alternate Unix/Linux scheduler. The scanning process should be setup in accordance with the scan ahead time defined using function **JS493 Maintain - EspAuto Setup** to ensure that all scheduled jobs are queued as per date/time definition. The run interval specified for the auto scanner should be less than the scan ahead time specified, or this will result in jobs not being scheduled.

Example crontab entry to execute Auto Scanner every 15 minutes:

0,15,30,45 * * * * /opt/softwareag/cronus/scripts/Autoscan.dev.bsh

7. USER EXITS

ESPUX003 – EspAuto notification:

This user exit provides the ability to call an external process as soon as notification specified using function **JS492 Maintain - Scheduled Job Notification** takes place.

Parameters that are available for the call to the external process are:

Parameter Name	Format	Description
#API-MSG-TYPE	Numeric 1	Type of message • 1 – Job Aborted • 2 – Job Completed • 3 – Job is Overdue • 4 – Job was Auto Restarted
#API-DESC	Alphanumeric 200	Description of the message
#API-JOB-NAME	Alphanumeric 100	Scheduled jobs User Library, Name and Type delimited by '.'. E.g. **PROD.TESTJOB.SCL**
#API-SCL-NAME	Alphanumeric 100	SCL's User Library, Name and Type delimited by '.'. E.g. **PROD.TEST.SCL**
#API-BAT-NO	Numeric 13	EspBatch batch no used for submission of the SCL
#API-RUN-ID	Numeric 13	Run Id of the EspBatch job step
#API-STEP-NAME	Alphanumeric 13	Step Name of the EspBatch job
#API-STEP-NO	Numeric 6	Step Number of the EspBatch job
#API-COMP-DATE	Numeric 8	Completion Date of the EspBatch job
#API-COMP-TIME	Alphanumeric 20	Completion Time of the EspBatch job
#API-ERR-DATE	Numeric 8	Error Date of the EspBatch job
#API-ERR-TIME	Alphanumeric 20	Error Time of the EspBatch job
#API-ERR-PROG	Alphanumeric 8	Program Name of the EspBatch job step that aborted
#API-ERR-LINE	Numeric 4	Error Line of the EspBatch job step that aborted
#API-ERR-NO	Numeric 4	Error No of the EspBatch job step that aborted

#API-GROUP	Alphanumeric 8	The Name of the support group as defined using function **JS492**
#API-SEVERITY	Numeric 2	The severity of the notification as defined using function **JS492**
#API-JOBNO	Packed 13	The EspAuto Job No

Site specific customisation applied to user exit **ESPUX003** should be replaced after an EspAuto upgrade.