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DOCUMENTATION

Visual Jobs Scheduler (VJS)

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1. Technical requirements

Microsoft Dynamics 365 Business Central

2. Starting the VJS: Info window shows progress when loading/reloading

When data is loaded into the VJS, multiple stages of data processing are executed until the visualization finally appears and the user can start working with it. Especially when there are large amounts of data to be loaded/reloaded, this can take some time during which the users do not know what is happening and are often unsure whether the application is still working.

To give the users detailed feedback as to what is happening during the loading process, we have implemented an info window that:

- gives feedback that something is happening at all (meaning the extension has not crashed)
- informs about the amount of data getting loaded, thus explaining why the process might take so long
- informs about how long this process might take and how long the users might need to wait
- also helps our support team during customer trainings or support cases to get a better understanding of the customers' environment.

Visual Jobs Scheduler: All \sim NETRONIC VJS \sim	Actions \lor Fewer options	
Notifications: 4 Resource Marty Horst (MARTY): Cap Res	ource Lina Townsend (LINA): Cap Resource Lift for Furniture (LIFT): Cap	The job planning line GUILD
Job View	January 2024 Wk 01 Wk 02 03 04 05 05 07 00 10 11 12 13	Wk 03 15 16 17 18
Planning	Working on it ×	
Quote	3/5 Scheduler setup	
⊿ Open	Resource Groups: 1 of 1 Resources: 5 of 5	
▲ DEERFIELD, 8 WP Setting up Eight Work Areas	Res. Capacity Entries: 6 of 6 Jobs: 2 of 2	DEERFIELD, 8 WP
▲ 1000: Begin-Total Setting up Eight Work Areas	Job Tasks: 18 of 18 Job Planning Lines:	
▲ 1100: Begin-Total Preliminary Services	- Job View: 12 of 12 - Resource View: 12 of 12	
▲ 1110: Posting Determining Specifications		
Resource Lina Townsend		
Budget: LINA Meeting with Customer	2	
▲ 1120: Posting Selecting Eurnishings		100

3. Understanding the VJS

Since the VJS is a Gantt chart, it naturally has all its characteristics:

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Jo	b View	January 202 Wk 02 14 15	1	Wk 03	20	21 22	23 24	Wk 04 25 26	27	28 29	30 31	Febru Wk 05	ary 2021 5 02 03	04	05	06	07
4	Open																
	DEERFIELD, 8 WP Setting up Eight Work Ar			DEERFIELD), 8 WP S	etting up Ei	ight Work Are	as									
	1000: Begin-Total Setting up Eight Work /																
	▶ 1100: Begin-Total Preliminary Services																
	▲ 1200: Begin-Total Assembling the Furnit																
	▲ 1210: Posting Assembling the Furnitur																
	Resource Lift for Furniture																
	Budget: LIFT Lift for Furniture								8								
	Billable: LIFT Lift for Furniture								8								
	▶ Resource Mark Hanson																
	▶ 1300: Begin-Total Closing the Job										-						
,	GUILDFORD, 10 CR Setting up Ten Confere																
	Planning																
	Quote																
	Completed																

- A **timescale** at the top.
- A **table** at the left, listing jobs (in the Job View) or resource groups/resources in the Resource View
- On the right below the time scale, a **chart** displaying the job schedule with a **calendar** in the background indicating work free periods in grey while working times appear in white.
- A menu ribbon allowing to make basic settings that will be explained in detail in the following.



The item "NETRONIC VJS" summarizes all options that we think are the most frequently used ones:

NETRONIC VJS \smallsetminus	🚺 Oper
🗱 Reload	
🖬 Save	
📰 Schedule Succe	essors
🛕 Toggle Creation	n Mode
😟 Resource View	
İ Job View	
Histogram Viev	N

All options of the VJS can be found under "Actions":



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Actions \smallsetminus	Fewer options
General	>
View Filter	r > _V
Timescale	>
View	>
Administra	ation >

In case the "Actions" item is not visible in the menu ribbon, click "More options". To hide it, click "Fewer options".

• A **red** vertical line in the chart indicates the **work date** as having been set in Dynamics 365 Business Central.



• Another vertical line is shown at the end date of the currently selected job which is helpful for planning job tasks and job planning lines in larger jobs where the job bar might be outside of the current view.

Visual Jobs Scheduler: All \sim	NETRONIC VJS \smallsetminus	💷 Open	in Exce	el	Acti	ons \vee	Fev	ver op	otions	
Notifications: 2 Resource Mary	A. Dempsey (MARY): Cap	pacity was e	xceede	d Re	esource	e Mark	Hansor	n (MA	RK): Cap	pacity wa
Job View		Wk 17	uary 20 Wk 0 18	21 3 19	20	21	22	23	24	Wk 04
⊿ Quote										D, 8 WP
▶ J00010 Project - Master - AB	01									ERFIEL
▶ J00030 Service and Repair - N	Master									Date Df
⊿ Open										nding l
▶ DEERFIELD, 8 WP Setting up	Eight Work Areas		DEER	FIELD,	, 8 WP					Job E

- Notifications appear below the menu ribbon in case
 - o a job planning line gets moved behind the job's end date
 - o a resource overload occurs

Notifications: 2 The job planning line DEERFIELD, 8 WP, 1120, 10000 has been placed past the end date of its job | Resource Mary A. Dempsey (MARY): Capacity was exceeded



4. Three different views

There are three different views in the VJS: The Job View, the Resource View, and the Histogram View. You can switch between them by using the corresponding menu items:

Actions \lor Fewer o	ptions	5				
General	>	acity	was e	xcee	Res	source Ja
View Filter	>					Wk 02
Timescale	>	/	08	09	10	11
View	>	à	Toggle	e Creat	ion M	ode
Administration	>	٥	Resoui	rce Vie	W	-
		Ē.	Job Vi	ew		
		dt	Histog	ıram Vi	iew	

