MANUAL

Visual Jobs Scheduler Version 1.4 For Microsoft Dynamics NAV

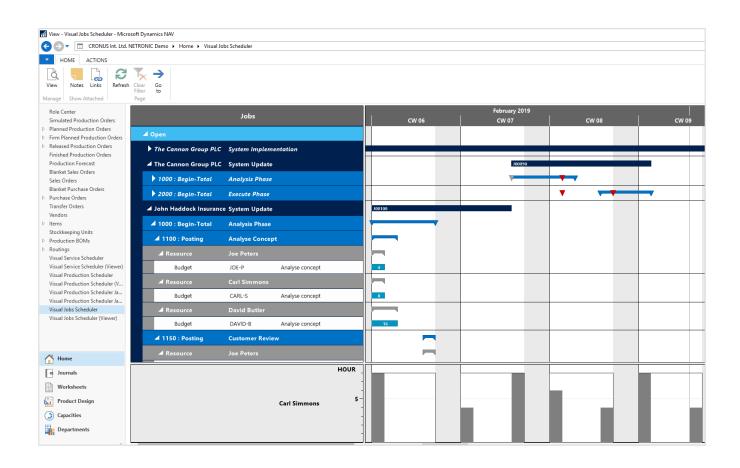




Table of Contents

Starting the VJS	4
First Option	4
Second Option	4
The VJS at First Glance	5
The Working Area	6
The Menu Bar	6
The Gantt Area	7
Five Different Views	8
The Job View	8
The Resource View	8
Histograms	9
The Histogram View	10
The Posting Problems View	10
The Resource Capacity Overview	12
Collapsing and Expanding	13
The Calendar: Summary or Details	14
Customize the Working Area	15
Adjusting the Numeric Scale of the Histogram	15
Adjusting the Height of the Histogram	15
Adjusting the Width Ratio between Table and Diagram	15
Zooming and Scrolling	15
How to See More Details	16
The Context Menu Options	17
Create Links	17
Create Job Planning Lines	17
Split Job PlanningLines	17
Delete Job Planning Lines	17
Show Notes	18
Accessing NAV Dialogs	18
View allocations from other modules	19
User Interactions	20
Move operations horizontally by drag & drop	20



Assign an Operation to another Resource	20
Assigning an Operation to a Resource Group	21
Change Quantity On the Bar	22
Lengthening/Shortening a Job Planning Line	22
The Setup Dialog	2 3
How the Start and End Dates of the Time Scale Are Defined	2 5
Jsing Filters	26
The Data Filter	26
The View Filter	28
Show/Hide Job Tasks	30
Reloading and Saving Data	30
Printing in the VJS	31
Highlight Resource Skills	32
Warnings and Visual Indications	32
Resources Overload	32
Saving Confirmation	32
-urther Resources	33
Nout NETRONIC - the Gantt Company	22

September 2018



Starting the VJS

FIRST OPTION

By Departments > Jobs > Lists > Visual Jobs Scheduler

SECOND OPTION

Customize your role center to display the VJS button in the role center menu

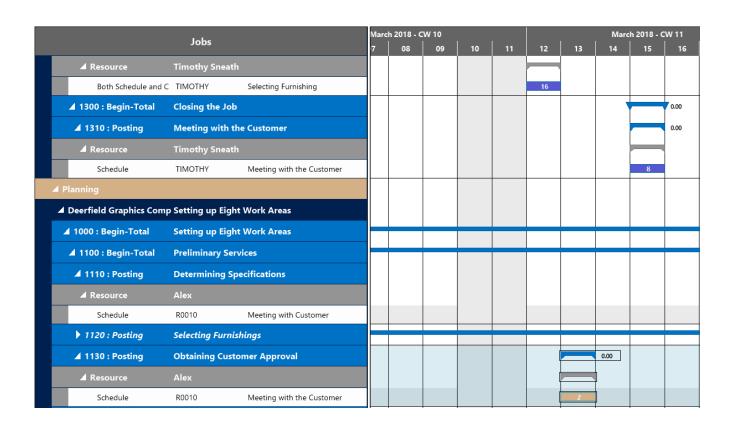


The VJS at First Glance

The VJS is a Gantt chart structured as follows

- A time scale at the top
- At the left, a table lists jobs (in the Job View) or resource groups/resources (in the Resource View and Histogram View
- Next to the table, a Gantt chart displays the job schedule
- Jobs are categorized by their status, this being indicated by different colors.





