

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 is 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

```

160.119.253.52 - PuTTY
MAP902          *** Cronus Consulting *** V7.1.2          10:32:12.7
MAM902          - JS : EspBatch - Job Scheduler -          2020/07/09

JS400    Maintain - Base Calendars
JS402    Maintain - EspAuto Dates
JS403    View     - EspAuto Variables
JS405    Maintain - EspAuto Jobs
JS410    Maintain - EspAuto Jobs per Schedule ID
JS415    Maintain - EspAuto Job Predecessors
JS416    Maintain - EspAuto Job File Events
JS417    Maintain - EspAuto Job Concurrency
JS420    Maintain - EspAuto Job Triggers
JS421    Maintain - File Events per Sub System
JS422    Maintain - File Event Triggers
JS425    View     - Forecast Scheduled Jobs
JS426    Extract  - Forecast Scheduled Jobs (CSV Format)
JS430    Submit   - EspAuto Job (Demand)
JS435    View     - EspAuto Job History by Sched Date/Time
                ** Start of Data **

Printer.: PRT01                                     User: MENUADM
Function: █ Data:                                     PID.: 64901
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
                Uexit Quit                          PgDn  SetPr      Logof

```

- Top line - Environment name
- Second line - Date, Menu Name and Time
- Lines 4 to 18 - Functions
- Line 20 - Default Printer-Id (UNDEFINED is displayed if no printer has been assigned)
- The User-Id of the current user
- Line 21 - Function selection area
- 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 is cursor sensitive and can be selected 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. A user can only perform actions at function level according to his/her 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 set up 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
- S** - Show Base Calendar

```

160.119.253.52 - PuTTY
*** Cronus Consulting ***
Maintain - Base Calendars
15:02:04.9
2020/06/15

Option: [ ] Year: [ ] Calendar: [ ] Copy from Year: [ ] Cal: [ ]
Desc:
Julian Day:
Greg Date.: 1 1 2 2 3
. . . . 5 . . . . 0 . . . . 5 . . . . 0 . . . . 5 . . . . 0 . Last Julian
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

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

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.

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.

```

160.119.253.52 - PuTTY
JSP400          *** Cronus Consulting ***          15:04:27.2
JSM400          Maintain - Base Calendars          2020/06/15

Option: A Year: 2020 Calendar: WEEKDAYS Copy from Year: Cal:
Desc: MONDAY TO FRIDAY

Julian Day:
Greg Date.: 1
. . . . 5 . . . . 0
Jan X X X _ _ X X X X X Base Calendar has changed
Feb _ _ X X X X X _ _ X X X X X Save Changes: Y (Y/N)
Mar _ _ X X X X X _ _ X X X X X
Apr X X X _ _ X X X X X
May X _ _ X X X X X _ _ X X X X X
Jun X X X X X _ _ X X X X X X X X X X X X X X X X X
Jul X X X _ _ X X X X X _ _ X X X X X _ _ X X X X X
Aug _ _ X X X X X _ _ X X X X X _ _ X X X X X _ _ X
Sep X X X X X _ _ X X X X X _ _ X X X X X _ _ X X X
Oct X X _ _ X X X X X _ _ X X X X X _ _ X X X X X
Nov _ _ X X X X X _ _ X X X X X _ _ X X X X X _ _ X
Dec X X X X _ _ X X X X X _ _ X X X X X _ _ X X X X

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

```

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.



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

```

160.119.253.52 - PuTTY
JSP402          *** Cronus Consulting ***          15:06:21.6
JSM402          Maintain - EspAuto Dates          2020/06/15

Option: C   Year: 2020                               Copy from Year: ____

Work Days..... Mon: ☒ Tue: ☒ Wed: ☒ Thu: ☒ Fri: ☒ Sat: ☐ Sun: ☐

Last Day of Week: SUN

----- Holidays -----
No MMDD Description                               No MMDD Description
01 0101 NEW YEAR'S DAY                               02 0120 MLK JR'S BIRTHDAY
03 0217 PRESIDENT'S DAY                               04 0330 SEWARD'S DAY
05 0525 MEMORIAL DAY                               06 0704 INDEPENDENCE DAY
07 0907 LABOR DAY                                   08 1018 ALASKA DAY
09 1111 VETERANS' DAY                               10 1126 THANKSGIVING DAY
11 1225 CHRISTMAS DAY                               12 _____
13 _____                                       14 _____
15 _____                                       16 _____
17 _____                                       18 _____
19 _____                                       20 _____

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

```

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.

```

160.119.253.52 - PuTTY
JSP402          *** Cronus Consulting ***          15:06:59.2
JSM402          Maintain - EspAuto Dates          2020/06/15

Option: C      Year: 2020                          Copy from Year: ____

Work Days.....: Mon: X Tue: X Wed: X Thu: X Fri: X Sat: _ Sun: _

Last Day of Week: SUN

-----
No MMDD Description
01 0101 NEW YEAR'S DAY
03 0217 PRESIDENT'S DAY
05 0525 MEMORIAL DAY
07 0907 LABOR DAY
09 1111 VETERANS' DAY
11 1225 CHRISTMAS DAY
13
15
17
19
06 0704 INDEPENDENCE DAY
08 1018 ALASKA DAY
10 1126 THANKSGIVING DAY
12
14
16
18
20

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



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.

```

JSP403          *** Cronus Consulting ***          15:08:43.0
JSM403          View      - EspAuto Variables      2020/06/15

Master Job No   Var Name   Var Value   Date       Time
      149      VAR1      RUN        20200421   10:37:32
      149      VAR2      RUN        20200421   10:37:32
      156      VAR1      RUN        20200519   10:17:41
      156      VAR2      RUN        20200519   10:17:41
90000000016806  VAR1      NEWVAL     20200417   20:32:04
90000000029245  VAR1      RUN        20200519   10:16:16
90000000029245  VAR2      RUN        20200519   10:16:16

*** End of Data ***
Restart at Master Job No:  Variable Name:
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Quit                                           PgDn
  
```

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 90000000000000 (In the example above variable **VAR1** has a Master Job No of **90000000016806** – which indicates that the process id was **16806** 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

```

160.119.253.52 - PuTTY
*** Cronus Consulting ***                                08:58:32.7
JSP405                                                    2020/06/15
JSM405                                                    2020/06/15

Option: C Sched User.: CRONUS__ Name: DBBACKUP Type: SCL____
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 Parm.: Y                        Pass Date to Triggered Jobs: Y
Submit Triggered Jobs.....: Y                        Lead Time.....: 04:00
Submit User ID.....: espbatch

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...:
Last Completion Code.....: 0
Last Updated by User.....: EY712
Last Update Date/Time.....: 2020-10-05 08:57
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 **Yes** and **No**. If **No** 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 **Yes** and **No**.
If this field is set to **Yes** and **Execute Job** has a value of **Yes** and the specified SCL does not exist, the job will abort.
If this field is set to **No** and **Execute Job** has a value of **Yes** and the specified SCL does not exist. The job status will be updated to **Complete** 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 Parm's - Valid values are **Yes** and **No**. If **Yes** 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 **Yes** and **No**. The scanned date is passed to all jobs that are triggered from this job.
 - Submit Triggered Jobs - Valid values are **Yes** and **No**. If **Yes** 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 **Yes** or **No** 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.
 - 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.
 - 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 “Abort/Complete” 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.



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 with multiple date/time specifications. Only jobs defined with this function will automatically be scheduled via the AutoScanner.

Function Options:

- A** - Add Scheduled Job
- C** - Change Scheduled Job
- D** - Delete Scheduled Job
- E** - View Scheduled Job
- S** - Show Scheduled Dates