4.1. The Job View

Job View	January 2 Wk 02	2021			WkO)3						Wk	04					
	14 1	5	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
⊿ Open																		
DEERFIELD, 8 WP Setting up Eight Work Ar					DEER	RFIELD,	, 8 WP	Setting	g up Eig	ght Wo	ork Area	IS						
1000: Begin-Total Setting up Eight Work /																		
• 1100: Begin-Total Preliminary Services																		
▲ 1200: Begin-Total Assembling the Furnit																		
1210: Posting Assembling the Furnitur																		
▲ Resource Lift for Furniture																		
Budget: LIFT Lift for Furniture														8				
Billable: LIFT Lift for Furniture														8				
▶ Resource Mark Hanson																		
▶ 1300: Begin-Total Closing the Job																		
▶ GUILDFORD, 10 CR Setting up Ten Confere																		
Planning																		
Quote																		
Completed																		

The Job View shows jobs categorized by their status. Each job, job task and job planning line is represented by a bar, the color of the job planning line bars depending on the job's category.



4.1.1. Elements and symbols in the Job View:

• Job – the green line beneath the bar showing the job's progress



• Job Task Line - the number beneath the bar showing the task's progress



• Job Planning Line - the grey dot indicating a change not having been saved yet, the orange frame highlighting the currently marked task.



• Resource summary bar – can be hidden by the according option in the "User setup" dialog



• The different colors of the categories:



- Within a category, jobs and their belonging tasks are sorted in ascending numerical order, within jobs the task numbers are sorted the same. The sorting order can be changed via the contextmenu, or via the "Configurations" tab in the user settings.
- Job planning lines of the "item" type
 If you have specific items the timing of which you'd like to specify more precisely, we
 recommend that you let the VJS visualize and schedule job planning lines using these items.



Set this into work on the relating item card:

\leftarrow	Item Card Work Date: 1/28/202	21	(2) + II	
	1001 · Touring Bi	cycle		
	Process Item Prices & Di	scounts Request Approval More	options	
	Item			Show more
	No	1001	Base Unit of Measure · · · · · PCS	~
	Description	Touring Bicycle	Show in VJS	
	Blocked · · · · · · · · · · · · · · · · · · ·		Item Category Code	\sim
	Туре	Inventory ~	Color (VAPS)	

Once activated, the result looks like this:

	Gun	Jary 2	:021								Febru	February 2021								
Job View	-Wk 22	03	24	Wk	(04 26	27	128	1 20	30	21	Wk 0 01	5 02	103	١٠	ا م	06	07	Wk 06 08	na	10 ·
⊿ Open		23	24	23	20	21	20	29	30	31		102	103	04	05	00	107	08	09	10
DEERFIELD, 8 WP Setting up Eight Work Areas																				
GUILDFORD, 10 CR Setting up Ten Conference Rooms																				
⊿ J00020 Project - Elkhorn - #ABD456											10002	20								
✓ 1000: Begin-Total Technical specification											_									(
▲ 1100: Posting Design definition											0%									
⊿ Item																				
Budget: 8904-W Computer - Basic Package											2									
∠ Resource Linda Martin																				
Budget: LINDA Linda Martin											8									
▲ Resource Tom Morgan												I.								
Budget: R0010 Tom Morgan											8									
▲ 1200: Posting CAD models & drawings												0 %								
▲ Resource Paul Little																				
Budget: R0020 Paul Little												24								

- Operations with a start or end date outside the timeframe:
 - The concerned operations are highlighted with a dashed frame.
 - If a planned date is set for a job planning line, no more capacity is displayed.
 - If the length of a job planning line is calculated by the VJS and the bar is pushed over the end of the working area, the capacity of the days within the timeframe is displayed and the capacity for the days outside the timeframe is not displayed/discarded.

Lina Townsend (LINA)	 \$0	d	50	
8- 4- 0-				
Marty Horst (MARTY)			20	20 0
8- 4- 8-				



 If the length of a job planning line is calculated by the VJS and the bar is moved before the start of the working area, the bar will be highlighted by a dashed frame and a warning symbol in the Gantt chart table header.



- $\circ~$ An average capacity (loaded capacity / loaded days) is used for the days within the time frame.
 - Capacity load before moving the job planning line outside the working area:

Re	esource View		Febr Wk (uary 20)7	21					Wk	08				
Ē	John Meyer (R0030)	•	15	16	17	18	19	20	21	22	23	24	25	26	2
I	Mary A. Dempsey (MARY)Designer		J003	20 10 1	6		k	N	ame:		Resou	urce Marv A	. Demr	osev	
L		8-	F					Re	source	Group	No.: 1	1000		,	l
		4-	_	_		_	_	Ту	pe:		F	Person			L
		0 -						L Ca	apacity:		8	В			E
	Egon 37,5 (R0130)	4	Total Load: 3.2								L				
L		8-	8 Date: 18/02/20						2021 0	9:30:00	l				

• Capacity load after moving the job planning line outside the working area:

Resource View		Feb Wk	February 2021 Wk 07 Wk 08							lar	lac	07	20	March 202 Wk 09 01 02		
		"	18	19	20	21	22	23	24	25	20	21	28	01	02	
Paul Little (R0020)	•					ſ				Res	ouro	e		1	٦	
John Meyer (R0030)	•						Name: Mary A. Dempse Resource Group No.: 1000							psey	1	
Mary A. Dempsey (MARY)Designer	4	20 1	0 16	••••	K		Type:				Per	son			Ŧ	
	8-					-	Capa	city:			8					
	4-	-					Total	Load	i:		5.3	3333	3333	3333	33	
	0-					_	Date:				18,	/02/2	2021	17:00	:00	

• If a bar gets moved beyond the end of the timeframe by scheduling, its start date will be set to the last day within the view instead.