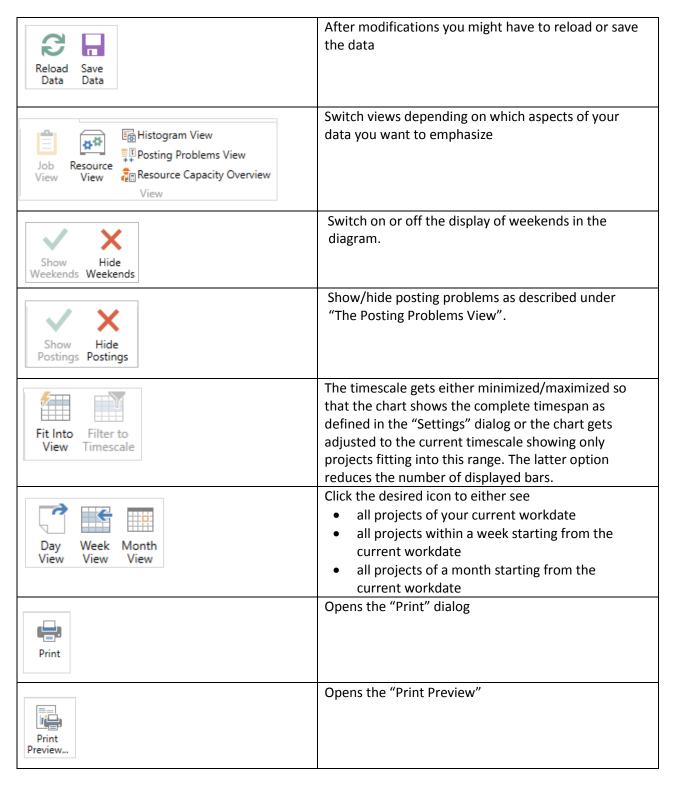


The Working Area

THE MENU BAR



Situated above the diagram, the menu bar offers comprehensive functionality:





Choose Activate Deactivate Filter Filter Filter	By "Choose Filter" you open the "Filter List" dialog where you can create and edit filters. By clicking the according button, you can apply the filters you selected in the "Filter List" to your current view or deactivate them.
Show all Hide empty Job Tasks Job Tasks	Job Tasks without resources matching the currently active View Filter criteria, can also be shown/hidden
Setup	Opens the "Setup" dialog where you can make basic settings for the VJS.
Highlight Resource Skills	Highlight resources with certain skill(s).

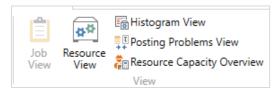
THE GANTT AREA

In the background of the Gantt chart a calendar indicates work free periods in grey while working times appear in white.

March 2018 - CW 10				March 2018 - CW 11							
7	80	09	10	11	12	13	14	15	16	17	18
					16						
							•		0.00		
									0.00		
									0.00		
								8			

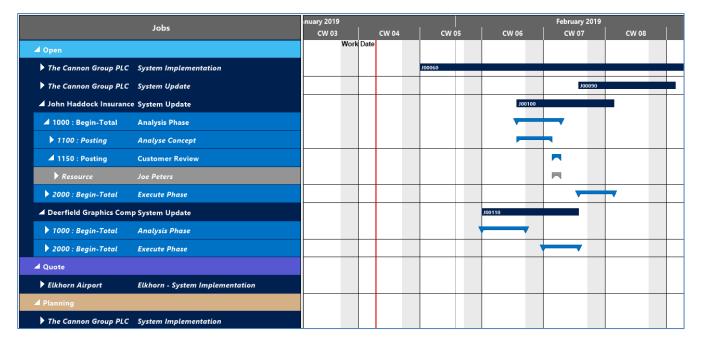


FIVE DIFFERENT VIEWS

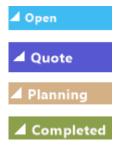


There are five different views in the VJS: the Job View, the Resource View, the Histogram View, the Posting Problems View, and the Resource Capacity Overview. You can switch between them by using the corresponding buttons.

The Job View



The Job View shows jobs categorized by their status, the categories being indicated by different colors:



Within a category, jobs and their belonging tasks are sorted in ascending numerical order.are sorted in ascending numerical order, within jobs, the task numbers are sorted the same.

The Resource View

- Displays resource groups and their respective resources.
- Visualizes capacity bottlenecks and date conflicts.



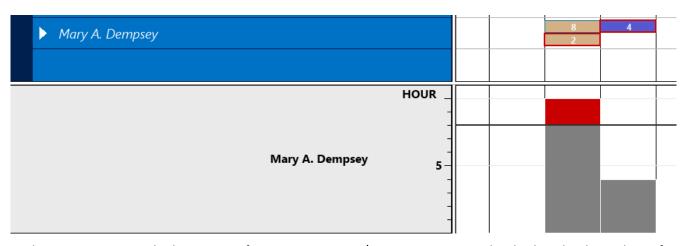
• The different category colors are applied as in the Project View

	Resources		March 2018 - CW 10				
	Resources		05	06	07	08	09
4	Engineers						
	▶ Unallocated engineers						
	▶ Alex				6		
	▶ Toni			8			2
4	Technicians						
	▶ Max						

Histograms

A histogram offers visual decision support by showing impending capacity problems. Both in the Job View and in the Resource View a histogram below the Gantt chart displays the workload of the corresponding resource. When moving the mouse onto a resource group or a resource, its capacity load will be visualized in the histogram.

The sections highlighted in red indicate a capacity problem at the according resource (in this case "Mary A. Dempsey") that ought to be solved by rescheduling:



In the Resource View, the histogram of a certain resource/resource group can be displayed independent of the position of the mouse cursor. Right-click on a resource or resource view and click "Fixate Histogram".



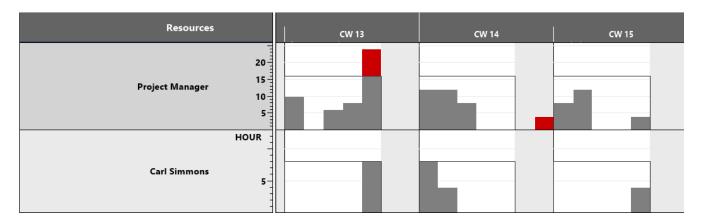
- The name of the resource group/resource is displayed in yellow.

