



DOCUMENTATION

just plan it 365

Connecting Microsoft Dynamics 365 Business Central with just plan it to achieve an easy time and resource scheduling for Business Central manufacturing customers

Version: 1.0 | 28. November 2018

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1 Prerequisites for getting started

This is a step-by-step guide how to connect your Business Central account with the just plan it software (via the just plan it 365 app). You also learn how you then add the respective data into your Business Central account so that you are ready to go for an easy production scheduling with just plan it. **We strongly recommend that you follow these steps in this sequence of order.**

Before you get going, please make sure that you have the following in place.

1.1 Microsoft Dynamics 365 Business Central

You need to have a Business Central account. Business Central Essentials is fine for just plan it. You **do not** need to have Business Central Premium. The just plan it 365 app just and only works with Dynamics 365 Business Central.

Go to Microsoft AppSource and install the just plan it 365 app into your Business Central account. No worries: it's free. If you do not know how to achieve this, please ask your Business Central partner.

1.2 just plan it

You need to have a just plan it account on the so called PRO plan ([you can compare plans and pricing here](#)). If you do not have a just plan it account yet, go ahead and [create a trial account](#). It is free for 30 days, and by default the trial is on the PRO plan. If you want to continuously use just plan it with Business Central via the just plan it 365 app, you need to subscribe to a just plan it PRO plan.

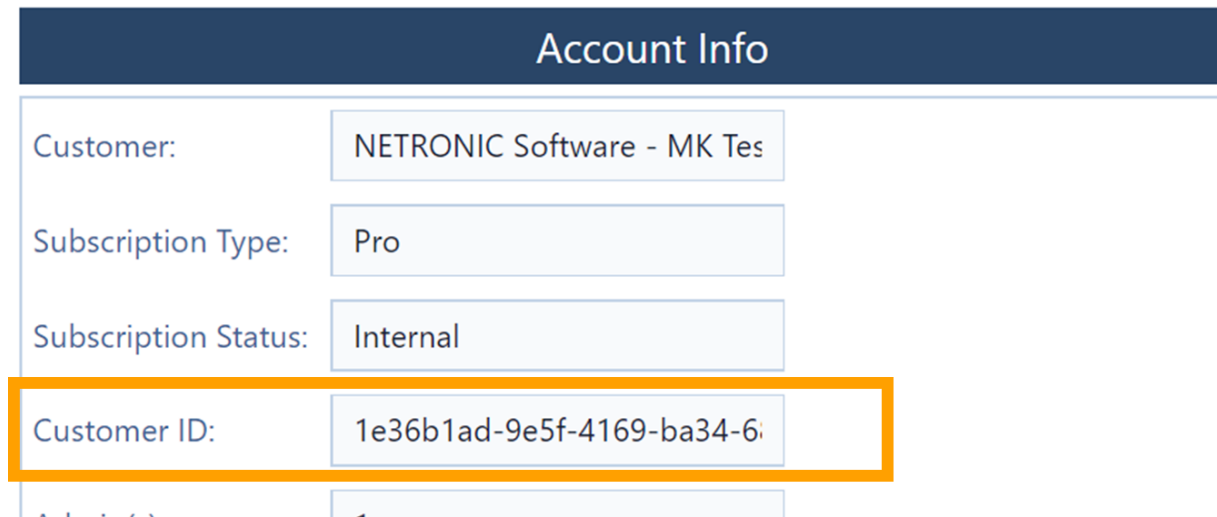
That's all you need. If you have this in place, you are ready to go ... and should follow the steps below.

1.3 Important notice

just plan it is a software that is independent of Dynamics 365 Business Central. You need to have a separate user account for just plan it and cannot directly log in with your Business Central user account.