48	
	 0%
	40
	1 3
	8

 $\circ~$ A warning symbol is shown when a resource without capacities is loaded.



By switching on the "Creation Mode" the VJS displays a list with your resources. You can
interactively allocate a resource by dragging it from the list to the chart. An orange
"phantom" bar and an info window indicate where and when the new job planning line will
be placed if you release the mouse button.

20	21	22	23	24	Wk 0	4 26	27		Resources
21/0	1/202	1 16:00:0	0					1	▲ No Group (NOGROUP)
									Lift for Furniture (LIFT)
									Linda Martin (LINDA)
									Mark Hanson (MARK)
									Mary A. Dempsey (MARY)
									Timothy Sneath (TIMOTHY)



4.2. The Resource View

The resource view shows resource groups and their respective resources.

	Sunday, 24. Ja	Monday, 25	5. January 202	1		Tuesday, 26	5. January 202	:1		Wednesday	Wednesday, 27. January 2021						
Resource view	1 18:00	00:00	06:00	12:00	18:00	00:00	06:00	12:00	18:00	00:00	06:00	12:00	18:00				
▲ No Group (NOGROUP)																	
Lift for Furniture (LIFT)		8								8							
										8							
8-																	
4-																	
Linda Martin (LINDA)																	
8-																	
4 -																	
0-																	
Mark Hanson (MARK)		40								20							
										20							
Mary A. Dempsey (MARY)																	

- It visualizes capacity bottlenecks and date conflicts.
- The different category colors are applied as in the Job View
- By switching on the "Creation Mode" the VPS displays a list with all your jobs, job planning lines and job tasks. You can interactively allocate a job task to a resource by dragging it from the list to the chart. An orange "phantom" bar and an info window indicate where and when the new job planning line will be placed if you release the mouse button.



4.2.1. Elements and symbols in the Resource View

• Calendar: A calendar in the background of the Gantt chart shows weekends in grey, working times in white. Absences of employees that are linked to resources are visualized in a light pink in the calendar and by a corresponding capacity curve.



• Bars: Each job task is represented by a bar, the color of the job planning line bars depending on the job's category. The Job categories are indicated as follows:





The grey dot indicates a change not having been saved yet, the orange frame highlighting the currently marked task.



- Sorting order: Within a resource group, resources are sorted in ascending alphabetical order.
- Capacity curve: In the VJS, you can show a capacity curve in the Resource View to see free and exceeded capacities, a red box indicating an overload:

Mary A. Dempsey (MARY)	10	3	2	2	2
				17	6
					8
10-					
5-					
0-					

4.3. The Histogram View

A histogram offers visual decision support by showing impending capacity problems. In the Histogram View all histograms of resource groups and resources are displayed in the same order as in the resource view.



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Visual Jobs Scheduler: All - NETRONIC VJS - I C	Open i	n Excel		Action	ns \lor	Few	er opti	ons										
Notifications: 13 Resource Steve Miller (R0080): Capacity was	excee	. Re	esource	e Allan	Jacob	sen (RO	070): C	Capacit	y was e	excee	Res	ource	Job Sh	10p #1	(R0040)): Capo	acity w	as excee
Histogram View	Dece Wk 5 31	r Janu: i3 01	ary 202 02	03	Wk 04	01	06	07	08	09	10	Wk (02 12	13	14	15	16	17
Project Lead (1000) 30 - 0]]]	
60 - 13 Project Manager - Unassigned (\$VJSRG\$PROJECTMA 30 - 0 -]				_]]	
16- Linda Martin (LINDA) 8- 0-]]]	
60 – Mark Hanson (MARK) 30 – 0 –																		
10 - Mary A. Dempsey (MARY) 5 - 0 -]								
40 - 9 Technical Office - Unassigned (\$VJSRG\$TECHNICALOF 20 - 0 -																		



4.4. Sorting order

You can change the default sorting order for nearly all elements in the plan either by context menu or via the "Configurations" tab in the user setup.

Table Name Ascendi [Decren
Table Name Ascendi [Descen
	Descention
Resource ··· Name	

5. Open Microsoft Dynamics 365 Business Central dialogs

The VJS fully integrates with Microsoft Dynamics 365 Business Central. This means that by doubleclicking the according element (job, job planning line, resource etc.) either in the table area or in the Gantt area, you'll directly switch to the according Dynamics 365 Business Central dialogs where you can navigate and make changes as usual:

Double-clicking a job planning line...



...will call the according dialog:



م	Search	+	New	🐯 Edit Lis	st 📋 Delete	e Process	Report	Show Attached	📲 Open in I	Excel M	ore options	
EDIT	- JOB PL Jew	LANI	NING	LINES - GUIL	DFORD, 10 CR S	SETTING UP TE	N CONFEREN	CE ROOMS 1110	DETERMINING S	PECIFICATIONS		2
JOI OM	B TASK			LINE TYPE	PLANNIN DATE	PLANNED DELIVERY DATE	DOCUME NO.	TYPE	NO.	DESCRIPTION	I	QI
111	10	\sim	1	Budget	06.01.2021	06.01.2021		Resource	MARY	Meeting with	the Customer	
•												۱.
												Close

6. Collapsing and expanding

The VJS allows viewing your data from different angles easily and quickly. Collapse and expand jobs, resource groups, groups etc. There are two ways how to collapse/expand the above-described elements of your plan:

6.1. Collapsing/expanding by clicking the corresponding symbols





6.2. Collapsing/expanding by context menu

By opening the context menu either in the table or on the bar you collapse/expand all levels below the current one in one go.