 Linda Martin
- Now, only the histogram of this resource will be displayed, even when the mouse cursor is being moved.



The Histogram View

In the Histogram View all histograms of resource groups and resources are displayed in the same order as the resource view, the resource groups being highlighted in a darker grey than the resources.

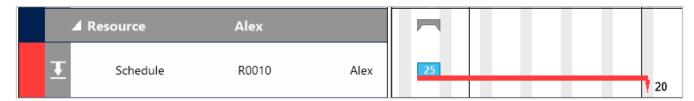


The Posting Problems View

This view is in fact a collapsed Job View that only shows posting problems like described below.

Posting date and quantity are shown for each Job Planning Line. Discrepancies between scheduled and actual usage are indicated in the VJS by according symbols or visual alerts on the basis of resources and the quantities they need for finishing certain tasks.

In the picture shown below, the posting date is indeed later than the planned start (red line and red flag in the table row) and the posted quantity is lesser than the planned one (downward pointing arrow next to the flag).



If there are no discrepancies, the line between posting date and Project Planning Line will be grey.

Several scenarios

In combination, the options of time usage with the ones for the posting date can illustrate the following scenarios:

- No discrepancies
 - The task is finished using hours as scheduled and the posting date is earlier than the calculated end date.





 The task is finished in time using hours as scheduled and the posting date is the same as the calculated end date



- Situations that might require the planner's intervention
 - The task is finished using hours as scheduled but the posting date is later than the calculated end date.



 The task is finished using less hours than scheduled but the posting date is later than the calculated end date.

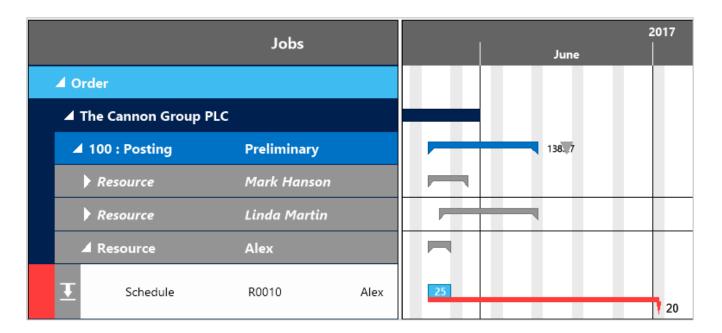


• The task is finished using less hours than scheduled and the posting date is the same as the calculated end date.





If, for some reason or other, you'd like to focus on this problems only, click the according icon and switch to the Posting Problems view:



The Resource Capacity Overview

This view

- offers the most general overview of the VJS, showing the monthly load of resources and groups
- lists the information of the histogram in text form like in a report
- indicates overloads in red
- takes into account external allocations and those of resources not being loaded

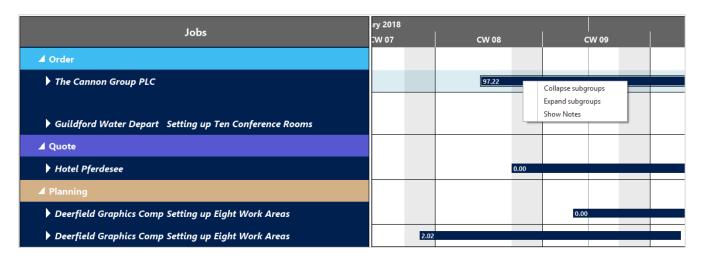
Resources	February	March	April
▲ Whole Company	Booked: 26 % 629 Hrs	Booked: 27 % 690 Hrs	Booked: 26 % 675 Hrs
	Quoted: 0 % 0 Hrs	Quoted: 6 % 152 Hrs	Quoted: 7 % 196 Hrs
	Free: 74 % 1771 Hrs	Free: 67 % 1678 Hrs	Free: 67 % 1769 Hrs
▲ 1000: Project Manager	Booked: 18 % 86 Hrs	Booked: 19 % 98 Hrs	Booked: 20 % 104 Hrs
	Quoted: 0 % 0 Hrs	Quoted: 4 % 22 Hrs	Quoted: 8 % 40 Hrs
	Free: 82 % 394 Hrs	Free: 76 % 384 Hrs	Free: 73 % 384 Hrs
Unassigned - Project Manager	Booked: 22 % 36 Hrs	Booked: 42 % 70 Hrs	Booked: 41 % 72 Hrs
	Quoted: 0 % 0 Hrs	Quoted: 13 % 22 Hrs	Quoted: 23 % 40 Hrs
	Free: 78 % 124 Hrs	Free: 45 % 76 Hrs	Free: 36 % 64 Hrs
Carl Simmons	Booked: 24 % 38 Hrs	Booked: 17 % 28 Hrs	Booked: 18 % 32 Hrs
	Quoted: 0 % 0 Hrs	Quoted: 0 % 0 Hrs	Quoted: 0 % 0 Hrs
	Free: 76 % 122 Hrs	Free: 83 % 140 Hrs	Free: 82 % 144 Hrs
Steve Johnson	Booked: 8 % 12 Hrs	Booked: 0 % 0 Hrs	Booked: 0 % 0 Hrs
	Quoted: 0 % 0 Hrs	Quoted: 0 % 0 Hrs	Quoted: 0 % 0 Hrs
	Free: 92 % 148 Hrs	Free: 100 % 168 Hrs	Free: 100 % 176 Hrs
▲ 2000: Software Engineers	Booked: 50 % 317 Hrs	Booked: 65 % 436 Hrs	Booked: 59 % 413 Hrs
	Quoted: 0 % 0 Hrs	Quoted: 15 % 98 Hrs	Quoted: 15 % 108 Hrs
	Free: 50 % 323 Hrs	Free: 21 % 138 Hrs	Free: 26 % 183 Hrs
Unassigned - Software Engineer	Booked: 115 % 184 Hrs	Booked: 202 % 340 Hrs	Booked: 166 % 292 Hrs
	Quoted: 0 % 0 Hrs	Quoted: 58 % 98 Hrs	Quoted: 61 % 108 Hrs
	Free: -15 % -24 Hrs	Free: -161 % -270 Hrs	Free: -127 % -224 Hrs