```

160.119.253.52 - PuTTY
*** Cronus Consulting ***
JSP410                               12:26:47.7
JSM410      Maintain - EspAuto Jobs per Schedule ID 2020/07/13

Option: C Year: 2020 User: CRONUS_ Name: REQUESTS Type: SCL_ ID: _1
Copy From Year: _ User: _ Name: _ Type: _ ID: _

Description...: USER REQUESTS Count: 1
Base Calendar.: EVERYDAY Every day of Year
Scheduled Time: 07:00 Roll: N Hold: N Last Date Scanned: Time:
Cycle Interval: 01:00 Stop: 23:59
Day/Week: _ _ _ _ _ (-1,-2 for last or 2'nd last Day/Week)
Weekly..: Sun: _ Mon: X Tue: X Wed: X Thu: X Fri: X Sat: _
Monthly.: Jan: X Feb: X Mar: X Apr: X May: X Jun: X
          Jul: X Aug: X Sep: X Oct: X Nov: X Dec: X

Include.: Holidays: _ Workdays: _ (Holidays & Workdays defined on JS402)

-Include: _ _ _ _ _ (Day)
-Exclude: _ _ _ _ _ (Day)
-Include: _ _ _ _ _ (Julian)
-Exclude: _ _ _ _ _ (Julian)
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
          Quit      Upd   Parm      Comm
  
```

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 can not run due to the fact that the day has not been 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**”.

Dynamic Parameters

Year: 2020 User: DAILY 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 From** 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 From** fields.



The **Show** 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 not scheduled for the specified date – the most likely cause for this would be that the Auto Scanner did not run.

```

160.119.253.52 - PuTTY
Year: 2020 User: CRONUS Name: DAILY Type: SCL ID: 1 Time: 18:00

      January                February                March
S M T W T F S           S M T W T F S           S M T W T F S
      1 2 3 4              1                    1 2 3 4 5 6 7
5 6 7 8 9 10 11          2 3 4 5 6 7 8           8 9 10 11 12 13 14
12 13 14 15 16 17 18      9 10 11 12 13 14 15       15 16 17 18 19 20 21
19 20 21 22 23 24 25      16 17 18 19 20 21 22      22 23 24 25 26 27 28
26 27 28 29 30 31         23 24 25 26 27 28 29      29 30 31

      April                 May                   June
S M T W T F S           S M T W T F S           S M T W T F S
      1 2 3 4              1 2                    1 2 3 4 5 6
5 6 7 8 9 10 11          3 4 5 6 7 8 9           7 8 9 10 11 12 13
12 13 14 15 16 17 18      10 11 12 13 14 15 16       14 15 16 17 18 19 20
19 20 21 22 23 24 25      17 18 19 20 21 22 23      21 22 23 24 25 26 27
26 27 28 29 30           24 25 26 27 28 29 30      28 29 30
                        31

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

```



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

```

160.119.253.52 - PuTTY
JSP415          *** Cronus Consulting ***          09:51:22.9
JSM415          Maintain - EspAuto Job Predecessors 2020/06/16

Option: C User: CRONUS_ Name: FUSERBCK Type: SCL_
Description: BACKUP NATURAL FUSER

  No  ID  User  Name  Type  L/N/S  U/R  Description
  --  --  --  --  --  --  --  --
   1   1  CRONUS  DBBACKUP  SCL_  -  N  BACKUP PROD DB
   2   -  -  -  -  -  -  -
   3   -  -  -  -  -  -  -
   4   -  -  -  -  -  -  -
   5   -  -  -  -  -  -  -
   6   -  -  -  -  -  -  -
   7   -  -  -  -  -  -  -
   8   -  -  -  -  -  -  -
   9   -  -  -  -  -  -  -
  10   -  -  -  -  -  -  -
  11   -  -  -  -  -  -  -
  12   -  -  -  -  -  -  -

          **** End of Data ****

Restart at Sch-ID:  User:  Name:  Type:
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
          Quit      Upd      PgUp  PgDn
  
```

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 **Completes** or **Aborts**.
- **N** - Predecessor is removed from this job when the job **Completes** successfully.

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.

```

160.119.253.52 - PuTTY
JSP415          *** Cronus Consulting ***          10:00:35.1
JSM415          Maintain - EspAuto Job Predecessors 2020/06/16

Option: C User: CRONUS__ Name: FUSERBCK Type: SCL_____
Description: BACKUP NATURAL FUSER

  No  ID  User  Name  Option
  ---  --  ---  ---  ---
   1   1  CRONUS  DBBAC  PROD DB
   2   _  _  _  _  _
   3   _  _  _  _  _
   4   _  _  _  _  _
   5   _  _  _  _  _
   6   _  _  _  _  _
   7   _  _  _  _  _
   8   _  _  _  _  _
   9   _  _  _  _  _
  10   _  _  _  _  _
  11   _  _  _  _  _
  12   _  _  _  _  _

          **** End of Data ****

Restart at Sch-ID:  User:  Name:  Type:
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
          Quit      Upd      PgUp  PgDn
  
```

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

```

160.119.253.52 - PuTTY

JSP416          *** Cronus Consulting ***          12:43:12.9
JSM416          Maintain - EspAuto Job File Events  2020/06/16

Option: C User: CRONUS__ Name: DBBACKUP Type: SCL__
Description: BACKUP PROD DB

  No  ID  Sub System  File Name  O/C  N/S
  --  --  -
  1   1  PERM         DB031.ADABCK  O    -
  2   -  -
  3   -  -
  4   -  -
  5   -  -
  6   -  -
  7   -  -
  8   -  -
  9   -  -
  10  -  -
  11  -  -
  12  -  -

      **** End of Data ****

Restart Sch-ID:  Sub Sys:  File Name:
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
          Quit      Upd      PgUp  PgDn
  
```

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.