All projects **collapsed**:



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lob View	De January	2021				February 2021
JOD VIEW	Wk 53	Wk 01	Wk 02	Wk 03	Wk 04	Wk 05
🖌 Open						
► DEERFIELD, 8 WP Setting up Eight Work Areas				DEERFIELD, 8 WP Setti	ng up Eight Work Areas	
► GUILDFORD, 10 CR Setting up Ten Conference Rooms	GUILDFO)RD, 10 CR Setting up Te	en Conference Rooms			
Quote						
Completed						

After having expanded parts of project "GUILDFORD, 10":

Job View	De	January 2	021					
	w	: 53	Wk 01	Wk 02		Wk 03	Wk 04	
⊿ Open								
DEERFIELD, 8 WP Setting up Eight Work Areas						DEERFIELD, 8 WP Set	ting up Eigl	t Work Areas
▲ GUILDFORD, 10 CR Setting up Ten Conference Rooms		GUILDFO	RD, 10 CR Setting up Te	en Conference Roon	ns			
▲ 1000: Begin-Total Setting up Ten Conference Rooms								
▲ 1100: Begin-Total Preliminary Services								
▲ 1110: Posting Determining Specifications								
▲ Resource Mary A. Dempsey								
Budget: MARY Meeting with the Custome			4					



7. Progress information

The VJS provides overview of a Job's or a Job Task's progress:

• The Job's progress is shown as a green line in the lower part of the Job bar.

DEERFIELD, 8 WP Setting up Eight Work Areas

• The progress of a Job Task is shown as number below the Job Task bar.



8. Capacity information

In the VJS, you can show a capacity curve in the Resource View, to see free and exceeded capacities, a red box indicating an overload:

Mary A. Dempsey (MARY)	10	3	2	2	2	
				17	6	
					8	
10-						
5-						
0-						

9. Navigation in the VJS

Navigating in the VJS largely comprises setting the time range for which parts of your plan are shown, modifying the timescale solution and quickly scrolling to certain parts of your plan.

9.1. Setting the timeframe

The timeframe specifies the time range covered by the timescale, either fixed by absolute values or relative to the workday. This is done in the "Setup" dialog, to be reached by clicking the "General" item in the "Actions" ribbon.



New Actions Fewer options								
EDIT - VISUAL JOBS SCHEDULER USER SETTINGS - ADMIN								
Timeframe Type	Timeframe Type							
Starting/Ending Date Input Type · · · · · · · Relative date								
	Absolute date							
Timeframe								
ABSOLUTE VALUES			RELATIVE VALUES					
Starting Date · · · · · · 31.12.2020			Starting Date · · · · · · -4W					
Ending Date	28.04.2021 Ending Date +3M							

9.2. Change the timescale resolution

For zooming in a certain area of your plan or to zoom out for a better overview, you can change the timescale resolution either by

- scrolling the mouse wheel in the timescale area
- or, more specifically, by the corresponding items of the "Actions" menu, based on the work date as having been specified in the settings of Dynamics 365 Business Central.

A	ctions ~ Fewe	er optic	ons			
	General	>	February 2021			
	Timescale	>	🔚 Fit into View		Wk 06	w
	View	>	Scroll to Workdate			
	Administration	>	Scale to	- XX W	ork Day	
				🖿 w	ork Week	_
		8	8	. w	ork Month	
		8		w w	ork Week ork Month	

9.3. Scrolling

The VJS offers the following options for quickly navigating to certain positions in the diagram:

- the common scrolling options by vertical and/or horizontal scrollbar
- dragging the timescale either right or left
- Scroll directly to the Dynamics 365 Business Central work date by selecting the corresponding item from the "Actions" menu.

Actions ~	ewer optic	ons
General	>	February 2021
Timescale	>	🔚 Fit into View
View	>	Scroll to Workdate
Administratio	on >	Scale to >

9.4. Fit into view

Select this item from the "Timescale" item in the "Actions" menu to switch directly to the timescale as defined in the "Setup" dialog.

9.5. Adjust the width ratio between table and diagram

For adjusting the width ration between table and diagram, put the mouse cursor on the sash between the two parts and drag the double arrow appearing then.

Job View		/ 2021	February 2021		
		Wk 02	Wk 03 Wk 04		Wk 05
⊿ Open	⇒				
► DEERFIELD, 8 WP Setting up Eight Work Areas			DEERFIELD, 8 WP Sett	ting up Eight Work Are	as
▲ GUILDFORD, 10 CR Setting up Ten Conference Rooms	ing up	Ten Conference Room	S		
▲ 1000: Begin-Total Setting up Ten Conference Rooms					
▲ 1100: Begin-Total Preliminary Services					



9.6. Show job planning line in other view

Show the currently marked job planning line in the respective other view while it gets highlighted by a blinking frame.

6	
0	Start New Link Creation
	Add to Link Creation
	End Link Creation
	Schedule Successors
	Split Job Planning Line
	Show in resource view

9.7. Search function

All three views offer a comfortable search function:

- In the Job View, you can search for jobs, job tasks, and job planning lines
- In the Resource View, you can search for job planning lines and resources
- In the Histogram View, you can search for resources.

The respective view automatically scrolls to the first search result which gets highlighted by a blinking frame, and, if possible, selected, so that the links are shown. If a view filter is active the search dialog will only show the visible elements in the VJS.