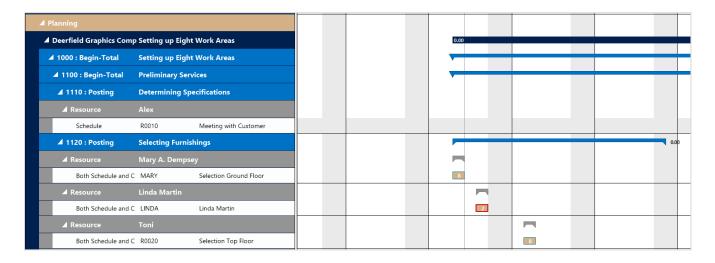
COLLAPSING AND EXPANDING

Collapse and expand bjobs, resource groups, groups etc. either by clicking the corresponding symbols or by selecting the corresponding command from the table row's/bar's context menu, thus hiding details or rendering them visible.

All projects collapsed:

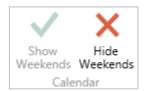


After selecting "Expand subgroups" for the "Planning" category:



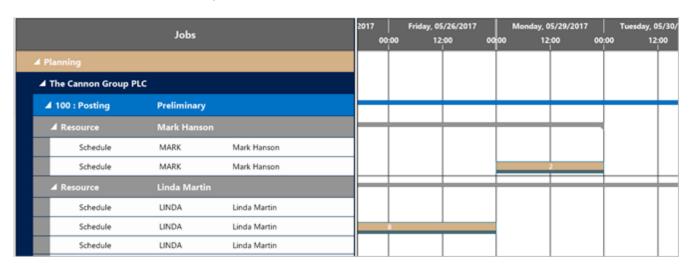


THE CALENDAR: SUMMARY OR DETAILS

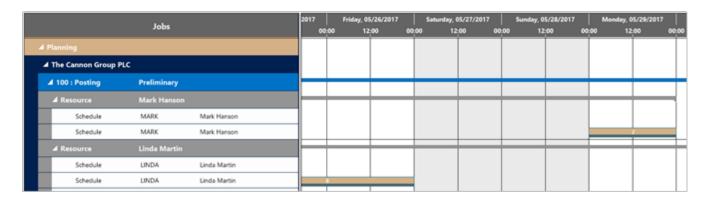


The "Calendar" buttons let you switch on or off the display of weekends in the diagram.

"HideWeekends" hides workfree periods that are common to all calendars.



Weekends are shown

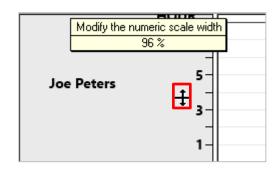




CUSTOMIZE THE WORKING AREA

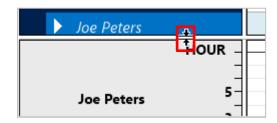
Adjusting the Numeric Scale of the Histogram

If you wish to modify the resolution of the numeric scale in the histogram, please place the mouse cursor on the numeric scale and drag it either upward (enlarging) or downward (reducing).



Adjusting the Height of the Histogram

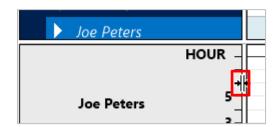
Accordingly, you can modify the height of the histogram. Drag the horizontal splitter bar between histogram and table/diagram area upward or downward.



Note: The modifications in the histogram area will always be set back and hence are not permanent.

Adjusting the Width Ratio between Table and Diagram

You can modify the width ratio between the table and the diagram by moving the vertical splitter bar between them.



ZOOMING AND SCROLLING

Increase/reduce time scale resolution:	Mouse within the time scale: mouse wheel
(depending on how much detail or summarization is	
required	Mouse outside of time scale: <shift> + mouse</shift>
	wheel)
6	If you have modified the time scale solution and
	want to gain the overview back again, click the icon
Fit Into	and the time range will be completely shown again.
View	
Shift time scale	By mouse
Enlarge/reduce diagram	<ctrl> + mouse wheel</ctrl>



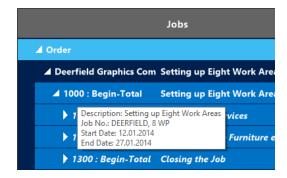
How to See More Details

Data details of a job show up when the mouse cursor points either to the according table row or to the layer in the diagram area.

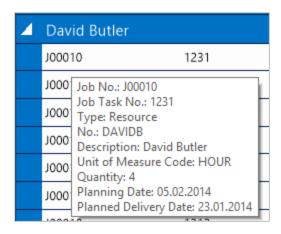


You can show data details of a job task line by moving the mouse

onto its number in the table or to the layer in the diagram area:



The same applies to resources in the diagram.