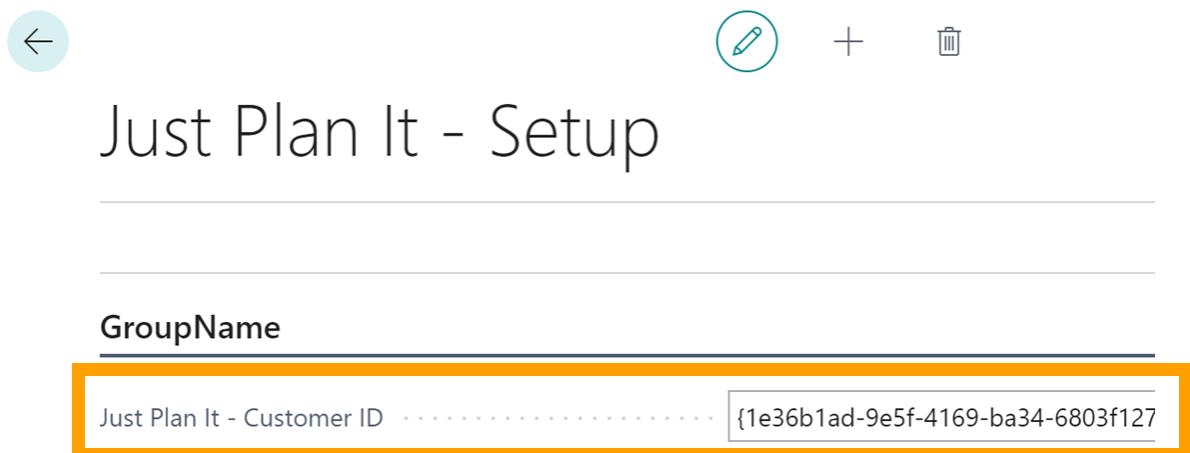
2 Step 1: Connect your just plan it and Business Central accounts

Log into your just plan it account. Go to "Settings" and click the "User management" button. On the left part of the screen, you see your account information. Here, you can see your unique just plan it customer ID, as outlined in the screenshot below. This customer ID consists of many numbers and letters - never mind. The only thing that you need to do is: copy this customer ID.



Next, log into Microsoft Dynamics 365 Business Central. Open the search bar (if you do not know how to achieve this: hit ALT+Q) and type in "just plan it".

If you installed the just plan it 365 app before (see prerequisites), you should see a link to "Just Plan It - Setup" in the admin section of the search results. Click this link to open the just plan it 365 setup page. Now paste the just plan it customer ID into the only field on this page. Then close this page.



Your accounts are now successfully connected.

3 Step 2: Add resource calendars to your Business Central resources

Ultimately, scheduling is all about bringing together

- the demand for internal capacity (coming from items that you need to produce)
- with the supply of internal capacity

In that regard, just plan it schedules tasks (coming from jobs / production orders) to resources. Resources are described by

1. The resource group they belong to
2. The times that they work and do not work
3. Their type (finite or infinite)

With the just plan it 365 app, you can set this up within Business Central. Well, to be precise: (1) is a standard Business Central functionality, whereas (2) and (3) is new functionality coming from the just plan it 365 app. Let's have a closer look.

3.1 Define resource groups and assign resources to them

As stated above, defining resource groups is a **standard Business Central functionality**. The just plan it 365 app also does not change this functionality at all. However, it is important to know that **you should work with resource groups in Business Central** if you want to achieve a proper production scheduling with just plan it.

Here is why: instead of assigning a task to a dedicated resource, just plan it allows you to assign a task to a resource group. The automatic scheduling engine of just plan it then finds that resource within this resource group, which can complete the assigned task at earliest. The screenshot shows how you can define resource groups in Business Central (and which type of information we need for just plan it). You see: this is pretty straight-forward.

Resource Groups

NO.	NAME
100	Cutting
200	Heat treatment
300	Sawing
400	Drilling
500	Milling
600	Quality control

Once you have set up your resource groups, you need to add your resources to these groups. Again, this is an absolute standard Business Central functionality and this is achieved via the **resource card**.

The screenshot shows the resource R0010 Cutting #1 which is defined as a resource of the type "machine", and which is added to the resource group 100 (cutting):

General

Name	Cutting #1	Blocked
Type	Machine	Last Date Modified
Base Unit of Mea...	STUNDE	Use Time Sheet
Search Name	CUTTING #1	Time Sheet Owne...
Resource Group ...	100	Time Sheet Appr...

3.2 Work and non-work times of your resources

If you scroll down the resource card, you notice that the standard resource card got enhanced by the just plan it 365 app. It now includes a section that is called "Just Plan It Calendar". It is very **important to populate this section of the card** with data. Here, you define the work and non-work times of your resources by work day. In other words: you define the base calendar of your resources as it will be used in just plan it.

Just Plan It Calendar

Finite	<input checked="" type="checkbox"/>	Thursday	7-15 15:30-22
Monday		Friday	7-15 15:30-22
Tuesday		Saturday	8-14
Wednesday		Sunday	

Here are some rules:

- If you leave the field for a day blank, then this means you define a non-work day (e.g. Sunday in the screenshot).
- If you type in numbers, use the 24 hours' time scheme. 8-14 translates into 8 am to 2 pm.
- If you have shift breaks, type in multiple time intervals. E.g. 8-12 12:30-17.
- If you work 24/7, type in 0-24 for each day.

Please notice: the **capacity in just plan it will be derived from this "base calendar"** of the resources that you define on the resource card. **just plan it will ignore the resource capacity that you can define elsewhere in Business Central** (by just giving an available amount of hours per day).

3.3 Finite or infinite resource

In just plan it, we can differentiate between finite and infinite resources. You can also make this differentiation when setting up your resource calendars in Business Central (please have a look at the screenshot above, where the finite option is selected). So, what does this mean?

- **Finite resources** can handle one task at a time. In just plan it, they will never get "over booked".
- **Infinite resources** can handle as many tasks at a time as you assign to them. We recommend that you use this option for resources with which you "model" outsourced tasks.

OK - that's it for step 2 "Add resource calendars to your Business Central resources". Of course, **you need to do (2) and (3) for each resource that you have in Business Central** and that you want to use for production scheduling with just plan it.

4 Step 3: Add manufacturing routings to the items that you produce

As outlined earlier, scheduling is all about matching internal demand for capacity and internal supply of capacity. In step 2, you defined your internal capacity supply via the respective resource calendars. Consequently, in this step you create the basics to determine the internal demand for capacity. Here's our approach to this:

In Business Central Essentials, you do not have manufacturing orders. But what you have are items that you add to a sales quote, respectively sales order. Most likely, some of these items are just commodity goods that you shop elsewhere. However, some of these items **are items that you produce on your own** (with the resources that you just defined in step 2). This is where just plan it kicks in. So, with the just plan it 365 app, we made two additions to the standard item card.

First, we added the option "JPI-Job" to the replenishment options. If you select this option, a new just plan it job (i.e. a production order) will be created in just plan it (!) if this item is added to a sales order/quote.

ITEM CARD

1896-S · ATHENS Schreibtisc

Process Item History Special Sales P...ces & Discount

Replenishment

Replenishment Sy... ·	JPI-Job ▼	ASSEMBLY
Lead Time Calcul... ·		Assembly Policy
PURCHASE		Assembly BOM

Second, if you scroll down the item card, you recognize a complete new section called "just plan it - Routing". Here, you can define **the steps that you need to make** on your shopfloor to produce that item. You also define **how long it takes per step to make one item** and you define **which resource (group) you need to make this happen**. The screenshot below shows this in detail (please note: you might not see all columns at one glance depending on your screen size and depending if you show the right-hand info boxes on the Business Central page. But never mind: in that case, you can scroll left and right to access all columns).

just plan it - Routing		Manage				
TASK #	TASK NAME	PRED. TASK #	RESOURCE	RESOURCE GROUP	RUNTIME PER UNIT	
10	⋮ Cut			100	36,00	
20	Heating	10		200	44,00	
30	Saw	20		300	28,00	
40	Drill	30		400	40,00	
50	Mill	40		500	30,00	
60	QC	50		600	12,00	

Here are all the columns described. Please notice that **each row represents one task from the overall job** to make that specific item.

- **Task#:** This is the number of the task. You can use whatever number or text you want. We recommend that you keep this simple as you will need to reference to this task number. On each item card, each task number must be unique. That means, you cannot use task# = 10 in two lines on one item card. However, in the routing for item A, and the routing for B you can each have one task with task# = 10.
- **Task name:** Any name that you want to give to that task.
- **Pred. task#:** This is the number of the predecessor task. In the above case, task 20 follows task 10. That means that task 10 needs to get finished before you can start with task 20. If a task has two predecessors, type in their numbers separated by a comma, but no blank. Example: if tasks 20 and 30 both are followed by task 40, please type in as pred. task# for task 40: 20,30.
- **Resource:** You can select one of your resources. In our above example, we left this blank as we recommend scheduling via resource groups. If you specify a dedicated resource, we treat this as a resource restriction aka "this specific resource will need to work on this task; no options".
- **Resource group:** You can assign the respective resource group via a drop-down menu from all your resource groups.
- **Runtime per unit:** This is the time (in minutes) it takes to make one unit of this item on that specific resource / resource group.

Guess what? This is all we need to determine the internal demand for capacity. Go ahead and make this for all items that you produce on your own ... and you are just one step away from building a compelling visual production schedule with just plan it.

5 Step 4: Add items "with routings" to sales orders/quotes and start scheduling

Good news: with finishing step 1-3, you completed all your "data setup" work. Now, you are all set and can start building your production schedule with just plan it by adding and managing your sales quotes and orders in Business Central. Here is how:

5.1 Case 1: Adding one item to a sales order/ quote

Create a new sales order or quote. Please notice that the integration between Business Central and just plan it works exactly the same for sales orders and sales quotes. Going forward we just reference sales quotes. However, the same also applies for sales orders. Having said this ... create a sales quote and add an item for which you (a) set the replenishment method to "JPI-Job" and (b) defined a just plan it routing. In case of the below screenshot, the ATHENS desk (item no 1896-S) is of that kind:

SALES QUOTE

1016 · School of Fine Art

Process Quote Request Approval Actions Navigate Less options

General Show more

Customer Name School of Fine Art Requested Delivery Date

Contact Meagan Bond Production Finish Date

Due Date 30.04.2018

TYPE	NO.	DESCRIPTION	LOCATION CODE	QUANTITY	PLANNED END DATE	PRODUC... STATUS	ASSEMBLE TO ORDER	QTY. TO ORDER	UNIT OF MEASU CODE
Item	1896-S	ATHENS Schreibtisch		15		Planned			STÜCK

Once you type in the quantity and leave the quantity field on the item line, you see two arrows show up in the quantity field (highlighted in the screenshot). They tell you that currently your Dynamics 365 Business Central is communicating with just plan it. Precisely, the following is happening:

1. When you add an item (with replenishment = "JPI-Job" **and** a defined "just plan it routing") to a sales quote/order, we automatically add this as a new job to just plan it.
2. just plan it schedules this job ... and takes into account your capacity, your resource's availability and also the utilization of these resources by other jobs (with higher priority). Of course, we also make use of the routing information you defined (as of step 3 above).
3. The result of the automatic scheduling in just plan it is that we know the finish time for the last task of this specific job. This is what we call the "planned end date".
4. The planned end date is returned to Business Central and shows up in the item line (see below). In addition, just plan it also returns the production status. Initially, this is "planned" as the new job had just been added to the just plan it schedule. However, if you work with the just plan it [Execute Mode](#) and add shopfloor data to your schedule, this can also change to "started" or "finished".

All of this happens on the fly, and typically it takes a few seconds (and not much more) for just plan it to return the planned end date value and the production status to Business Central and to populate

DOCUMENTATION

the respective field in the sales quote item line. With this, everybody working with Business Central can see when an item will be produced and what the current status is.

SALES QUOTE

1016 · School of Fine Art

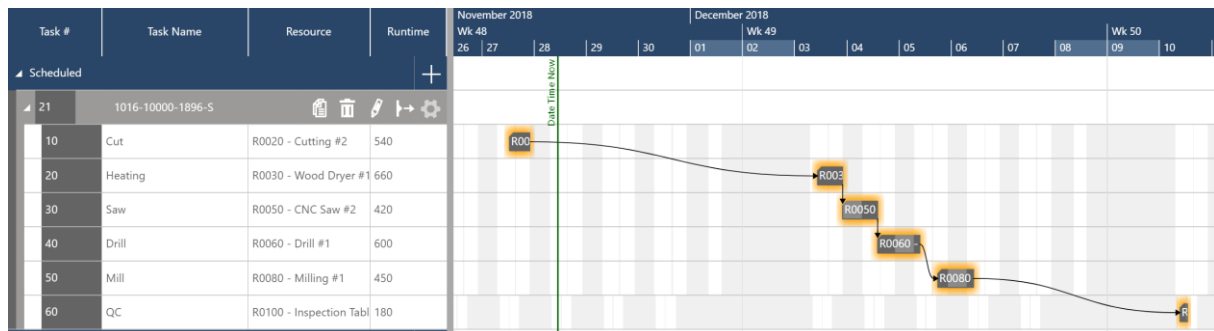
Process Quote Request Approval Actions Navigate Less options

General Show more

Customer Name: School of Fine Art Requested Delivery Date: []
Contact: Meagan Bond Production Finish Date: 10.12.18 14:16
Due Date: 30.04.2018

TYPE	NO.	DESCRIPTION	LOCATION CODE	QUANTITY	PLANNED END DATE	PRODUC... STATUS	ASSEMBLE TO ORDER	UNIT OF MEASU CODE
Item	1896-S	ATHENS Schreibtisch		1	10.12.2018 14:16	Planned	0	STÜCK

And by the way, in just plan it this looks as follows:



Of course, in just plan it you can reschedule this job and the tasks both via drag & drop and via triggering some more sophisticated automatic scheduling procedures (such as changing the priority, adding extra shifts or taking into account machine downtime). By the way: the "gap" e.g. between the first and the second task result from the fact that the resource required for task 20 is utilized for higher priority jobs already.

Last, but not least, please have a look at the name that we gave to the job in just plan it. It is 1016-10000-1896-S. This means that **the just plan it job name always consists of three parts, which all come from Business Central:**

- Sales order/ quote number (1016)
- Item line number (10000)
- Item number (1896-S)

This makes it easy for you to keep the reference between your Business Central sales order/quotes and the just plan it jobs.

5.2 Case 2: Adding multiple items to one sales order/ quote

For sure, you can also add multiple items to one sales quote. When you do this, the same mechanisms apply as outlined above. You just should know the following:

- We create a **new just plan it job for each item** that you add to a sales quote.
- That means you get a separate production end date for each item.
- In the sales quote (order) header, you also see a production finish date. This is the latest date of all of these separate production end dates of the individual items.

The below screenshot reflects this.

1017 · Relecloud

Process Quote Request Approval Actions Navigate Less options

General Show more

Customer Name Relecloud

Contact Izaak Schroder

Due Date 23.04.2018

Requested Delivery Date

Production Finish Date 12.12.18 16:00

Lines | Manage More options

TYPE	NO.	DESCRIPTION	LOCATION CODE	QUANTITY	PLANNED END DATE	PRODUC... STATUS	ASSEMBLE TO ORDER	UNIT OF MEASU CODE
Item	1896-S	ATHENS Schreibtisch		10	10.12.2018 12:46	Planned	0	STÜCK
Item	1900-S	PARIS Gästestuhl, schwarz		20	12.12.2018 16:00	Planned	0	STÜCK
Item	1908-S	Schreibtischstuhl ohne Arml...		20	10.12.2018 16:36	Planned	0	STÜCK

6 Further information: learning just plan it

The above is meant to support you with using the just plan it 365 app ... and triggering an automatic and easy production scheduling within just plan it from Microsoft Dynamics 365 Business Central.

However, just plan it offers much more functionality than outlined above and we **highly recommend to work with the following resources to learn just plan it**. And please, use these resource in the given sequence of order:

1. Understand the visual scheduling cycle of update, understand, schedule, report, execute and [watch the really short tutorial videos](#) that show you how just plan it supports you mastering the visual scheduling cycle.
2. We regularly host webinars to discuss and present just plan it. We record all of them and offer the option to watch the recordings without even asking for your name. We have an [extra website to host the 3-5 most compelling and meaningful recorded webinars](#).
3. We also regularly document each and every just plan it function. However, we find that seeing just plan it in action is much more helpful than reading a documentation. Just in case you [want to read the documentation: here you go!](#)
4. Last, but not least: we blog about new stuff that we keep on adding to just plan it. [Here are all blogs that are tagged as "product news"](#). We recommend that you bookmark this page and come back regularly.

7 Document History

VERSION	COMMENT
1.0	Initial document