	Actions \lor Fewer opt	tions	5						
ac	General	>	Reso	ource Jo	ob Shop	o #1 (R	0040):	Capa	city
02	View Filter	>					Wk 02	2	_ _
	Timescale	>	7	08	09	10	11	12	13
_	Search	>	M	Search	Job			+	
	View	>	M	Search	Job Ta	isk			
_	Administration	>	A	Search	Job Pl	anning	g Line	-	
			A	Search	Resou	irce			
			_		20			2	20

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10. Move operations

You can move operations by mouse either horizontally or vertically, either way having a different impact.

10.1. 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.

26/01/202	1 15:36	00	
20/01/202	115.50		
ŏ	ŏ ←→-	J	
27	/01/202	11	5:35:59

10.2. 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.



10.3. Notifications

Notifications appear in a window below the menu ribbon and alert you to possible problems. They pop up in the following cases:

• when a job planning line gets moved behind the job's end date

Notifications: 4 The job planning line GUILDFORD, 10 CR, 1130, 10000 has been placed past the end date of its job

• when a resource's capacity gets exceeded

Resource Mary A. Dempsey (MARY): Capacity was exceeded

10.3.1. Show/hide notifications

If you don't want the notifications to be shown, you can hide them by ticking the according option in the VJS User Setup.



Show Notification	
Enable Notification	

11. Working with links

11.1.Create links

The VJS enables creating links on all levels of your plan - meaning between jobs, job tasks and job planning lines, even between different levels, e.g., job to job planning line and job task to job - by a context menu. According to your needs and planning situation, you can select between two possible relations:

- Start-Start (the successor must not start before the predecessor)
- Finish-Start

Click "Start New Link Creation" on the job planning line you want to start with and "End Link Creation" on the job planning line you want the link chain to end.



After having ended the link creation, you need to specify the desired relation type and link duration:

Eait - Link Options		2 ^
Manage		
RowLinkType		
Relation Type	Finish-Start	~
Link Duration (in days)		(
		Close



The link structure you build this way will be considered when one element – job, job planning line etc. - in this chain gets moved.

DEERFIELD, 8 WP Settin 01/08/21	
	GUILDFORD, 10 CRISetting up Ten Conference Rooms 02/13/21

The link duration will be considered after a drag and drop interaction or after scheduling successors. If the time interval between the linked elements is smaller than the specified link duration, the link will appear in red:



11.2.Edit links

To modify or delete links, click the according item of the link's contextmenu:

J00380	Adjust Link
	Delete Link

The "Adjust link" item will call the above shown "Edit link options" dialog.

11.3. Violated link orders

If the link order within a link structure gets violated, the according link(s) appear in red gets highlighted by a warning symbol is in the table header and on the bar.



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Link conflicts are indicated by the according links appearing in red and by warning symbol on the participating element, its parent elements and in the Gantt chart table header. Thus, the planner immediately recognizes that there is a conflict that needs solving either by manually dragging the operation or by the "<u>Schedule successors</u>" option of the context menu.



If you want to show/hide the warning signs, tick the according option in the "General" area of the VJS "User setup" dialog:

General			
Startup View	Job View 🗸	Show warnsigns for li	

The meaning of the symbols in detail:

The element has a link violation. Shown at the bar or in the table. Can be displayed in the job view at the level of the element that causes the violation (job planning line, job task, or job). In the resource view at the resource level.
A child element has a link violation. Shown in the table header and in the job view for job tasks and jobs and the status group and in the resource view for resource groups
Link violations in the element itself and in child elements. Shown in the job view at job task or job level If the children of those cause link violations and the element itself as well

12. Schedule successors

This option that can be found in the menu ribbon ensures that the link structure is being considered with no buffer time, i.e., linked operations are processed without temporal offset. This applies for the selected node and all its successors.



13. Split job planning lines

By splitting a job planning line, you will add a new job planning line to your plan. Click the according context menu item on the job planning line you want to split

In the dialog popping up you can specify

- How the quantity is to be distributed between the two lines.
- Whether you want to calculate partial quantity, so that when you enter the value for the first line, the quantity for the second line will be calculated automatically. At the same time, you



get an error warning, when the quantity of part 1 is calculated higher than the original quantity.

EDIT - SPLIT DIALOG	27
Original Quantity	2.00
Unit of Measure HOUR	
Quantity Part 1	1.00
Quantity Part 2	1.00
Calculate partial quantity	
	OK Cancel

14. Change the quantity of job planning lines

The quantity of a job planning line can be changed directly in the plan. Open the context menu of the job planning line you want to change the quantity of and click the according item:



This leads you to the self-explanatory "Edit - Change Quantity" dialog:



EDIT - CHANGE QUANTITY	2
Quantity	2.00
ОК	Cancel

15. Distribute workload of a resource individually

The standard allocation of workload to a resource in the VJS runs in such a way that the VJS will either show all job planning lines as allocated to the planning date or, if activated, will visualize the allocation according to the available resource capacities and allocate all capacities starting from the planning date until the quantity has been fully allocated. This follows the idea that as soon as a job planning line is assigned to a planning date and a resource that all efforts of the resource should immediately be dedicated to this job planning line. This is a rather inflexible approach that does not take into account the individual work pace of each resource.



To get around this, you can define a "planned end date" on the job planning line page:

boyum

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,	+ New	🐯 Edit Lis	st 📋 Delei	te Process	Report	Open in Exc	el Mo	re options		
EDIT - JOB I	PLANNING	LINES - J000	50 SETTING U	P EIGHT WORK A	AREAS 1110 DE	TERMINING SE	PECIFICATION	5		2
Job Task No	o. ↑	Line Type	Planning Date	Planned End Date	Planned Delivery Date	Document No.	Туре	No.	Description	
→ 1110		Budget	2021-09-24	2021-09- 🛗	2021-09-24		Resource	R0010	Meeting with Cus	tomer
										÷
									Clos	se

This sets a date by which the work on this job planning line should be finished. This means that with the planning date as a start and with the planned end date as end, the VJS can visualize a proportional usage over all available dates with capacity between start and end for this job planning line. This gives the user and the resource a more realistic approach to plan the intended workload over a certain amount of time and leave it to the resource to fulfill the workload on their own pace.