THE CONTEXT MENU OPTIONS

Create Links

Links between operations can be created in the "Create link" mode which, since the "Pointer mode" is set by default, you have to switch to by the context menu that pops up after a right-click on the diagram area.

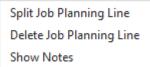
Mode: Marking and dragging Mode: Create link Mode: Create Job Planning Line

Create Job Planning Lines

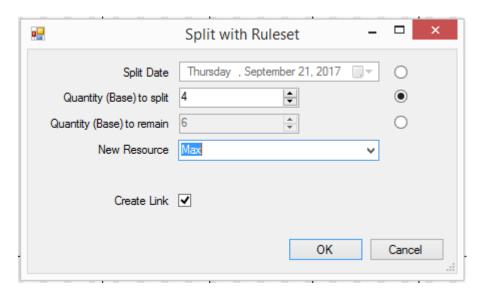
Select Create Job Planning Line from the above context menu.

Split Job PlanningLines

By splitting a Job Planning Line you will add a new Job Planning Line to your plan. Open the according context menu of the Job Planning Line you want to split and click "Split Job Planning Line" to open a dialog where you can



- specify
 - o the date at which the line is to be split or
 - o how the quantity is to be distributed.
- allocate the new line to another resource
- determine whether the two lines are to be linked or not.



Delete Job Planning Lines

Select **Delete Job Planning Line** from the above context menu. The node will be removed from the chart at once but deleted from NAV only after saving your data.



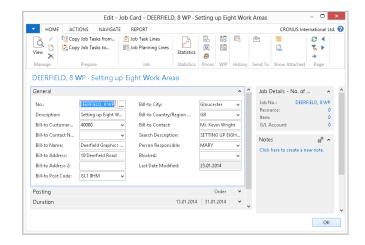
Show Notes

Extending the Notes feature you already know from Microsoft Dynamics NAV, the VJS also allows to to create and view notes not only on the Jobs level but also for Job Tasks and Job Planning Lines. Creating nodes can best be done by clicking the according item in the above context menu on the desired level, or, if there are already existing notes, by clicking the "Notes" symbol.

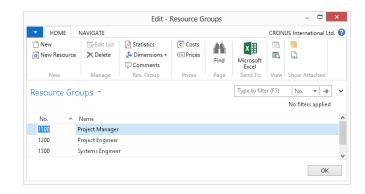


ACCESSING NAV DIALOGS

The VJS has been fully integrated into Microsoft Dynamics NAV. By double-clicking on a job /job task line/job planning line in the job view of the VJS, the according card will be invoked where you can, for instance, modify dates manually. Alternatively, you can close the sheet and move the operation in the Gantt chart (graphical modification).



The same applies to resource groups, resources and job planning lines in the resource view — by double-clicking you open the according card where data can be edited manually.



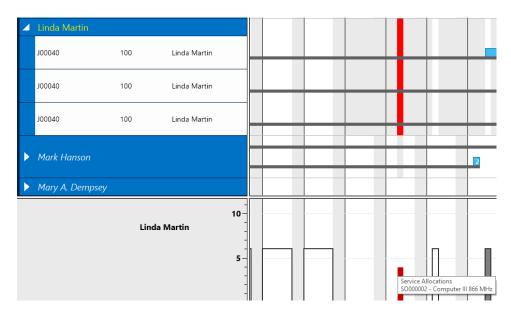


VIEW ALLOCATIONS FROM OTHER MODULES

Allocations of the modules Service and Assembly and of Jobs that are not currently loaded into the VJS (e.g. due to filter settings), and **don't cause an overload** so far, are indicated by a grey bar in the diagram area and a corresponding grey capacity curve in the histogram.

Allocations of the modules Service and Assembly and from jobs that are not currently loaded into the VJS and **that have already caused an overload** at the corresponding resource, are indicated by a red bar in the diagram area and a corresponding capacity curve in the histogram.

In both cases, the histogram's tooltip (also available in the Resource View and in the Histogram View) informs you which module/job is blocking the resource.



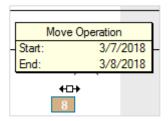


User Interactions

MOVE OPERATIONS HORIZONTALLY BY DRAG & DROP

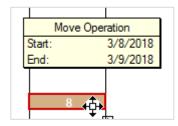
To schedule an operation, you can move it horizontally along the time scale both in the Job View and in the Resource View: as a consequence, the operation will be worked off at a different time.

If in the Job View a job task or job planning line is moved, every subordinate operation will shift as well



ASSIGN AN OPERATION TO ANOTHER RESOURCE

In the Resource View, an operation can also be moved vertically when scheduled – to a different resource. As a consequence, the operation will be worked off by the resource it was moved to. This behavior can be configured in the "Setup" dialog so that operations can only be moved to resources in the same resource group.