```

160.119.253.52 - PuTTY
*** Cronus Consulting ***
JSP416                               12:44:07.7
JSM416          Maintain - EspAuto Job File Events      2020/06/16

Option: C User: CRONUS__ Name: DBBACKUP Type: SCL__
Description: BACKUP PROD DB

No  ID  Sub System  File  O/C  N/S
1   1  PERM         DB03  0    -
2                                     -
3                                     -
4                                     -
5                                     -
6                                     -
7                                     -
8                                     -
9                                     -
10                                    -
11                                    -
12                                    -

**** End of Data ****

Restart Sch-ID:   Sub Sys:   File Name:
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
          Quit      Upd      PgUp   PgDn
  
```




3.8 JS417 Maintain - EspAuto Job Concurrency

This function is used to maintain job concurrency.

Function Options:

- C** - Change Concurrency
- E** - View Concurrency

```

160.119.253.52 - PuTTY
JSP417          *** Cronus Consulting ***          12:44:49.4
JSM417          Maintain - EspAuto Job Concurrency 2020/06/16

Option: C User: CRONUS__ Name: FUSERBCK Type: SCL__
Description: BACKUP NATURAL FUSER

No  ID  User  Name  Type  Description
1   1  CRONUS DBBACKUP SCL__ BACKUP PROD DB
2   _  _     _     _     _
3   _  _     _     _     _
4   _  _     _     _     _
5   _  _     _     _     _
6   _  _     _     _     _
7   _  _     _     _     _
8   _  _     _     _     _
9   _  _     _     _     _
10  _  _     _     _     _
11  _  _     _     _     _
12  _  _     _     _     _

**** End of Data ****

Restart at Sch-ID:  User:  Name:  Type:
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
Quit      Upd      PgUp  PgDn

```

If a scheduled job has concurrent job(s) defined, the job will not start execution while the specified concurrent job(s) has a status of submitted, executing or is 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

```

160.119.253.52 - PuTTY

JSP420          *** Cronus Consulting ***          12:50:30.2
JSM420          Maintain - EspAuto Job Triggers    2020/06/16

Option: C User: CRONUS__ Name: DAILY__ Type: SCL__ ID: __1 PF1 - Select ID
Description: DAILY BATCH RUN

  No  User   Name   Type   Cond  Time  Susp  Delay  Sch-Time  Req  Cond  Rel  H
  ---  ---   ---    ---    ---   ---   ---   ---      ---   ---   ---  -
  1  CRONUS  JOB1   SCL    _    _    _    _    2200    _    _    _  X
  2  CRONUS  JOB2   SCL    _    _    _    10    _    _    _    _
  3  CRONUS  JOB3   SCL    _    _    _    _    _    Y    _    _    _
  4  CRONUS  JOB4   SCL    _    _    Y    _    _    _    _    _    _
  5  CRONUS  JOB5   SCL    _    _    _    _    _    _    _    Y    _
  6  _        _    _    _    _    _    _    _    _    _    _    _
  7  _        _    _    _    _    _    _    _    _    _    _    _
  8  _        _    _    _    _    _    _    _    _    _    _    _
  9  _        _    _    _    _    _    _    _    _    _    _    _
 10  _        _    _    _    _    _    _    _    _    _    _    _
 11  _        _    _    _    _    _    _    _    _    _    _    _
 12  _        _    _    _    _    _    _    _    _    _    _    _

      **** End of Data ****

Restart at User:  Name:  Type:
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
      Quit      Upd   Cond  PgUp  PgDn
  
```

Once the scheduled job has completed, all triggered jobs will be submitted after evaluation of any trigger conditions if specified. 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 it's

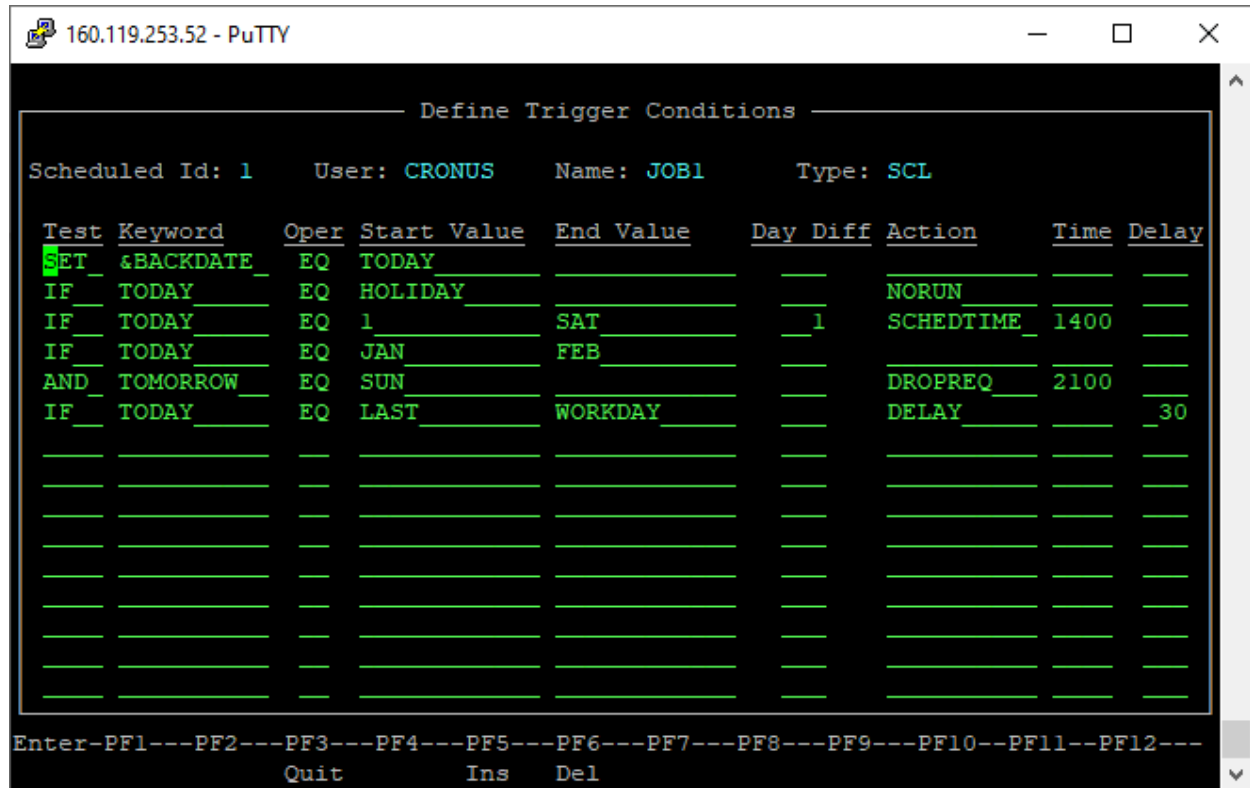


- completion The **Cond** field may contain: **LT** – Less than, **LE** – Less than or Equal or **NE** - Not Equal.
- **Time** - Time format is HHMM.
 - **Suspend** - If suspend contains a value of **Yes**, then the job will not be triggered. Jobs triggered by the suspended job will not be triggered.
 - **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.
 - **Sch-Time** - Scheduled time for triggered job – format is HHMM.
 - **Req** - If the request field contains a value of **Yes** 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 it's completion and if any triggered jobs have been defined they will be submitted.
 - **Cond Rel** - If the conditional release field contains a value of **Yes** then the job will automatically be removed from the job queue if it still has outstanding requirements and all jobs with conditional release set to **No** 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 schedule 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.



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 .



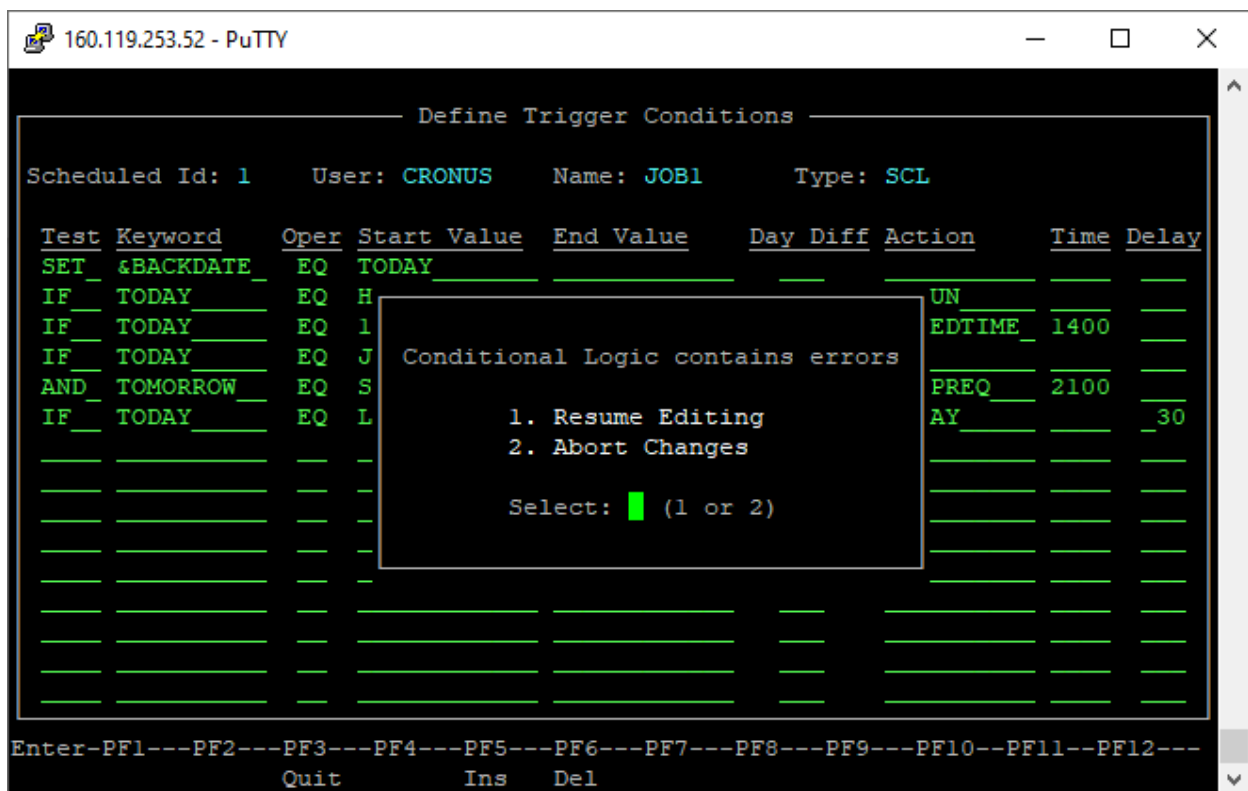
• Action	-	NORUN:	Do not submit triggered job if condition evaluates to TRUE
		SCHEDTIME:	Time the triggered job will be scheduled to run. The Scheduled Time must be specified in the Time column
		DELAY:	The delay in minutes (max. 720 minutes) will be added to the current system date/time to determine 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 it's 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 column.

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