16. Apply individual colors to jobs

You can define individual colors for jobs that are then used for the job line and all of its job planning lines. Thus, you can very easily highlight certain jobs, e.g., the most important one.

The job color gets changed on the job card. If you want to switch to the standard VJS color again, you only need to delete the hex code from the color field on the job card.



General			Show	/ more
No	GUILDFORD, 10 CR ····	Person Responsible	MARY	\sim
Description	Setting up Ten Conference Rooms	Blocked · · · · · · · · · · · · · · · · · · ·		•
Bill-to Customer No.	50000 ~	Last Date Modified	1/28/2021	
Bill-to Contact No.	СТ000016	Project Manager		\sim
Bill-to Name	Guildford Water Department	Color (VJS)	#4f000b	
County				

17. Use filters

17.1.Data filters

Data filters work as Dynamics 365 BC filter on reading the data (either when the VJS is started or on reloading) so that they are already effective at the data interface to make sure that only filtered data are handed over from Dynamics 365 BC to the VJS.

17.1.1. Create and edit data filters

First, you have to open the according dialog by clicking "Choose Data Filter" in the "Setup" dialog:

New	Actions	Fewer options
Filter \sim		
Choose	Data Filter	

In the dialog, you can edit, create and apply not only one but multiple data filters.

✓ Search New	🐯 Edit List	📋 Delete	Show Attached	💶 Open in Excel	Actions Fewer options		
Home \vee							58
VJS FILTER CHOOSER	+ New						2
NAME			OWNER	GROUP	FILTERTYPE	SUBCATEGORY	
Show All		÷	ADMIN	Individual User	Data		
						OK Car	cel



To create a data filter, click "+New" and then enter the name of the new filter. To specify the filter settings, click "Actions" "Edit Data Filter".



You can filter by jobs, job tasks, resource groups and resources:

VJS FILTER	2
Filter: Job	*
× No	$\overline{}$
× Description	
+ Filter	
Filter totals by:	
+ Filter	
Filter: Job Task	
× Job No	\sim
× Job Task No.	
× Description	
+ Filter	
Filter totals by:	
+ Filter	
Filter: Resource Group	_
× No	\sim
×Name ·····	
+ Filter	•
ОК Саг	ncel

The job task filter enables users who only want to see a specific portion of big jobs to do so. Since this data filter may result in a list of projects for which no project tasks were found, there will be a message for the user indicating that the specified filter conditions did not allow for any job tasks to be loaded.

If you want to make sure that the "Edit Data Filter" dialog pops up when you start the VJS, tick the according option in the "Setup" dialog:

Filter	
Show Data Filter on Start	



17.2. View filters

View filters are applied to data already having been loaded into the VJS. Accordingly, only the capacity utilization by the visible activities are shown in the histograms. To work with the filters, the "Actions" menu offers three according options:



Click "Choose View Filter" to open the list of existing filters where you can create, delete and edit filters as described in the "Data filters" section.



18. The User Setup dialog

🐴 User Setup

The "User Setup" dialog allows customizing basic settings of the Visual Jobs Scheduler. You reach it via "Actions" -> "Administration

Here you can make or see the basic settings for:

18.1.Timeframe:

• Specify the timeframe that sets the time range covered by the timescale, either fixed by absolute values or relative to the workday (see also 7.1., "Setting the timeframe).

Nore options			
Timeframe Type			
Starting/Ending Date Input	Туре	Relative date	~
Timeframe			
Absolute Values		Relative Values	
Starting Date	12/31/2020	Starting Date · · · · · · · · · · · · · · · · · · ·	
Ending Date	4/28/2021	Ending Date +12M	
Filter>			
Data Filter >			

18.2.Filter

 \circ $\;$ Decide whether the "Edit Data Filter "dialog pops up when you start the VJS.





18.2.1. Data Filter

• See which data filter is currently active.

Data Filter		
Current Data	Show All	Resource Gr
Job Filter		Resource Filter

18.3.General

o Decide which **view** is shown upon starting the VJS

General	
Startup View	Last Active View 🗸
	Last Active View
	Job View
	Resource View

18.4.Company settings

This section of the "User Setup dialog" gives you an overview of settings being applied companywide. See

- which way of calculating the quantity of job planning lines is activated. In standard Dynamics 365 Business Central the quantity of job planning lines is calculated independent of the resource's capacity. The VJS allows to bypass this way of visualizing the quantity by activating "Calculate Job Planning Line Duration" in the "Company Setup" dialog.
- whether the resource summary bar gets displayed or not
- whether to enable employee absences for calculation: Absence times of employees that are linked to resources can be visualized in the plan, both in the calendar and in the histogram capacity curve:





• whether you want to **move items along with job tasks**: You can let the VJS track whether the time of the job task has changed and then automatically adapt the time of the item job planning line. Thus, you needn't adjust the timing of a job planning line of the type "item" to possible shifts of the belonging job task manually in the job planning line list.

Edit - Visual Jobs Scheduler Compa	ny Settings - VAPS Webinar - 29 Sep 2020	2 ×
Company Setup		
Calculate Job Planning 🔹 🦲	Enable Employee Abse 🕚 💽	
Hide Resource Summa ·	Move Items along wit	
		Close
		L

18.5. Show Notification

When a job planning line gets moved behind the job's end date or in case of a resource overload, a notification window pops up, informing the user about possible problems.