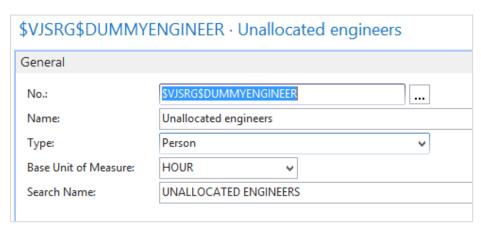
Note: Only when a linked operation is moved behind its successor, the successor will be moved accordingly



Assigning an Operation to a Resource Group

In standard NAV, a Job Planning Line can only be assigned to a resource, not to a resource group. So if you want to assign a Job Planning Line to a resource (if, e.g. you don't know for sure yet which staff member of a group will work off this special task), you can bypass this restriction in the VJS by creating a "dummy" resource. By adding the string "\$VJSRG\$" at the beginning of the Resource No the VJS treats this resource as the group itself:

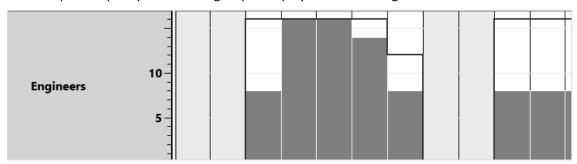
• Create a dummy resource the no of which starts with "\$VJSRG\$". The resource name you enter here will be shown in the table.



• A white number on a red background tells you how many planning lines are assigned to the group.



• The complete capacity load of the group is displayed in the histogram.



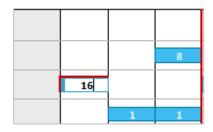
IMPORTANT:

For the bar length to be calculated properly make sure to assign a capacity to the "dummy" resource that is usual for this group.



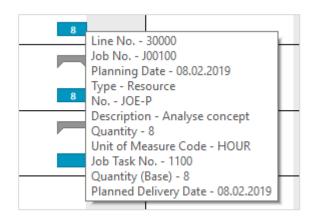
CHANGE QUANTITY ON THE BAR

The quantity (Base Unit of Measure) of Job Planning Lines can be edited directly on the Job Planning Line bar. For this, either click the bar two times (no double click) and enter the desired quantity or click only once and start entering. Confirm with ENTER.

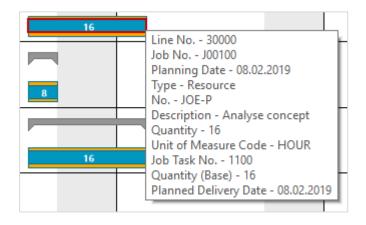


LENGTHENING/SHORTENING A JOB PLANNING LINE

A job task's length can be modified by dragging its start and/or end.



Depending on the available resource capacity, the planned capacity will also be modified.

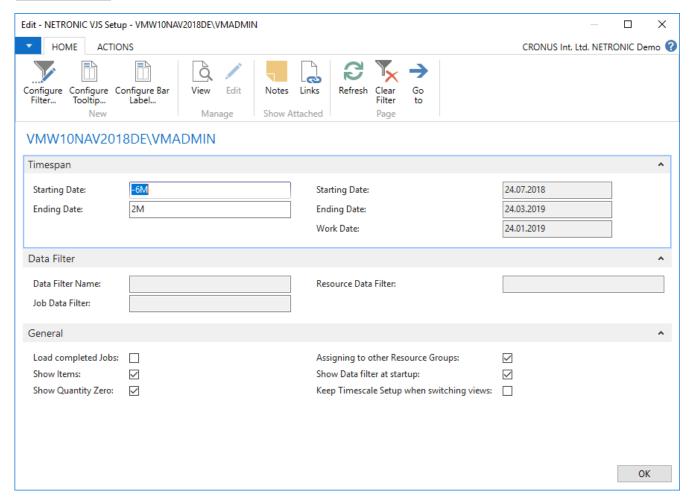




The Setup Dialog



The "Setup" button in the "Administration" area of the menu bar opens a dialog with various options to customize the basic settings of the Visual Jobs Scheduler:

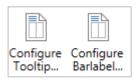


In this dialog you can:

• Configure filters (see chapter "Using filters")

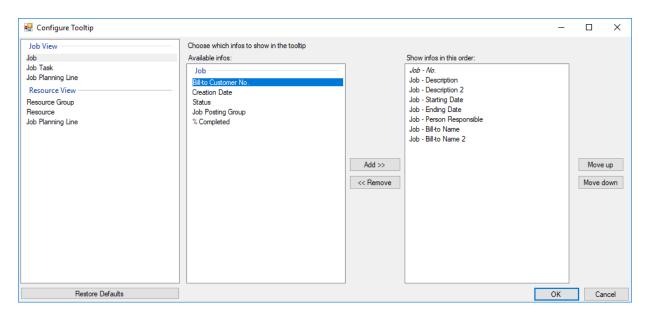


• Configure tooltips/Configure bar labels





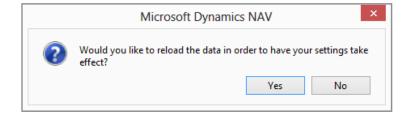
In both cases a dialog allows to specify the text to be shown in the tooltip or as bar label by selecting the desired NAV data from a list, either to add or remove them.

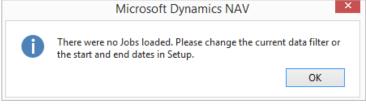


- Set the **Starting** and **Ending** date of the time scale. "-1D" in the starting date field will prepone the starting date by one day to the starting date defined in the NAV calendar, whereas "2W" in the ending date field will postpone the defined ending date by two weeks (for the definition of the start and end dates of the NAV calendar, see chapter below).
- See which **Data Filters** are currently activated.
- Load completed jobs
- Configure whether to show or hide **job planning lines of type "Item"**. Hidden "Item" job planning lines can still be moved via super job tasks and jobs.
- Configure whether to show or hide job planning lines with quantity "0"
- Allow or prohibit moving job planning lines to another resource group. If it is prohibited the cursor will change its appearance when a job planning line is moved to a different resource group.
- Switch on/off the **Data Filter popup** at the start of the VJS. If this check box is ticked, the data filter that was last confirmed by the user will then be loaded automatically.
- Decide whether **to keep timescale setup when switching views**. This option ensures keeping the settings (position, solution) of the timescale when switching views.

Please note:

- For your settings to take effect, the data needs to be reloaded.
 So after having left the above dialog by clicking **OK**, the dialog opposite will appear:
- If due to the current filter and timespan settings no projects could be loaded into the VJS, a warning message will pop up:







How the Start and End Dates of the Time Scale Are Defined

Starting and ending date of the time scale are calculated by adding the intervals specified for starting and ending date in the date formulas to the working date.

Calculated start date Working date from Calculated end date from Setup menu Dynamics NAV from Setup menu

Working date - start date Working date + end date



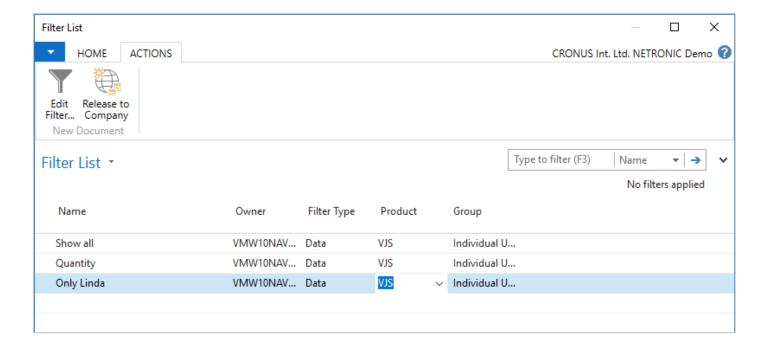
Using Filters

The VJS offers two different kinds of filters, the difference between them lying in the time of application:

THE DATA FILTER



The settings of the Data Filter are evaluated on starting the VJS. You can create, name and apply several different filters. Clicking the **Configure Filter** button in the "Setup" dialog leads you to the **Filter List** where you get an overview of your existing filters and can create new ones.



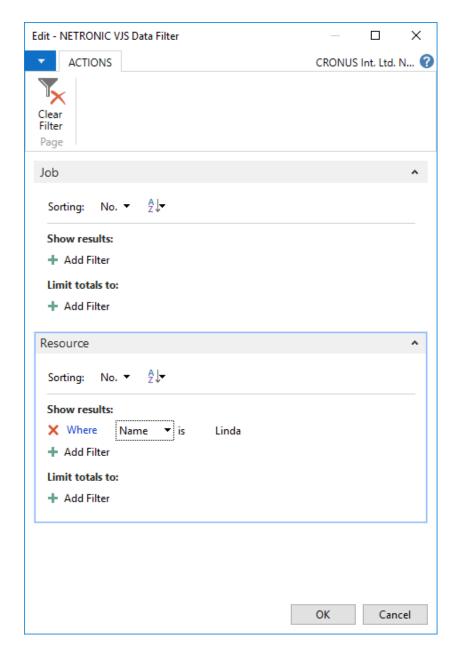
If you want to make a certain filter available to your colleagues also using the VJS, click "Release to Company". Your colleagues will then have this filter also in their filter list and can apply it but they won't be able to edit it.

Click the "Edit Filter" button to open the according dialog where you can modify the settings of the desired filter



The settings made in the "Edit Data Filter" dialog reduce the amount of data being loaded.

Please note that it is only possible to load complete jobs and that, even if they don't match the filter criteria, the VJS will still load all necessary resources which are used by the currently loaded jobs



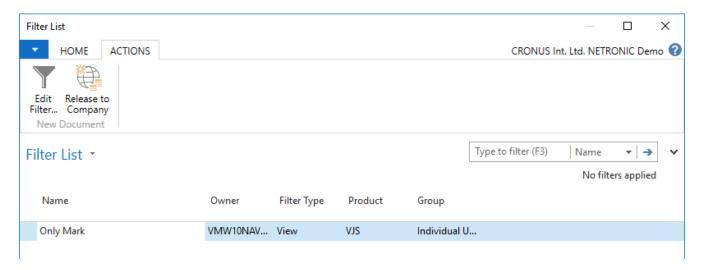


THE VIEW FILTER

The View Filter is applied to resources, employees and employee qualifications already having been loaded into the VJS. All filter options can be found in the "View Filter" area of the menu bar:



- Choose Filter: Opens the dialog "Filter List" dialog shown below where you get an overview of your existing filters and can create new ones
- Activate filter
- Deactivate filter



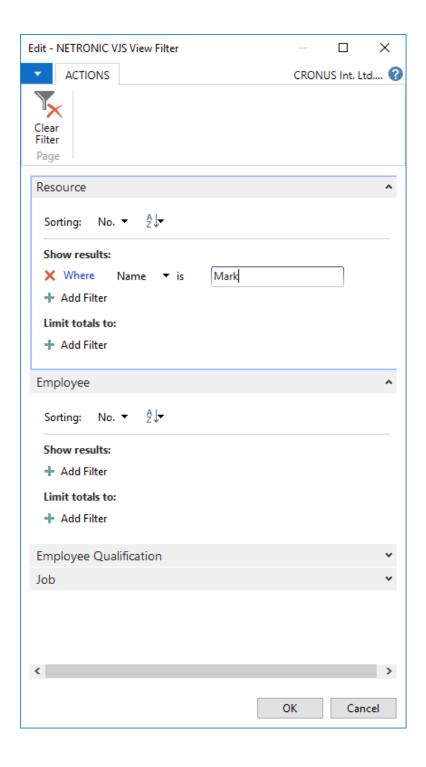
If you want to make a certain filter available to your colleagues also using the VJS, click "Release to Company". Your colleagues will then have this filter also in their filter list and can apply it but they won't be able to edit it.

By clicking the "Edit Filter" button you open the according dialog where you can modify the settings of the desired filter.



Make the desired settings here to specify whether to show/hide resources, employees and employee qualifications.

Note: Don't mix up employee qualifications with resource skills!



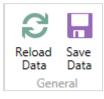


SHOW/HIDE JOB TASKS



Job Tasks without resources matching the currently active View Filter criteria can also be shown/hidden.

Reloading and Saving Data



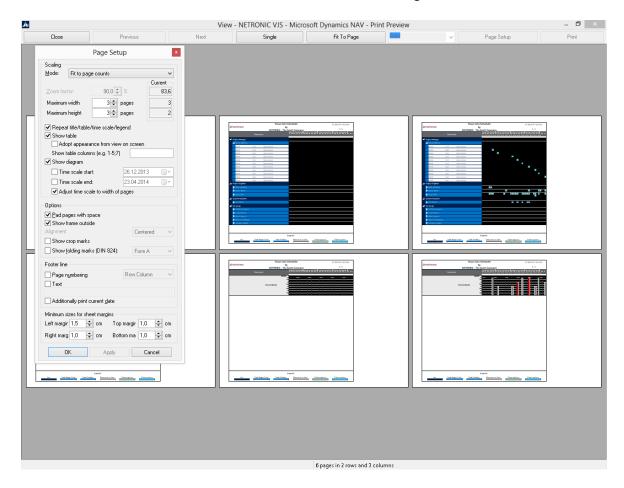
In case you wish to discard your changes after modifying the diagram (provided you didn't store them) you can simply reload the data of the diagram. The "General" buttons allow to reload the former values or, alternatively, to store your modifications.



Printing in the VJS



The VJS allows to print a diagram as displayed on the screen; alternatively, you can make use of a large variety of versatile and comfortable printing options before, like paging, page numbers, recurrence of time scale, table and legend on printed pages etc. These and many other customizable options are offered by the "Page Setup" dialog that can be reached from the "Print Preview" dialog.

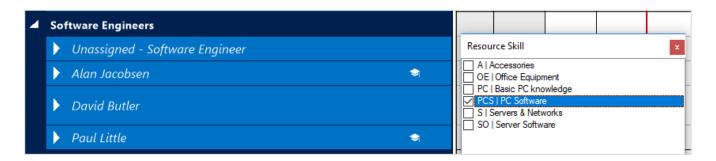




Highlight Resource Skills



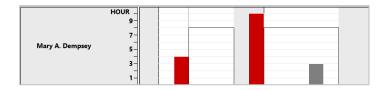
Searching for resources with certain skills is pretty easy in the VJS. Select the desired skill(s) and every resource with matching skills will be highlighted in the Resource View.



Warnings and Visual Indications

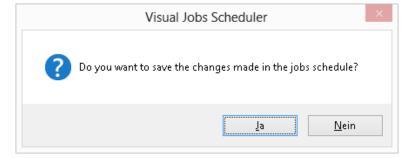
RESOURCES OVERLOAD

Conflicts such as overloads of resources can be identified very quickly by the histogram. Red sections indicate that operations need to be assigned to different resources or require a different distribution over time. The Visual Jobs Scheduler thus offers visual support to your decisions.



SAVING CONFIRMATION

When leaving the VJS, you are prompted to answer whether your changes are to be stored to Dynamics NAV.





Further Resources

This Manual introduces the fundamental functions of the Visual Jobs Scheduler for Microsoft Dynamics NAV (2017, 2016, 2015, 2013 R2, 2013 and 2009 R2). Please find more details on our Website http://www.netronic.com/vjs. Feel free to contact us if you have questions, ideas or suggestions — we will be happy to answer your call or mail:

+49-(0)2408-141-0, support@netronic.com

About NETRONIC - the Gantt Company

The Aachen (Germany) based NETRONIC is "The Gantt Company". Interactive Gantt charts add transparency to production, project and process data and improve planning and scheduling of resources, jobs and workflows. For decades, the Gantt chart has been our core competence – resulting in three business lines:

- With the Gantt chart controls VARCHART XGantt and VARCHART JGantt, we address software vendors who typically develop industry-specific scheduling solutions.
- The Visual Jobs Scheduler has been designed for partners and customers of Microsoft Dynamics NAV and provides a fully integrated, intuitive graphical jobs scheduling support.
- Based on our Gantt know-how, we also develop custom-made scheduling applications for end customers who want to improve their short-term production scheduling.

For further information, please

- visit our Website
- read our Blogs
- or follow us on Facebook, Twitter, Google+ or LinkedIn .