```

160.119.253.52 - PuTTY
*** Cronus Consulting ***                               15:22:31.3
JSP421                                                    2020/06/16
JSM421      Maintain - File Events per Sub System

Option: C Sub System: PERM      Sleep Time...: 60      Status: Running
                                Wait Time....: 10
                                No of Retries: 3

   Code  File Name                                     Sub System
1 Src.:  S   DAILY.COMP                                TEMP
  Dest.:  O   DAILY.COMP
2 Src.:  S   DB031.ADABCK                               TEMP
  Dest.:  N   DB031.ADABCK
3 Src.:  -
  Dest.:  -
4 Src.:  -
  Dest.:  -
5 Src.:  -
  Dest.:  -
6 Src.:  -
  Dest.:  -

**** End of Data ****

Restart at File Name: 
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
                                Exit      Upd      PgUp  PgDn  Link
  
```

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 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/espmon/<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

160.119.253.52 - PuTTY

```

JSP422          *** Cronus Consulting ***          15:23:30.4
JSM422          Maintain - File Event Triggers      2020/06/16

Option: C Sub System: PERM
File Name.: DB031.ADABCK

No  Sch-ID  User   Name      Type      Date      Time      O/C  Add PRE  Submit TRIG
 1    1    CRONUS DBBACKUP SCL                O        Y        Y
 2
 3
 4
 5
 6
 7
 8
 9
10
11
12

          **** End of Data ****

Restart at Sch-ID:  User:      Name:      Type:
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
          Quit      Upd      PgUp   PgDn
  
```

Required Fields:

- **Add PRE** - Valid values are **Yes** and **No** – If “**Y**” is specified then the predecessors defined for this job will be added.
- **Submit TRIG** - Valid values are **Yes** and **No** – 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.



```

160.119.253.52 - PuTTY
JSP425          *** Cronus Consulting ***          16:54:09.0
JSM425          View          - Forecast Scheduled Jobs          2020/06/16

Year: 2020 Job Name: CRONUS.DAILY.SCL          ID: 001          Lvl: 999
Mode: SCAN Date....: 20200617          Show Predecessors / File Events: Y

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

          *** End of Data ***          Total.: 9
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 **0** 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 **Yes** or **No**, if it contains a value of **No**, 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.

A screenshot of a PuTTY terminal window titled "160.119.253.52 - PuTTY". The terminal displays the following text:

```
JSP426          *** Cronus Consulting ***          17:11:03.5
JSM426      Extract  - Forecast Scheduled Jobs (CSV Format)  2020/06/16

Process ID.....: 33834
Start Date.....: 20200616
Scheduled User.....: CRONUS__
Scheduled Name.....: DAILY__
Scheduled Type.....: SCL__
Scheduled ID.....: __1
Include Predecessors/File Events: _

Extract to file in CSV format

Sub System: TEMP__
File Name.: CRONUS.DAILY.CSV__

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

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 **Yes** or **No**, 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

```

160.119.253.52 - PuTTY

JSP430          *** Cronus Consulting ***          17:34:40.4
JSM430          Submit - EspAuto Job (Demand)      2020/06/16

  User   Name   Type   Description
  ---    ---    ---    ---
- CRONUS ARCHIVE SCL   ARCHIVE REPORTS
- CRONUS DAILY  SCL   DAILY BATCH PROCESSING
- CRONUS DBBACKUP SCL  DATABASE BACKUP
- CRONUS FUSERBCK SCL  FUSER BACKUP
- CRONUS WEEKLY SCL   WEEKLY BATCH PROCESSING

*** End of Data ***
Restart at User:  Name:  Type:

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

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 - Yes or No
- Trigger on HOLD - Yes or No – Defines whether triggered jobs are submitted in hold.
- Confirm - Yes to confirm submission.



```

160.119.253.52 - PuTTY
JSP430 ----- Demand Job ----- 6:44:05.4
JSM430 Scheduled - User: CRONUS Name: DBBACKUP Type: SCL 020/06/16
SCL - User: CRONUS Name: DBBACKUP Type: SCL
User Desc: Database Backup
S CRONU Run Environment.....: 123
- CRONU Scheduled ID.....: 9
- CRONU Scheduled Date.....: 20200616
Scheduled Time.....: 16:44

Predecessors, File Events and Job Concurrency defined on
JS415, JS416 & JS417 with a Sched-ID 999 are always Added.

Add Predecessors.....: Y (Y/N)
Submit Triggered Jobs: Y (Y/N)
Submit on HOLD.....: Y (Y/N)
Trigger on HOLD.....: Y (Y/N)
Confirm.....: Y (Y/N)

Restart <PF5> - Predecessors <PF6> - File Events
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
Quit Pred File

```

Predecessors can be added by pressing **PF5**. In addition, predefined predecessors with a schedule id of 999 will be added.

File events can be added by pressing **PF6**. In addition, predefined file events with a schedule id of 999 will be 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 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

```

160.119.253.52 - PuTTY

JSP435          *** Cronus Consulting ***          17:38:32.3
JSM435      View      - EspAuto Job History by Sched Date/Time  2020/06/16

Start Date: 20200616 Time: 00:00 End Date: 20200616 Time: 24:00

  Sch Date  Time  Job No  User   Name    Type    ID  Mode  Sta  H  M  Job No
  _  _  _  _  _  _  _  _  _  _  _  _  _  _  _  _  _
  20200616 17:37      1  CRONUS  ARCHIVE  SCL      1  DMND  SCN  1  1

*** End of Data ***                               Mast Job:

Restart at Scheduled Date:  Time:  Job No:
Filter on Status:  User:  Name:  Type:  ID:
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
Quit                                           PgDn

```

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

```

160.119.253.52 - PuTTY
JSP435          *** Cronus Consulting ***          17:39:31.7
                Job History
Job No.: 1      SCH User: CRONUS   Name: ARCHIVE   Type: SCL   ID: 1
M Job No: 1     SCL User: CRONUS   Name: ARCHIVE   Type: SCL
Batch No: 6558
  Date   Time  Program  Description
20200616 17:37 JSN43001 Demanded by User ID: EY712
20200616 17:39 JSN44010 HOLD removed from job: EY712
20200616 17:39 JSP498   Submitted - Batch No: 6558
20200616 17:39 JZN010   Executing - Batch No: 6558
20200616 17:41 JTERMA   Completed - Batch No: 6558
20200616 17:41 JTERMN   Completion Notification:
20200616 17:41 JTERMN   - 2020-06-16 @ 17H41
20200616 17:41 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.



3.16 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

```

160.119.253.52 - PuTTY

JSP436          *** Cronus Consulting ***          20:02:01.4
JSM436      View      - EspAuto Job History by Start Date/Time  2020/06/16

  Str Date Time Sch Date Time Job No User  Name  Type  ID Mode Stat
  ──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──
  20200616 2001 20200616 2001    3 CRONUS  DAILY  SCL   1 DMND CPL

*** End of Data ***          Mast Job: _____
Restart at Start Date: _____ Time: _____
Filter on Status:  User: _____ Name: _____ Type: _____ ID: _____
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
          Quit                      PgDn
  
```

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

```

160.119.253.52 - PuTTY
JSP436          *** Cronus Consulting ***          20:02:01.4
              Job History
Job No.: 3      SCH User: CRONUS   Name: DAILY   Type: SCL   ID: 1
M Job No: 3     SCL User: CRONUS   Name: DAILY   Type: SCL
Batch No: 6562
  Date   Time  Program  Description
20200616 20:01 JSN43001 Demanded by User ID: EY712
20200616 20:01 JSN43001 Parm Name 01 - RUNTYPE
20200616 20:01 JSN43001 Parm Value 01 - DAILY
20200616 20:01 JSP498   Submitted - Batch No: 6562
20200616 20:01 JZN010   Executing - Batch No: 6562
20200616 20:01 JTERMA   Completed - Batch No: 6562
20200616 20:01 JTERMN   Completion Notification:
20200616 20:01 JTERMN   - 2020-06-16 @ 20H01
20200616 20:01 JTERMN   - info@cronus.co.za
20200616 20:01 JSN404   TRG CRONUS.ARCHIVE.SCL - Job No: 4
20200616 20:01 JSN404   TRG CRONUS.DBBACKUP.SCL - Job No: 5
20200616 20:01 JSN404   TRG CRONUS.FUSERBCK.SCL - Job No: 6
              ** Start 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.



3.17 JS437 View - EspAuto Job Statistics

This function displays history of execution times per scheduled job.

```

160.119.253.52 - PuTTY
JSP437B          *** Cronus Consulting ***          21:18:25.2
JSM437          PROGRAM NOT KNOWN TO MENU-DRIVER    2020/06/16

SCL User: CRONUS__ SCL Name: ARCHIVE_ SCL Type: SCL_____

Description: ARCHIVE REPORTS

  Job No  Batch No  Submit Time and Date  Status  CC  Total Time  Exec Time
    289    1783  17.33.57 FRI 12JUN2020 COMPLETED  0  00:03:46.9  00:03:33.1
    306    1942  17.37.11 MON 15JUN2020 COMPLETED  0  00:04:01.9  00:03:43.6
    324    2001  17.39.22 TUE 16JUN2020 COMPLETED  0  00:01:46.9  00:01:56.3

*** 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 number generated in EspAuto
- Batch No - Internal Batch number generated in EspBatch
- Submit Time and Date - Submission Time (format HH.MM.SS) and Date
- Status - Status of the job
- CC - Completion Code
- Total Time - Total elapsed from start to completion of job
- Exec Time - Total of execution time per Job step



3.18 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.

```

160.119.253.52 - PuTTY
JSP438          *** Cronus Consulting ***          21:37:51.0
JSM438          Maintain - File Event Log          2020/06/16

  Sub System  File Name                               S Date      Time
- PERM       FILE.CHANGES.20200616.213640          P 20200616  2136
- PERM       FILE.CHANGES.20200616.213735          P 20200616  2137

*** End of Data ***  Status Filter: _
Restart at Sub System:  File Name:
Date.....:            Time.....:
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
Quit                PgDn                Date

```

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.



3.19 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.

```
160.119.253.52 - PuTTY

JSP438          *** Cronus Consulting ***          21:37:51.0
JSM438          Maintain - File Event Log          2020/06/16

  Sub System  File Name                               S Date      Time
- PERM        FILE.CHANGES.20200616.213640         P 20200616  2136
- PERM        FILE.CHANGES.20200616.213735         P 20200616  2137

*** End of Data ***  Status Filter: _
Restart at Sub System:  File Name:
Date.....:           Time.....:
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
Quit                               PgDn           Date
```

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.



3.20 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: **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



```

160.119.253.52 - PuTTY
*** Cronus Consulting ***                                09:35:31.9
JSP44001                                                    2020/06/17
JSM440      Maintain Job Queue by Status, User, Name, Type

EspAuto Status: Running

  User      Name      Step No  ID  Sch Date  Time M  Job No  Sta  Req  Ex  Run ID  H
- CRONUS    ARCHIVE    1      1  20200616  2001 T    4  SCN    Y    Y
- CRONUS    DBBACKUP    1      1  20200616  2001 T    5  SCN    Y    Y
- CRONUS    FUSERBCK    1      1  20200616  2001 T    6  SCN    Y    Y
- CRONUS    JOB1      R      1  20200617  0935 T   16  SCN    Y    Y
- CRONUS    JOB2      1      1  20200617  0935 T   17  SCN    1 Y    Y

*** End of Data ***
Restart at Status: █ User: _____ Name: _____ Type: _____ ID: _____
Filter on Status.: User: _____ Name: _____ Type: _____ ID: _____
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
Quit          Mast          PgDn          Exec Error

```

- 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 **JOB1** 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 **No**, 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 **Yes** 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.



3.21 JS445 Report - Auto Scheduled Jobs

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

A screenshot of a PuTTY terminal window titled "160.119.253.52 - PuTTY". The terminal displays the following text:

```
JSP445          *** Cronus Consulting ***          09:40:07.5
JSM445          Report    - Auto Scheduled Jobs      2020/06/17

Type.....: R          (A=Extract & Report, E=Extract or R=Report)
Start Date....: 20200617 (YYYYMMDD)
Start Time.....: 0      (HHMM)                  (Blank for all)
End Date.....: 20200617 (YYYYMMDD)
End Time.....: 2400     (HHMM)
Sub System....: 
File Name.....: 

Filters
Scheduled User: 
Scheduled Name: BCK* 
Scheduled Type: 

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

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



3.22 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.

A screenshot of a PuTTY terminal window titled "160.119.253.52 - PuTTY". The terminal displays the following text:

```
JSP447          *** Cronus Consulting ***          09:43:20.7
JSM447          Delete   - EspAuto History          2020/06/17

                Scheduled User: _____
                Scheduled Name: _____
                Scheduled Type:  _____
                Scheduled ID..:  _____

                Scheduled Date:  _____ (YYYYMMDD)
                Scheduled Time:  _____ (HHII)

                Retention Days: 60_

                Deletes jobs with a status of Completed and Deleted

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

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.



3.23 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)

A screenshot of a PuTTY terminal window titled "160.119.253.52 - PuTTY". The terminal displays the following text:

```
JSP480          *** Cronus Consulting ***          09:44:14.7
JSM480          Extract  - Schedule per Scheduled ID  2020/06/17
                                                    EY712

Path.....: /opt/softwareag/cronus/schedule

File Name.....: CRONUS.DAILY.1_____

Scheduled ID..: 1__

Scheduled Year: 2020

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



3.24 JS481 Load - Schedule per Scheduled ID

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

A screenshot of a PuTTY terminal window titled "160.119.253.52 - PuTTY". The terminal displays the following text:

```
JSP481          *** Cronus Consulting ***          09:45:02.9
JSM481          Load      - Schedule per Scheduled ID 2020/06/17
                                                    EY712

Path.....: /opt/softwareag/cronus/schedule

File Name.....: CRONUS.DAILY.1

Scheduled ID...: 1

Scheduled Year.: 2020

Options.....: 1 1 - Delete metadata for Schedule ID prior to load
                2 - Check metadata for Schedule ID prior to load
                3 - Replace metadata for Schedule ID

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

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 a schedule from a non leap year to a leap year the base calendar must be modified manually to set the 29'th of February as a run date if this is a requirement.



3.25 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)

A screenshot of a PuTTY terminal window titled "160.119.253.52 - PuTTY". The terminal displays the following text:

```
JSP482          *** Cronus Consulting ***          09:46:17.0
JSM482          Delete    - Schedule per Scheduled ID  2020/06/17
                                                         EY712

                                                         ^

                Scheduled ID.: 1
                Scheduled Year: 2020

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



3.26 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 completion/failure of a job. 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 screenshot of a PuTTY terminal window titled "160.119.253.52 - PuTTY". The terminal displays the "JS490 Maintain - Support Groups" screen. At the top, it shows "JSP490 *** Cronus Consulting *** 09:46:42.7" and "JSM490 Maintain - Support Groups 2020/06/17". Below this, it prompts for "Option: C Support Group: ESPAUTO_" and "Copy from Support Group: _____". The "Support Desc.:" field is filled with "DEFAULT SUPPORT GROUP". Under the heading "E-Mail Addresses", the email "info@cronus.co.za" is entered. At the bottom, there are navigation options: "Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11--PF12---" and "Quit Upd".

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.

A screenshot of a PuTTY terminal window titled "160.119.253.52 - PuTTY". The terminal displays the EspAuto maintenance menu. At the top, it shows "JSP490" and "JSM490" on the left, "*** Cronus Consulting ***" and "Maintain - Support Groups" in the center, and the time "09:47:38.8" and date "2020/06/17" on the right. Below this, it shows "Option: C Support Group: ESPAUTO_" and "Copy from Support Group: _". Underneath, it shows "Support Desc.: DEFAULT SUPPORT GROUP". There is a section for "E-Mail Addresses" with "info@cronus.co.za" and several empty lines. A dialog box is overlaid on the screen with the text "Support Group has changed" and "Save Changes: Y (Y/N)". At the bottom, it shows "Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---" and "Quit Upd".

```
160.119.253.52 - PuTTY

JSP490          *** Cronus Consulting ***          09:47:38.8
JSM490          Maintain - Support Groups          2020/06/17

Option: C Support Group: ESPAUTO_      Copy from Support Group: _
Support Desc.: DEFAULT SUPPORT GROUP

E-Mail Addresses
info@cronus.co.za
Support Group has changed
Save Changes: Y (Y/N)

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



3.27 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 field 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

A screenshot of a PuTTY terminal window titled "160.119.253.52 - PuTTY". The terminal displays the following text:

```
JSP491          *** Cronus Consulting ***          09:49:01.4
JSM491          Maintain - Support Levels          2020/06/17

Option: C Support Level:  1          Copy from Support Level:  __
          Description..: CRITICAL

Time - Holidays.....: 00:00 Defined on function JS402

Time - Day of Week Mon: 00:00
                  Tue: 00:00 Notification will take place on the following
                  Wed: 00:00 day at the time specified.
                  Thu: 00:00
                  Fri: 00:00 If the notification should be sent immediately,
                  Sat: 00:00 then Time fields must contain a zero value.
                  Sun: 00:00

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

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.

A screenshot of a PuTTY terminal window titled "160.119.253.52 - PuTTY". The terminal displays the EspAuto maintenance menu. At the top, it shows "JSP491" and "JSM491" on the left, "*** Cronus Consulting ***" and "Maintain - Support Levels" in the center, and the time "09:49:50.6" and date "2020/06/17" on the right. Below this, it prompts for "Option: C Support Level: _1" and "Copy from Support Level: __". The "Description.." is set to "CRITICAL". The "Time - Holidays....." field is set to "S402". The "Time - Day of Week" section lists days from Mon to Sun, with "Mon:" highlighted. A dialog box is overlaid on the terminal, asking "Support Level has changed" and "Save Changes: Y (Y/N)", with the 'Y' key highlighted in green. To the right of the dialog box, text reads "e place on the following fied." and "ould be sent immediately, then Time fields must contain a zero value." At the bottom of the terminal, it lists function keys: "Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---", with "Quit" under PF5 and "Upd" under PF6.

```
160.119.253.52 - PuTTY

JSP491          *** Cronus Consulting ***          09:49:50.6
JSM491          Maintain - Support Levels          2020/06/17

Option: C Support Level: _1          Copy from Support Level: __
Description..: CRITICAL

Time - Holidays.....: S402

Time - Day of Week Mon: Support Level has changed
                        Tue: e place on the following
                        Wed: Save Changes: Y (Y/N) fied.
                        Thu:
                        Fri: ould be sent immediately,
                        Sat: 00:00 then Time fields must contain a zero value.
                        Sun: 00:00

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



3.28 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

A screenshot of a PuTTY terminal window titled "160.119.253.52 - PuTTY". The terminal displays the "JS492 Maintain - Scheduled Job Notification" screen. At the top, it shows "JSP492 *** Cronus Consulting *** 10:07:48.9" and "JSM492 Maintain - Scheduled Job Notification 2020/06/17". Below this, it prompts for "Option: C User: ESPAUTO_ Name: NOTIFY_ Type: SCL_ ID: 999" and "Copy from User: Name: Type: ID:". The "Description" is "Default EspAuto notification". The "Support Group" is "ESP AUTO_ DEFAULT SUPPORT GROUP". The "Support Level" is set for "Abend...: _1 CRITICAL", "Restart.: _5 INFORMATIONAL", "Complete: _5 INFORMATIONAL", and "Overdue.: _2 HIGH". The "E-Mail Addresses" field shows "support@cronus.co.za" with a cursor. At the bottom, there are function key prompts: "Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---" and "Quit Upd".

```
JSP492          *** Cronus Consulting ***          10:07:48.9
JSM492          Maintain - Scheduled Job Notification 2020/06/17

Option: C User: ESPAUTO_ Name: NOTIFY_ Type: SCL_ ID: 999
Copy from User:      Name:      Type:      ID:

Description.....: Default EspAuto notification

Support Group.....: ESP AUTO_ DEFAULT SUPPORT GROUP
Support Level - Abend...: _1 CRITICAL
                  - Restart.: _5 INFORMATIONAL
                  - Complete: _5 INFORMATIONAL
                  - Overdue.: _2 HIGH

E-Mail Addresses: support@cronus.co.za
                  [Cursor]
                  _____
                  _____
                  _____
                  _____

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

If the support level is omitted for Abend, Restart, Complete 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.

A screenshot of a PuTTY terminal window titled "160.119.253.52 - PuTTY". The terminal displays the EspAuto maintenance menu. At the top, it shows "JSP492" and "JSM492" on the left, "*** Cronus Consulting ***" in the center, and the time "10:32:24.6" and date "2020/06/17" on the right. The main menu is "Maintain - Scheduled Job Notification". Below this, it shows "Option: C User: ESPAUTO_ Name: NOTIFY_ Type: SCL_ ID: 999" and "Copy from User: _____ Name: _____ Type: _____ ID: _____". The "Description" field is highlighted in green. A dialog box is overlaid on the screen, asking "Notification has changed" and "Save Changes: Y (Y/N)". The "Y" is highlighted in green. Below the dialog box, it shows "Support Group: _____" and "Support Level - Abend...". The "E-Mail Addresses" field is highlighted in green, showing "support@cronus.co.za". At the bottom, it shows "Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---" and "Quit Upd".

```
JSP492          *** Cronus Consulting ***          10:32:24.6
JSM492          Maintain - Scheduled Job Notification  2020/06/17

Option: C User: ESPAUTO_ Name: NOTIFY_ Type: SCL_ ID: 999
Copy from User: _____ Name: _____ Type: _____ ID: _____

Description.....ion
Support Group..... Notification has changed GROUP
Support Level - Abend...
                  - Restart.
                  - Complete
                  - Overdue.

E-Mail Addresses: support@cronus.co.za
                  _____
                  _____
                  _____
                  _____

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



3.29 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

```

160.119.253.52 - PuTTY

JSN493          *** Cronus Consulting ***          11:05:49.0
JSM493          Maintain - EspAuto Setup          2020/06/17

Option: C Status: Running      Audit Info: EY712      20200616 17:37:21.7

Last Job No.....: 17
Script Name.....: Autosched.dev.bsh
Simulate Schedule.....: N
Scan Ahead Time.....: 240 Minutes
Lead Time.....: 240 Minutes

Parameter Name Value Description
PREDMASTER      Y Only remove predecessors for Master Job No
REQABORT         Y Abort if job not loaded - Update mode
SUBESPAUTO       Y Restrict demand of EspAuto jobs via SCL
RESUBESPAUTO     Y Restrict resubmission of job steps from EspBatch
LEADTIMECHK      Y Validate Lead Time on add of Predecessors & File Events
INHERETPRED      Y Inheret Predecessors
NOTIFY-UE        N Invoke Notification User exit ESPUX003

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

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 **Yes** and **No**. When set to **Yes**, 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 **Yes** and **No**. 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 **Yes** and **No**. 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 **Yes** and **No**. 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 **Yes** and **No**. Restricts/allows resubmission of abended jobs from EspBatch. If set to **Yes** abended batch jobs submitted via EspAuto cannot be restarted via EspBatch functions JS050*.
 - **LEADTIMECHK:** Valid values are **Yes** and **No**. If yes is specified, then lead time checking will take place when adding predecessors and file events.
 - **INHERETPRED:** Valid values are **Yes** and **No**. If set to **Yes** jobs will inherit predecessors from scheduled jobs that are bypassed due to conditional trigger defined on **JS420 Maintain – EspAuto Job Triggers**.
 - **NOTIFY:** Valid values are **Yes** and **No**. 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.



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**)

• 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**.

```

160.119.253.52 - PuTTY
JSP300          *** Cronus Consulting ***          12:22:12.9
Parameters
SCL User: CRONUS      SCL Name.: SUBAUTO  SCL Type: SCL  V-- Library: ESPSOFT
Step No.: 1          Step Name: STEP0001      Program: JSP460

Control Card Format: @@CONTROL@@User Lib;Control Card
Setup Card Format...: @@PROC@@SubSystem;Work File Name
@@PROC@@$LABEL

Value
1 CRONUS
2 ESPVFY
3 SCL
4 1
5 HOLD=Y
6 ADD-PRED-FILE=N
7 SCHEDULED-DATE=&YYYYMMDD
8
9
10

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

```

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 **Yes** - EspAuto jobs can be demanded using API **JSP460**
- Value **No** - EspAuto jobs may not be demanded using API **JSP460**



The REQUEST mode will be updated according to the value passed in the REQUEST/REQUEST-NO-ABORT mode parameter. A value of **REQUEST=Yes** will set change the job mode to REQUEST and a value of **REQUEST=No** will remove the REQUEST mode status. Ex. to remove REQUEST mode from a job the value of the fourth parameter must be: REQUEST=N

```

JSP300          *** Cronus Consulting ***          14:03:48.1
                Parameters

SCL User: CRONUS   SCL Name.: UPDAUTO  SCL Type: SCL  V-- Library: ESPSOFT
Step No.: 1       Step Name: STEP0001  Program: JSP461

Control Card Format: @@CONTROL@@User Lib;Control Card
Setup Card Format...: @@PROC@@SubSystem;Work File Name
                    @@PROC@@$LABEL

Value
1 CRONUS
2 ESPVfy
3 SCL
4 1
5 REQUEST=N
6
7
8
9
10

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

If all prerequisites for a job 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.

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 **Yes** - Abort EspBatch job step if EspAuto job is not loaded
- Value **No** - 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 time 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 specified under the work file definitions using **PF7**. Multiple jobs can be scheduled - each scheduled job must be defined on a separate line.

```

160.119.253.52 - PuTTY

JSP300          *** Cronus Consulting ***          14:09:12.6
JSM30001        Maintain - SCL's                  2020/06/17

Option: C User: CRONUS__ Name: SUBAUTO_ Type: SCL V-- Class: A Parms:
Hold: N Desc: SUBMIT ESPAUTO JOBS                  CC: NE 0
Execute Date: _____ (YYYYMMDD) Time: _____ (HHMM) PF4 PF6 PF7 PF8 PF9 PF12
Step Library Program Env StepName Exe              C-E Par W-F Rep Com Secu
__1 ESPSOFT_ JSP470_ __ STEP0001                    1
____
____
____
____
____
____
____
____
____
____
____
____
____
____
____
____
*** End of Data ***

Restart at Step No: 1 No of Steps: 1
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
Del Copy Quit Cond Ins Parms WF'S Reps Comm Find J-Per Sec

```

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 - Yes or No
- Default: No
- ADD-PRED-FILE Add predecessors/File events - Yes or No
- Default: No



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

Example work file layout:

```
CRONUS , BBB , SCL , 1 , ADD-PRED-FILE=Y , SCHEDULED-DATE=20071231 , SCHEDULED-TIME=2315  
CRONUS , CCC , 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 **Yes** - EspAuto jobs can be demanded using API **JSP470**
- Value **No** - 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 **JSP461**. Parameters are contained within the work file specified under the work file definitions using **PF7**. Multiple jobs can be updated - each scheduled job must be defined on a separate line.

```

160.119.253.52 - PuTTY

JSP300          *** Cronus Consulting ***          14:10:16.3
JSM30001        Maintain - SCL's                  2020/06/17

Option: C User: CRONUS__ Name: UPDAUTO_ Type: SCL V-- Class: A Parms:
Hold: N Desc: SUBMIT ESPAUTO JOBS                  CC: NE 0
Execute Date: (YYYYMMDD) Time: (HHMM) PF4 PF6 PF7 PF8 PF9 PF12
Step Library Program Env StepName Exe C-E Par W-F Rep Com Secu
  1 ESPSOFT_ JSP471_ STEP0001 1
*** End of Data ***

Restart at Step No: 
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11---PF12---
Del Copy Quit Cond Ins Parms WF'S Reps Comm Find J-Per Sec
  
```

Required parameters:

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

Optional Parameters (Parameter syntax PARMNAME=VALUE):

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



REQUEST/REQUEST-NO-ABORT:

The REQUEST mode will be updated according to the value passed in the REQUEST/REQUEST-NO-ABORT mode parameter. A value of **REQUEST=Yes** will set change the job mode to REQUEST and a value of **REQUEST=No** will remove the REQUEST mode status. Ex. to remove REQUEST mode from a job the parameter must be specified as: REQUEST=N

```

Work File Parameters
SCL User: CRONUS   SCL Name.: UPDAUTO   SCL Type: SCL   V--   Library: ESPSOFT
Step No.: 1       Step Name: STEP0001 WF No.: 01   Program: JSP471

Name.....: UPDATE.JOBS
Sub System.: TEMP                               Label.....:
Disposition: O Complete: _ Abort: _ Permissions - Owner: _ Group: _ Other: _
Type.....: GDG.....

Text
1
2
3
4
5
6
7
8
9
10

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

```

If all prerequisites for a job 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.

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 **Yes** - Abort EspBatch job step if EspAuto job is not loaded
- Value **No** - 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 time 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, AAA, SCL, REQUEST=N

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 **Yes** - Abort EspBatch job step if EspAuto job is not loaded
- Value **No** - 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 SUBSTITUTION** 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.

```

160.119.253.52 - PuTTY
JSP300          *** Cronus Consulting ***          14:14:40.1
Parameters
SCL User: CRONUS   SCL Name.: AUTOVAR   SCL Type: SCL   Library: ESPSOFT
Step No.: 1       Step Name: STEP1      Program: TESTAUTO
Control Card Format: @@CONTROL@@User Lib;Control Card
Setup Card Format...: @@PROC@@SubSystem;Work File Name
@@PROC@@$LABEL
Value
1 ESPJOBNO
2 &ESPSCHEDMM/&ESPSCHEDDD/&ESPSCHEDYY
3 &CRONUSBCK
4
5
6
7
8
9
10
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Quit Ins      Next      PgDn Card

```

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
ESPSYSYYYY	YYYY	System Year
ESPSYSYY	YY	System Year
ESPSYSMM	MM	System Month
ESPSYSDD	DD	System Day
ESPSYSHH	HH	System Hour
ESPSYSHH	MM	System Minutes



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 <ul style="list-style-type: none"> • 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.