Notifications: 3 Resource Mary A. Dempsey (MARY): Capacity was exceeded

If you don't want this notification window to be shown you can switch it off here:

Show Notification	
Enable Notification	

18.6.Calculation

Calculation
Enable Employee Absences for calculation

• **Absence times of employees** that are linked to resources can be visualized in the calendar and the histogram capacity curve.

18.7. Appearance

Appearance		
Zoom Factor(%)	100	Output of Decimal Values
Layout · · · · · · · STANDARD	~	Limit Decimal Places · · · ·
Show allocated worki		Maximum Decimal PI 2
Tooltip Delay (ms)	750	Asynchronous Time
		Asynchronous Rende

• Specify a **zoom factor** in percent.



• Choose a **layout**: In the "Compact" layout, the display is reduced as much as possible to provide a better overview, especially with large plans.

Visual Jobs Scheduler: All D NETRONIC VJS D 🕼 Open in Excel Actions D Fewer options Notifications: 13 Resource Steve Miller (R0080): Capacity ... | Resource Allan Jacobsen (R0070): Capacity... | Resource Job Shop #1 (R0040): Capacity ... | Resource John Meyer (R00 Decer January 2021 ~ Job View Wk 53 Wk 01 Wk 02 14 15 16 17 04 05 06 07 08 09 10 11 12 02 03 1110: Posting Determining Specifications Budget: MARY Meeting with Customer 1120: Posting Selecting Furnishings Budget: MARY Selecting Furnishings 1130: Posting Obtaining Customer Appro Budget: MARY Meeting with the Customer 1200: Begin-Total Assembling the Furniture etc 1210: Posting Assembling the Furniture etc. esource Mark Hanson Budget: MARK Delivering and Assembling 1300: Begin-Total Closing the Job

Standard layout:

Compact layout

/isual Jobs Scheduler: All 🛛 🛛 NETRONIC VJS 🗆 🖾 O	pen in Excel	Action	s 🗆 🛛 Fe	wer optio	ns														
Notifications: 13 Resource Steve Miller (R0080): Capacity	Resource All	an Jacobsen (R0070): C	apacity	Reso	urce Job	Shop #1 (R0	0040): Cap	acity	Resou	rce Johr	n Meyer (H	:0030):	Capacit	y	Resour	ce Paul	Little (i	(R0020):
Job View	Decer Janu Wk 53	ary 2021	Wk 01	ا م	07	0.8	09 10	Wk 02	113	14	15	16 17	Wi	k 03	20	21	22	22	24
1110: Posting Determining Specifications	51 01	02 05	04 0	5 00	101	100 1	05 10	11 12	15		1.5	10 17	10		120	121	LL		
▲ Resource Mary A. Dempsey																			
Budget: MARY Meeting with Customer						2													
▲ 1120: Posting Selecting Furnishings							100 -												
▲ Resource Mary A. Dempsey																			
Budget: MARY Selecting Furnishings							2												
1130: Posting Obtaining Customer Approval											112.								
▲ Resource Mary A. Dempsey																			
Budget: MARY Meeting with the Customer											2								
▲ 1200: Begin-Total Assembling the Furniture etc.																			
▲ 1210: Posting Assembling the Furniture etc.													0	%					
▲ Resource Mark Hanson																			
Budget: MARK Delivering and Assembling													20						
1300: Begin-Total Closing the Job																			

• **Show allocations on a job in the job line:** This option allows to highlight all dates on the job line in the Gantt view on which job planning lines are planned and occupy resources:



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Joh View	Decembe January 2023									
JOD VIEW	Wk 52	Wk 01	Wk 02	Wk 03						
🖌 Open										
DEERFIELD, 8 WP Setting up Eight Work Areas				DEERFIELD, 8 WP						
▲ GUILDFORD, 10 CR Setting up Ten Conference Rooms	G	JILDFORD, 10 CR								
▲ 1000: Begin-Total Setting up Ten Conference Rooms										
	_									

- Specify a **tooltip delay**: give a time in milliseconds after which the tooltip shall appear
- Specify the **number of decimal places** displayed in tooltips, bars, and tables.
- Improve the **visual responsiveness and performance** when navigating big plans by ticking off/on the options:
 - Asynchronous Time-Area Stretching
 - Asynchronous Rendering

18.8.Configure tooltips

The tooltips in the VJS provide further information on the following items of your jobs schedule:

- o Jobs
- o Job planning lines
- $\circ \quad \text{Job tasks}$
- $\circ \quad \text{Resource groups} \quad$
- \circ Resources
- $\circ \quad \text{Resource summaries} \quad$

You can specify which information is to be shown in the tooltip of the respective item in the according "Configurations" dialog - to be reached by clicking "Configurations" in the "Actions" menu of the "User Setup" dialog.

Actions	Fewer options
Configur	rations \sim
📌 Tooltip	
📌 Label	
📌 Table	

In the dialog popping up, you just click the item for which you want to customize the tooltip:



🔎 Search 📲 Open in Excel More options	
VIEW - SELECT TOOLTIP	\swarrow \times
Description	
dol	
Job Planning Line	:
Job Task	
	Close

The "Edit – Define Configuration" dialog pops up.:

Q	Search	+ New	👿 Edit List	📋 Delete	🛧 Move Up	\rm Move I	Down	Open in Excel	
EDIT	T - DEFIN	E CONFIGU	RATION						2
Uob Pla	inning Lin	ie							
	Table Na	ime					Field Na	ime	
	Job Plar	nning Line					Job No.		
	Job Plar	nning Line					Job Tasł	k No.	
\rightarrow	Job Plar	nning Line				:	Descrip	tion	
	Job Plar	nning Line					No.		
	Job Plar	nning Line					Status		
	Job Plar	nning Line					Plannin	g Date	
									Close
									ciose

Here you can:

• Add a new field:

either click +NEW or just click in the last row. You can select the desired table name and field name from your Dynamics 365 BC data by clicking "...":

AVAILABLE VALUES							
Value 1							
Job							
Job Planning Line							
Job Task							



The list of available table names

AVAILABLE VALUES					
Value 1					
Bin Code					
Cost Factor					
Country/Region Code					
Currency Code					
Currency Date					
Currency Factor					
Customer Price Group					
Description					
Description 2					

The list of available field names depending on the table selected previously

- **Insert a new field**: Select the field above which you want to insert a new one and proceed as described above.
- **Delete a field**: Click "Delete" in the menu ribbon
- **Change the order** by clicking "Move up" or "Move down"

18.9.Configure bar labels

You can decide which D365 BC information is to be shown as bar label.

Bar labels are shown on

- jobs
- job planning lines in the Job View
- job planning lines in the Resource View

In the picture below, the bar label contains

- the job number and the job description separated by "|"
- the job ending date in a new line

GUILDFORD, 10 CR | Setting up Ten Conference Rooms 01/31/21

The settings are made in the corresponding dialog that can be found by clicking "Configurations" in the "Actions" menu of the "User Setup" dialog:

Actions	Fewer options			
Configur	rations \checkmark			
📌 Tooltip				
📌 Label				
📌 Table				

In the "View - select label" dialog, select the item and/or view for which you want to customize the bar label

Search 🖾 Open in Excel More options		
VIEW - SELECT LABEL	≣ 8	$ \ \ \ \ \ \ \ \ \ \ \ \ \$
Description		
dol		÷
Job Planning Line in Job View		
Job Planning Line in Ressource View		
		Close



The "Edit – Define Configuration" dialog pops up:

Q	Search	+ New	🐯 Edit List	📋 Delete	🛧 Move Up	\rm Move 🛛)own	Open in Excel	
EDIT	- DEFIN	E CONFIGU	RATION						2
lob									
	Table Na	me					Field Na	me	
	Job						No.		
	VJS Forr	mat Strings							
	Job						Descrip	tion	
\rightarrow	Job					:	Ending	Date	
									Close

Here you can add, insert, edit, and delete fields as well as change their order. You can select the desired table name and field name from your Dynamics 365 BC data by clicking "..."

18.9.1. Formatting the labels

Separate the field contents by a line break, a blank or a "|" by selecting the according separator from the "VJS Format Strings" table.

AVAILABLE VALUES				
Value				
New Line				
Space				
I				

18.10.Configure table labels

You can decide which D365 BC information is to be shown as table label.

Table labels are shown on

- jobs
- job tasks
- job planning lines
- resources
- resource groups
- resource summaries



The settings are made in the corresponding dialog that can be found by clicking "Configurations" in the "Actions" menu of the "User Setup" dialog:

Actions	Fewer options
Configur	ations 🗸
🕂 Tooltip	
📌 Label	
📌 Table	

In the "View - select table text" dialog, select the item and/or view for which you want to customize the table label

✓ Search III Open in Excel More options	
VIEW - SELECT TABLE TEXT	$ \mathbb{Z} \times $
Description	
Job	:
Job Task	
Job Planning Line	
Resource	
Resource Group	
Resource Summary	
	Close

The "Edit – Define Configuration" dialog pops up:

م	Search	+ New	🐯 Edit List	📋 Delete	🛧 Move Up	V Move [Down	💶 Open in Excel		
EDI	T - DEFIN	E CONFIGU	RATION						≣ 8	27
Resour	esource Group									
	Table Na	me					Field Na	me		
	SIMRes	ourceGroup					Name			
	VJS For	mat Strings					Space			
	VJS For	mat Strings					(
	SIMRes	ourceGroup					No.			
\rightarrow	VJS For	mat Strings) :)			
										Close



Here you can add, insert, edit, and delete fields as well as change their order. You can select the desired table name and field name from your Dynamics 365 BC data by clicking "..."

18.10.1. Formatting the labels

Separate the field contents by a blank, or by the separators shown below by selecting the according character from the "VPS Format Strings" table.

Available Va	alues	ע ∖	
Valu	Je		
Ne	w Line		
Spa	ace		
1			
1			
(
\rightarrow)			

In the picture below, you see the table label of a job planning line and its corresponding settings in the dialog.

Budget: MAF	Y Selecting	Furnishings
-------------	-------------	-------------

Table Name		Field Name
Job Planning Line		Line Type
VJS Format Strings		:
VJS Format Strings		Space
Job Planning Line		No.
VJS Format Strings		Space
Job Planning Line	:	Description



19. The Company Setup dialog

The settings in this dialog are applied company wide. Here you can

- Determine whether the quantity of job planning lines is calculated independent of the resource's capacity. In standard Dynamics 365 Business Central the quantity of job planning lines is calculated independent of the resource's capacity. The VJS allows to bypass this way of visualizing the quantity
- Hide or show the resource summary bar: some companies' processes include either several allocations per resource for one job task or considerably more than two resources per job task. These processes are much better visualized without a summary bar for the resources and so we created an option for hiding it.

Company Setup	
Calculate Job Plannin	Hide Resource Summ ·

20. Reload and save data

You can always reload data, thus discarding your changes as well as getting the latest status of your NAV data. The "General" items allow reloading or saving.

Actions \smallsetminus	Fewer optic	ons	
General	>	🞲 Reload	
View Filter >		🚽 Save	
Timescale		Schedule Successors	
View			
Administration >			

If there are unsaved changes in your plan when you click "Reload", a dialog pops up where you can decide whether to save these changes or discard them.

?	There is unsaved Data, do you want to save?	,	
		Yes	No



After having saved your changes, a confirmation message pops up:



