How to Work with Production in SAP Business One 9.3
## Typographic Conventions

<table>
<thead>
<tr>
<th>Type Style</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Example</strong></td>
<td>Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options. Textual cross-references to other documents.</td>
</tr>
<tr>
<td><strong>Example</strong></td>
<td>Emphasized words or expressions.</td>
</tr>
<tr>
<td><strong>EXAMPLE</strong></td>
<td>Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.</td>
</tr>
<tr>
<td><strong>Example</strong></td>
<td>Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.</td>
</tr>
<tr>
<td><strong>Example</strong></td>
<td>Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.</td>
</tr>
<tr>
<td><strong>&lt;Example&gt;</strong></td>
<td>Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.</td>
</tr>
<tr>
<td><strong>EXAMPLE</strong></td>
<td>Keys on the keyboard, for example, F2 or ENTER.</td>
</tr>
</tbody>
</table>
## Document History

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>2014-09-10</td>
<td>First version</td>
</tr>
<tr>
<td>2.0</td>
<td>2015-04-13</td>
<td>Minor changes</td>
</tr>
<tr>
<td>3.0</td>
<td>2016-12-22</td>
<td>Minor changes</td>
</tr>
</tbody>
</table>
| 4.0     | 2017-08-18 | • Introduced the concept of Single Run Capacity in Resource Master Data and Resource Capacity.  
• Added production routing related fields in BOM and Production Orders.  
• Added batch change production order status functionality in Production Orders. |
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<th>Section</th>
<th>Title</th>
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<td>10</td>
<td></td>
<td>Interim WIP Consolidation Account Mapping</td>
<td>60</td>
</tr>
</tbody>
</table>
The Resources module together with the existing production functionality provides a base platform for managing light manufacturing processes in SAP Business One.

A resource is defined as a commodity, machine, labor, or other asset used to produce goods and services. As opposed to items, resources have capacity available throughout a period of time which can be consumed in a production process. Resources (resource capacity) can therefore be assigned to production orders. Resource capacity is always viewed within a period of time called “capacity period”.

Consumption of resources in a production process contributes to the overall production costs and can be split into underlying cost elements for further accounting purposes.

Using the resources functionality, you can perform the following key business functions:

- Manage basic production capacity
- Analyze real production variances
- Simplify BOM management
- Use production order more flexibly
2 Initial Settings

2.1 Defining Primary G/L Accounts

Define G/L accounts to be used for resources. Postings behind transactions are made to these accounts directly unless you create advanced G/L account determination rules for resources and specify other accounts for certain transactions.

**Example**

You may have different resource groups which should use different standard cost expense accounts. If you name Standard Cost Expense 1 differently for two different groups, the system posts costs for both resource groups to the account defined for the Standard Cost Expense 1 in the G/L Account Determination window. To enable posting values for Standard Cost Expense 1 to different accounts depending on the resource group, you can define advanced G/L account determination rules, according to which the system will post cost expenses to the accounts determined by each resource group separately. For more information, see 2.2 Advanced G/L Account Determination.

**Procedure**

From the SAP Business One Main Menu, choose Administration → Setup → Financials → G/L Account Determination → G/L Account Determination → Resources tab.

<table>
<thead>
<tr>
<th>Account</th>
<th>Description</th>
</tr>
</thead>
</table>
| Std. Cost Expense 1 ... 10 | Note  
These fields are available only if you are using a perpetual inventory system.  
Define accounts for up to ten standard cost expense components. Each of the standard cost components is posted when the resource is consumed through the production order, that is, when a user creates the issue for production document with resource lines. When issuing to production, each separate standard cost component numbered from 1 to 10 is credited according to the quantity consumed to the corresponding standard cost expense account and debited to the related WIP account. |

| Resource WIP Account | Note  
This field is available only if you are using a perpetual inventory system.  
This account maintains the value of resources that are included in the work process, that is, the period between the start of production and the completion of the final product. The value from this field is copied to the Account Code field for resource lines in the issue for production document if the following applies:  
- The Component WIP Account radio button is selected for the production order document in the Document Settings window. For more information, see 7.6 Document Settings and WIP Account.  
- You have not defined the Account Code field for a resource line in the Production Order window.  
If you defined the Account Code field for a resource line in the production order manually, or if the value has been copied from the Bill of Materials window, then that |
### Offset accounts

<table>
<thead>
<tr>
<th>Account</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WIP Offset P&amp;L</strong> Account</td>
<td>This account is used to offset the WIP resource account posting.</td>
</tr>
<tr>
<td><strong>Resource Offset P&amp;L Account</strong></td>
<td>This account is used to offset all of the Std Cost Expense accounts that are in use. This offset account selects component related account irrespective of the document settings option for parent or component WIP accounts.</td>
</tr>
</tbody>
</table>

#### Note

The offset accounts are available only if you are managing accounting with Balance Sheet accounts and Profit and Loss accounts. To manage accounting with these accounts, from the SAP Business One Main Menu, choose Administration → System Initialization → Document Settings → Per Document tab, in the Document field, select Production Order. In the Posting Schemas for Manufacturing area, select the Accounting with Balance Sheet Accounts and Profit & Loss Accounts radio button.

Postings for resources related to issues for production, receipts from production and production order closure impact these accounts. That is, the offset accounts appear in any posting in which the WIP account and the Std Cost Expense accounts are used.

The offset postings are dependent on the definition in the Document Settings window for the production order of whether to use component or parent item WIP accounts for component transactions. For more information, see 7.6 Document Settings and WIP Account.

---

### Advanced G/L Account Determination

You can manage resource G/L account determination according to a flexible and centralized method. By setting a hierarchy of rules, you can assign resource G/L accounts by the following determination criteria:

- Resource groups
- Resources
- Warehouses
- Various combinations of all the above criteria

If defined, the advanced G/L account determination rules have priority over the settings in the G/L Account Determination window. However, there are exceptions, for example, if you define the WIP Account field in the Bill of Materials or the Production Order window manually, that account will be used as the WIP account regardless of the criteria you defined in the Advanced G/L Account Determination window. For more information on this functionality, see the How To Set Up and Work with Advanced G/L Account Determination guide in the documentation resource center.
2.3 Enabling Fixed Assets Functionality

If you want to associate some resources with fixed assets, you need to enable the fixed assets functionality.

Procedure

1. From the SAP Business One Main Menu, choose Administration → System Initialization → Company Details → Basic Initialization tab.
2. Select the Enable Fixed Assets checkbox.

A system message appears informing you that enabling this functionality is an irreversible process. Choose Yes.

3. On the Basic Initialization tab, in the Calculate Depreciation By field, select one of the following options:
   - Month
   - Day
4. Choose Update.

For more information on how to use the fixed assets functionality, see the online help for SAP Business One.
2.4 Defining Resource Defaults

To define default settings for resources at the company level, proceed as follows:

1. From the SAP Business One Main Menu, choose Administration → System Initialization → General Settings → Resources tab.
2. Define the following fields:

<table>
<thead>
<tr>
<th>Field/Checkbox</th>
<th>Activity/Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Default Warehouse</strong></td>
<td>Select a default warehouse. This warehouse will be used for resources in production orders.</td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>You can also set a default warehouse at the resource level and at the user level. For more information, see Defining a Default Warehouse.</td>
</tr>
<tr>
<td><strong>Auto Add All Warehouses to New Resources</strong></td>
<td>If you select this checkbox, when adding a new resource master data record, all warehouses appear in the Warehouse table on the Capacity Data tab. If you deselect this checkbox, when adding a new resource master data record, only the default warehouse appears in the Warehouse table on the Capacity Data tab.</td>
</tr>
<tr>
<td><strong>Default Capacity Period</strong></td>
<td>Determines the default capacity period displayed upon opening any of the windows that contain the Capacity Period From...To fields.</td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>Upon opening windows and tabs which contain the Capacity Period field, the From date is always the current system date. The To date is calculated by the settings for resources in the General Settings window. You can shift between periods using the arrow buttons; the buttons move the capacity period backwards and forwards by the same number of days as displayed upon opening the window.</td>
</tr>
<tr>
<td><strong>1.</strong></td>
<td>In the Start From Today Until field, specify the default end date for capacity period calculation:</td>
</tr>
<tr>
<td><strong>Today</strong></td>
<td>The current system date is taken as a start date for calculation.</td>
</tr>
<tr>
<td><strong>Month Start</strong></td>
<td>The first day of the month of the current system date is taken as a start date for calculation.</td>
</tr>
<tr>
<td><strong>Month End</strong></td>
<td>The last day of the month of the current system date is taken as a start date for calculation.</td>
</tr>
<tr>
<td><strong>2.</strong></td>
<td>In the Months and Days fields, specify the number of months and days from the start date. Both positive and negative numbers are allowed.</td>
</tr>
</tbody>
</table>
Example 1

You have defined the default capacity period as displayed below.

Upon opening the *Capacity Data* tab of the *Resource Master Data* window, the *Capacity Period From* field is always the current date, for example, September 23, 2017. Since the end date of the capacity period is Today, the To field is September 23, 2017. The forward and backward arrows move the capacity period by one day.

Example 2

You have defined the default capacity period as displayed below.

Upon opening the *Capacity Data* tab of the *Resource Master Data* window, the *Capacity Period From* field is the current system date, for example, September 23, 2017. The To field is October 1st, 2017. The forward arrow moves the capacity period by the same number of days, hence the From date is October 2 and the To date is October 10.

Example 3

You have defined the default capacity period as displayed below.

Upon opening the *Capacity Data* tab of the *Resource Master Data* window, the *Capacity Period From* field is the current date, for example, September 23, 2017. The To field is September 30, 2017 (calculated from October 1, the month start). The forward arrow moves the capacity period by the same number of days, hence the From date is October 1 and the To date is October 8.
You have defined the default capacity period as displayed below.

Upon opening the Capacity Data tab of the Resource Master Data window, the Capacity Period From field is the current date, for example, September 23, 2017. The To field is October 10, 2017 (calculated from September 30, the month end). The forward arrow moves the capacity period by the same number of days, hence the From date is October 11 and the To date is October 28.

Note
If upon opening the Capacity Data tab (or any other window containing the Capacity Period From... To fields) the current date is later than the To date by the set calculation, the capacity period displays results for the current date only.

3. To save the changes, choose OK.

2.5 Defining a Default Warehouse

You can set a default warehouse for a resource at three levels:
- Resource level - in the Resource Master Data window
- User level - in the User Defaults window
- Company level - in the General Settings window (Administration → System Initialization → General Settings → Resources tab)

The system takes the default warehouse according to the priority order above; for a new transaction, the system takes the default warehouse from the resource level. If a resource does not have a defined default warehouse at the resource level, it takes the default warehouse from the user level. If there is no default warehouse defined at the user level, it takes the default warehouse defined in the general settings.

2.6 Defining Resource Properties

You can define resource properties and use them for filtering purposes, for example, in reports.
Procedure

To define resource properties, proceed as follows:

1. From the SAP Business One Main Menu, choose Administration → Setup → Resources → Resource Properties. The Resource Properties - Setup window appears.
   By default, the fields are named Resource Master Data Property 1...64.
2. To change the name field, click the line and enter a desired property name.
3. Choose Update.

2.7 Defining Resource Groups

Whenever you create a resource, it belongs to a group. The default resource group is Resources. You can create more groups to classify your resources. Upon creation, a resource obtains setting defaults from its group. You can change these settings at the resource level in the Resource Master Data window.

Use the groups for analysis purposes, reports, evaluations, and to process resources together as a group.

Procedure

To create a resource group, proceed as follows:

1. From the SAP Business One Main Menu, choose Administration → Setup → Resources → Resource Groups. The Resource Groups - Setup window appears.

   ![Resource Groups - Setup Window](image)

2. In the Resource Group Name field, enter the name of the group you want to create.
3. In the Resource Type field, select one of the following options:
   - Machine - This type of resource can be linked to fixed assets.
   - Labor - This type of resource can be linked to employees.
   - Other - This type of resource cannot be linked to fixed assets or employees.
   The default option is Machine.
4. In the field Unit of Measure Text, enter the unit of measure used for this resource group.
5. In the Resource Std Cost table, you can define up to 10 components of the resource standard cost per the defined unit of measure.

   In the column, User-Definable Name, enter the desired name of the cost component, for example, "Electricity".

   In the column Default Std Cost, enter costs charged for one defined unit of measure.

   The names and default standard cost values will be copied into the resource master data if the resource belongs to this group.

6. Choose Update.
3 Working with Resource Master Data

Use the resource master data to add, update, search and maintain resource data.

3.1 Creating Master Data Records

Procedure

From the SAP Business One Main Menu, choose Resources → Resource Master Data.

1. The window appears in Find mode. Switch to Add mode.

2. Define the fields in the header area and on the tabs as described below and choose Add.

**General Area (Header)**

In the general area, define the following fields:

1. **Note**

   Fields that are self-explanatory are not described in the table below:

<table>
<thead>
<tr>
<th>Field/Checkbox</th>
<th>Activity/Description</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource No.</td>
<td>Define a number (code) for the resource. The value of this field must be unique; other resources or items cannot have the same code.</td>
<td></td>
</tr>
<tr>
<td>Field/Checkbox</td>
<td>Activity/Description</td>
<td>Comments</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Bar Code</strong></td>
<td>Enter a bar code for the resource. You can only enter one bar code per resource.</td>
<td></td>
</tr>
</tbody>
</table>
| **Resource Type**      | From the dropdown list, select one of the following resource types:                  | • Machine  
• Labor  
• Other  
The default value is defined by the selected resource group.                                                                                                                                 |
|                        |                                                                                      | Note                                                                                                                                       |
|                        |                                                                                      | The resource draws default values from the resource group as described in Defining Resource Groups. You can update them at the resource level in this window. |
| **Resource Group**     | Select the group to which you want to assign the resource.                            |                                                                                                                                          |
|                        |                                                                                      | Note                                                                                                                                       |
|                        |                                                                                      | You can update them at the resource level in this window.  
You can update them at the resource level in this window.  
You can update them at the resource level in this window. |
| **Unit of Measure**    | Enter a unit of measure for expressing resource capacity. For example, machine cycle, hour, or minute. |                                                                                                                                          |
| **Time per Resource Units** | Enter the time per resource units in the `<hours:minutes:seconds>` format. This field is related to the Res. Units per Time Period field. | Note                                                                                                                                 |
|                        |                                                                                      | Resource capacity is always expressed in quantity of units of measure; capacity time in this field is used to translate the capacity quantity into capacity time for reporting purposes only. |
| **Res. Units per Time Period** | Enter the number of resource units to which the Time per Resource Units field relates. The default value is 1. | Example                                                                                                                                   |
|                        |                                                                                      | The resource is a circular saw. The unit of measure is a saw cycle. The time per resource units is 00:00:30, and the resource units per time period is 300. This means that in 30 seconds, the circular saw processes 300 items. For calculation purposes, the system then divides the resource units per time period with the time per resource units. |
|                        |                                                                                      | Note                                                                                                                                       |
|                        |                                                                                      | These definitions are used to calculate the Run Time value for resources included in a production order. You                            |
### General Tab

On the **General** tab, view or define the following fields:

**Note**

Fields that are self-explanatory are not described in the table below:

<table>
<thead>
<tr>
<th>Field/Checkbox</th>
<th>Activity/Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue Method</td>
<td>Select one of the following issue methods:</td>
</tr>
<tr>
<td></td>
<td>• <strong>Backflush</strong> - Upon receiving finished items on a production order, the resource</td>
</tr>
<tr>
<td></td>
<td>capacity is automatically consumed, that is, the issue to production is then</td>
</tr>
<tr>
<td></td>
<td>automatically issued.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Manual</strong> - Receipt of finished items on a production order does not impact the</td>
</tr>
<tr>
<td></td>
<td>capacity of the resource. Resource consumption (issue to production) must be</td>
</tr>
<tr>
<td></td>
<td>issued manually.</td>
</tr>
<tr>
<td></td>
<td>The default option is <strong>Backflush</strong>.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field/Checkbox</th>
<th>Activity/Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource Allocation</td>
<td>From the dropdown list, choose one of the following options:</td>
</tr>
<tr>
<td></td>
<td>• <strong>On Due Date</strong> - All the capacity of the resource is allocated to the due date of the</td>
</tr>
<tr>
<td></td>
<td>production order regardless of the quantity of the <strong>Internal</strong> and <strong>Available</strong></td>
</tr>
<tr>
<td></td>
<td>capacities on that day.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Automatic</strong> - The capacity of the resource is allocated automatically regarding the</td>
</tr>
<tr>
<td></td>
<td><strong>Internal</strong>, but regardless of the <strong>Available</strong> capacities on that day. For more</td>
</tr>
<tr>
<td></td>
<td>details on automatic resource allocation, see Production Order Window.</td>
</tr>
<tr>
<td></td>
<td>The default value is <strong>On Due Date</strong>. This field is later copied to the production order.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field/Checkbox</th>
<th>Activity/Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource Std. Cost</td>
<td>The field names and default values of each cost component are defined by the selected resource group. To change the values for this resource, enter them in the <strong>Default Std. Cost</strong> column.</td>
</tr>
<tr>
<td></td>
<td>Consumption of resources on a production order automatically adds these separate resource costs to separate WIP and expense accrual accounts.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field/Checkbox</th>
<th>Activity/Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active</td>
<td>Enter the range of dates to determine a validity period for the resource.</td>
</tr>
<tr>
<td>Inactive</td>
<td>Enter the range of dates to indicate the period for which you freeze the resource.</td>
</tr>
</tbody>
</table>

**Capacity Data Tab**

On the **Capacity Data** tab, you can view resource capacity for a desired period per warehouse.

1. Upon opening the window, the **From** date is always the current system date and the **To** date is defined by the default capacity period defined in the **Resources** tab of the **General Settings** window. Use the arrow buttons to shift between capacity periods.

   To view the capacity data for a different date range, enter the desired date range in the **Capacity Period** field and click anywhere in the table.
Note

The capacity period is restricted to a maximum of one year.

2. View or define the following fields in the warehouse table:

<table>
<thead>
<tr>
<th>Field/Checkbox</th>
<th>Activity/Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whse Code</td>
<td>To define an additional warehouse for the resource, select one from the choose from list in this field.</td>
</tr>
<tr>
<td>Locked</td>
<td>Selecting this checkbox locks the warehouse for the resource and prevents you from adding the resource from this warehouse to production orders.</td>
</tr>
<tr>
<td>Internal</td>
<td>The capacity that you set for a resource available in your warehouses or production areas. The capacity applies to the period specified on this tab. For more information, see 4.1 Setting Internal Resource Capacity.</td>
</tr>
<tr>
<td>Committed</td>
<td>The capacity that has not yet been issued and that is assigned to production orders of either Planned or Released status, and which has been allocated within the capacity period defined on this tab.</td>
</tr>
<tr>
<td>Available</td>
<td>This capacity is defined per warehouse within the specified capacity period as follows: Internal Capacity - Committed Capacity - Consumed Capacity</td>
</tr>
<tr>
<td>Set Default Whse</td>
<td>To set a default warehouse at the resource level, select the desired row and choose this button.</td>
</tr>
</tbody>
</table>
Note

Capacity data in the warehouse table are rounded according to the settings in SAP Business One Main Menu → Administration → System Initialization → General Settings → Display tab → Quantities field.

To delete a row, right-click in the row and choose Delete Row. You can only delete a row which has zero capacity set from today into the future.

Planning Data Tab

On the Planning Data tab, you can plan daily internal capacity which you can later set as default values in the Resources - Set Daily Internal Capacity window.

1. For every day in the table, enter up to four daily capacity factors in numbers that determine the overall daily capacity of the resource. The total daily standard capacity is automatically calculated in the Daily Capacity field by multiplying the factors. Instead of entering daily factors, you can enter the daily capacity directly in the Daily Capacity field.

Example

The resource is a wood cutting machine and the unit of measure is machine hour. You have three wood cutting machines which can be operated eight hours a day. In the Daily Capacity Factors fields, enter numbers 3 and 8. In the Daily Capacity field, the total daily capacity of 24 hours is displayed.

2. Single Run Capacity is introduced on the assumption that a single production order will only be able to be produced on a single machine. It reflects the number of capacity hours a production order can consume on each working day.

3. Select Yes or No in Relevant to Single Run Capacity field to identify whether the factor is relevant to the calculation of Single Run Capacity which is automatically calculated by multiplying all relevant factors.
Example

The first daily capacity factor represents hours per shift, and the second factor represents shifts per day. The third factor may represent number of machines. The first two factors are tagged Yes in Relevant to Single Run Capacity. The calculation of Single Run Capacity on any one day would therefore be the multiplication the first and second factors.

4. You can enter comments and remarks in the Remarks field.

Fixed Assets

Depending on the resource type you have defined, you can associate it with fixed assets or employees. If the resource type is Machine, on the Fixed Assets tab, you can associate fixed assets with the resource. To do so, in the Fixed Asset Item No field, select a fixed asset from the choose from list. The remaining fields are then filled with the values from the relevant fields in the Asset Master Data window.

### Note
- This tab is available only if the Enable Fixed Assets checkbox is selected, as described in Enabling Fixed Assets Functionality.
- One resource can be associated with multiple fixed assets, but one fixed asset can be associated with one resource only.

To delete a row, proceed as follows:

1. Select the desired row.
2. In the menu bar, choose Data → Remove.
3. A message appears informing you about the removal process. Choose Yes.
Properties Tab
On the Properties tab, you can assign properties to the resource.

Remarks Tab
On the Remarks tab, you can add text or an image to further describe the resource.

Attachments Tab
On the Attachments tab, you can add files related to the resource. Document formats include Word, Excel, .bmp files and other file extensions.

3.2 Updating Master Data Records

Procedure
1. From the SAP Business One Main Menu, choose Resources → Resource Master Data.
2. In the Resource No. field, enter the complete or partial resource number and choose Find.
3. Modify the necessary fields and choose Update.
4. Choose Update to save the changes.

3.3 Deleting Master Data Records

Caution
You can remove a resource only if all of the following apply:
- It is not assigned to a document or a draft document.
- It is not assigned to any open sales, purchasing or production documents.
- The internal capacity of the resource for the current system date and later is zero.

Procedure
1. From the SAP Business One Main Menu, choose Resources → Resource Master Data.
2. In the Resource No. field, enter the complete or partial resource number and choose Find.
3. In the SAP Business One menu bar, choose Data → Remove.
   A system message appears informing you that this process is irreversible.
4. Choose Yes.
4 Working with Resource Capacity

4.1 Setting Internal Resource Capacity

You need to set the internal resource capacity for resources, so that the exact available capacity can be used as a measure against resource requirements in open production orders. Use the following options:

- To set or update daily internal capacity in a batch for a selected range of resources within a period of time, use the Resources - Set Daily Internal Capacities window, as described in section 4.1.1 Setting Internal Resource Capacities in a Batch (Set Daily Internal Capacities Window).

- To set or update internal capacity manually for one or more resources for specific days, use the Resource Capacity window, as described in section 4.1.2 Setting Daily Internal Resource Capacity for Specific Days Manually (Resource Capacity Window).

You can also use this window to view all types of capacities per a period of time (Internal, Committed, Consumed, or Available).

4.1.1 Setting Internal Resource Capacities in a Batch (Set Daily Internal Capacities Window)

Procedure

1. From the SAP Business One Main Menu, choose Resources → Set Daily Internal Capacities.

   Note
   You can access this window from the Resource Capacity window by choosing the Set Daily Internal Capacities button. In this case, all the selection criteria fields inherit the values from the Resource Capacity window.

2. The Capacity Period fields are defined by the initial settings for the default capacity period. Upon opening the window, the From date is always the current system date. The To date is defined by the default capacity period. Use the arrow buttons to shift between capacity periods. To define a different capacity period, enter the desired date range in the Capacity Period field and click outside the fields.

3. Define the range of the remaining selection criteria in the header area:
   - Warehouse Code
   - Resource No.
   - Resource Group
   - Resource Type
   - Resource Properties

   Note
   If you leave any of the fields above blank, the system selects all data from the category.

4. In the Set Daily Capacity Basis Using field, select one of the following options:
Note

Depending on this selection, different fields in the window are enabled.

- **Data from Planning Data Tab of Resource Master Data** - Sets the internal capacity for the selected range of resources using the values specified on the Planning Data tab of the relevant resource master data record.

1. In the table area, in the Update Data For column, select the checkboxes for the days for which you want to update the internal capacity.
2. To modify the data from the Planning Data tab, in the Increase/Decrease Data from Planning Data Tab By field, select one of the following:
   - **Fixed Amount** - Enter the amount of resource units, positive or negative, by which you want to increase or decrease the data.
   - **Percentage** - Enter the percentage, positive or negative, by which you want to increase or decrease the data.

- **Manual Data as Entered Below for Each Weekday** - Sets the internal capacity for the selection of resources according to the data entered manually in this window.
  1. In the table area, in the Update Data For column, select the checkboxes for the days for which you want to update internal capacity.
  2. In the Daily Capacity Factors fields, enter up to four daily capacity factors in numbers that determine the overall daily capacity of the resource. The total daily standard capacity is automatically calculated in the Daily Capacity field by multiplying the factors. Instead of entering daily factors, you can enter the daily capacity directly in the Daily Capacity field.
3. In the Additional Comment field, you can enter text which will be accessible from the Resource Capacity window. In the mentioned window, the data associated with this comment are displayed in blue.

4. If you do not want the capacity data to be applied to holiday days, select the Do Not Update Holiday Days checkbox.

5. Choose Update.

   Note
   To view capacity for a resource that you have defined here, use the Resource Capacity window. There you can update resource capacity for specific days manually.
   When you access this window from the Main Menu, the Capacity Period From...To values appear according to the rules defined in the General Settings window, and the remaining criteria are inherited from the last execution view.

- Update Single Run Capacity with Internal Capacity
  When this option is selected and the Update button is pressed, the data held in the Single Run Capacity fields in the Resource Capacity screen will be overridden with the values from the Internal Capacity fields, for the corresponding dates and the range of data selected in this screen.
• Update Internal Capacity with Single Run Capacity
  
  When this option is selected and the Update button is pressed, the data held in the Internal Capacity fields in the Resource Capacity screen will be overridden with the values from the Single Run Capacity fields, for the corresponding dates and the range of data selected in this screen.
4.1.2 Setting Daily Internal Resource Capacity for Specific Days Manually (Resource Capacity Window)

Procedure

1. From the SAP Business One Main Menu, choose Resources → Resource Capacity. The Resource Capacity window appears.

   Note
   
   If you access this window from the Resource Master Data window, the selection criteria from the Resource Capacity window are copied to the Resource Capacity window and internal resource capacity data for All Warehouses is displayed.

2. In the Capacity Type field, select Internal.

3. The Period Capacity From and To fields are determined by the defined default capacity period. To shift between capacity periods, use the arrow buttons. To change the capacity period, enter the desired date range and choose Refresh.

   Note
   
   The defined capacity period cannot be longer than one year.

4. Define the range of the remaining selection criteria in the general area, then choose Refresh:
   
   - Warehouse Code
   - Resource No.
   - Resource Group
   - Resource Type
   - Resource Properties
   - Resource Properties Status
To view data for each day in the table, scroll over the date fields, as displayed below:

5. In the desired date field, enter capacity for a resource. You can enter decimal values, too. You can repeat this for as many dates and resources as you need.

   Note

Dates related to holiday days are displayed in red.

To decrease or increase values by 5%, press [CTRL] and select the desired rows in the table, then choose the Decrease/Increase Percentage buttons or enter a desired percentage value in the field (positive or negative).

6. To enter a comment, double-click a desired cell in the table and choose Edit Comment. Enter the comment and choose OK. Fields with comments added from the Resource Capacity window are displayed in red.

   Fields with comments added from the Resources - Set Daily Internal Capacity window are displayed in blue. You can edit those comments in this window, as well. In that case, the fields are no longer displayed in blue, but in red.

7. The following internal capacity totals related to the selection criteria are displayed in the table:

   o At the bottom of each column - displays the total internal capacity of the displayed items per date.
   o In the Total column - for each item, displays the total internal capacity for the defined capacity period.

   At the bottom of the Total column, the value of the summed totals is displayed.

8. To save the data, choose Update.
Note

If you access this window from the Main Menu, all selection criteria are inherited from the last execution view except the Capacity Period From... To field, which appears according to the definitions in the General Settings window. Choose Refresh to display the capacity data in the table.

4.1.2.1 Accessing Resource Capacity Window from Resource Master Data

If you access the Resource Capacity window from the Capacity Data tab of the Resource Master Data window, the selection criteria from the Capacity Data tab are copied to the Resource Capacity window. To access the Resource Capacity window from Resource Master Data, proceed as follows:

On the Capacity Data tab, right-click anywhere in the window and choose Internal Resource Capacity.

The Resource Capacity window opens with the following selection criteria copied from the Capacity Data tab: All Warehouses, Capacity Period, and Resource No.

4.1.2.2 Accessing Resource Capacity Window from Production Order Window

You can access the Resource Capacity window from the Production Order window. To do so, in the resource line, click (Link Arrow) in the Available column. The Resource Capacity window opens with the following criteria:

- **Capacity Type**: All
- **Capacity Period**: Not defined
- **Warehouse Code**: Copied from the resource line of the production order

4.2 Viewing Resource Capacity

To view data for all capacity types for a resource within a desired capacity period, use the Capacity Data tab in the Resource Master Data window.

To view daily data for all capacity types for a selected range of resources within a desired capacity period, use the Resource Capacity window as described below.

4.2.1 Viewing Resource Capacity from Resource Capacity Window

Note

If you access this window from the Main Menu, all selection criteria are inherited from the last execution view except the Capacity Period From... To field, which appears according to the definitions in the General Settings window. Choose Refresh to display the capacity data in the table.
Procedure

1. From the SAP Business One Main Menu, choose Resources → Resource Capacity.

2. From the dropdown list in the Capacity Type field, select the desired option:
   - **Internal** - If you select this, you can also manually update the Internal capacity data.
   - **Ordered**
     Ordered capacity displays the value of the total quantity of Qty (Inventory UoM) field for the non-inventory item connected with this resource, from document grid lines of the following documents:
     - Purchase orders with document grid line field of Del. Date which falls within the From-To period specified in the Capacity Period field.
     - GRPOs with document grid line field of Actual Del. Date which falls within the From-To period specified in the Capacity Period field.
     - Non-based purchase invoices (and purchase invoices generated based on purchase quotations) with document grid line field of Actual Del. Date which falls within the From-To period specified in the Capacity Period field.
   - **Committed**
   - **Consumed**
   - **Available**
   - **Single Run Capacity** - If you select this, you can also manually update the Single Run Capacity data.
   - **All** - If you select this, all these capacity types are displayed simultaneously. In the collapsed view, only the Internal capacity is visible. In the expanded view, all these capacity types are visible, and the Internal capacity and Single Run Capacity can be both manually updated.

3. The Period Capacity From and To fields are determined by the defined default capacity period. Upon opening the window, the From date is the current system date. To shift between capacity periods, use the arrow buttons. To change the capacity period, enter the desired date range and choose Refresh.

4. Define the range of the remaining selection criteria in the header area:
   - Warehouse Code
   - Resource No.
   - Resource Group
- **Resource Type**
- **Resource Properties**

**Note**

If you leave any of the fields above blank, the system selects all data from the category.

Choose **Refresh**.

The capacity data for the defined selection criteria are displayed in the table area.

5. To view data for each day in the table, scroll to the right over the date columns.

**Note**

For Internal resource capacity type, the following applies:

- Capacity data with comments added from the **Resource Capacity** window are displayed in blue.
- Capacity data with comments added from the **Resources - Set Daily Internal Resource Capacity** window are displayed in red.

To view the comments, hover over the field.

6. To view cumulative quantities of the selected capacity type, select the **Show Cumulative Capacity from Today** checkbox. The capacity quantities accumulate with each day starting from the current system date, regardless of the **Capacity Period** you are viewing. Data for days prior to the current system date are in this case blank.

**Note**

If you are viewing the **Internal** capacity type, the fields in the table are read-only; you cannot update the internal capacity if the **Show Cumulative Capacity from Today** checkbox is selected.

**Example 1 - Show Cumulative Capacity from Today**

- You are viewing **Available** capacity for a resource for a period of 5 days. The **From** date is the current system date, July 12. The following information is displayed in the table when the **Show Cumulative Capacity from Today** checkbox is deselected.

<table>
<thead>
<tr>
<th>Capacity Type</th>
<th>July 12</th>
<th>July 13</th>
<th>July 14</th>
<th>July 15</th>
<th>July 16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available</td>
<td>5</td>
<td>5</td>
<td>7</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

- You are viewing **Available** capacity for the same resource, for the same period. However, now the **Show Cumulative Capacity from Today** checkbox is selected.

<table>
<thead>
<tr>
<th>Capacity Type</th>
<th>July 12</th>
<th>July 13</th>
<th>July 14</th>
<th>July 15</th>
<th>July 16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available</td>
<td>5</td>
<td>10 (5+5)</td>
<td>17 (5+5+7)</td>
<td>22 (5+5+7+5)</td>
<td>28 (5+5+7+5+6)</td>
</tr>
</tbody>
</table>
**Example 2 - Show Cumulative Capacity from Today**

You are viewing Available capacity for a resource for a period of 7 days. The From date is July 10, the current date is the current system date, July 12. The following information is displayed in the table when the Show Cumulative Capacity from Today checkbox is selected.

<table>
<thead>
<tr>
<th>Capacity Type</th>
<th>July 10</th>
<th>July 11</th>
<th>July 12</th>
<th>July 13</th>
<th>July 14</th>
<th>July 15</th>
<th>July 16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available</td>
<td></td>
<td>5</td>
<td>10 (5+5)</td>
<td>17 (5 + 5 + 7)</td>
<td>22 (5 + 5 + 7 + 5)</td>
<td>28 (5 + 5 + 7 + 5 + 6)</td>
<td></td>
</tr>
</tbody>
</table>

**Example 3 - Show Cumulative Capacity from Today**

You are viewing Available capacity for a resource for a period of 3 days. The From date is July 14, the current date is the current system date, July 12. The following information is displayed in the table when the Show Cumulative Capacity from Today checkbox is selected.

<table>
<thead>
<tr>
<th>Capacity Type</th>
<th>July 14</th>
<th>July 15</th>
<th>July 16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Available</td>
<td>17 (5 + 5 + 7)</td>
<td>22 (5 + 5 + 7 + 5)</td>
<td>28 (5 + 5 + 7 + 5 + 6)</td>
</tr>
</tbody>
</table>

7. If you are viewing All capacity types in collapsed view, the quantities in resource rows display the Available capacity type. Choose the Expand All button, to switch to the expanded view and display all capacity type rows.
   - In the Internal capacity type row, if you have defined internal capacities for the defined period, the relevant quantities are displayed. You can update the internal capacity for any of the dates displayed, and view or add comments.
   - In the Ordered, Committed and Consumed capacity type rows, the cells which contain values appear as push buttons. Click them to see the relevant source documents related to the committed or the consumed quantity of the resource.
5 Item Master Data

The Production Data tab is available on the Item Master Data window to help streamline BOM and resource management.

To access this tab, from the SAP Business One Main Menu, choose Inventory → Item Master Data → Production tab.

View or define the following:

<table>
<thead>
<tr>
<th>Field/Checkbox</th>
<th>Description/Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phantom Item</strong></td>
<td>▲ Note</td>
</tr>
<tr>
<td></td>
<td>This checkbox has been moved from the General tab to the Production Data tab.</td>
</tr>
<tr>
<td></td>
<td>Defines the item as a phantom; a phantom item is an item type in BOM that has an engineering or structure function only. Phantom items do not represent a physical component or a subassembly, thus they are defined as non-inventory items.</td>
</tr>
<tr>
<td><strong>Issue Method</strong></td>
<td>▲ Note</td>
</tr>
<tr>
<td></td>
<td>This checkbox has been moved from the General tab to the Production Data tab.</td>
</tr>
<tr>
<td></td>
<td>Select one of the following issue methods:</td>
</tr>
</tbody>
</table>

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Item Master Data

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- **Backflush** - after you report the completion of the parent item, the components are automatically issued to the production order.
- **Manual** - the components are manually issued to the production order, regardless of the issue of the product.

**Note**
You cannot use the *Backflush* method for items managed by serials or batches.

<table>
<thead>
<tr>
<th>BOM Type</th>
<th>This field indicates if the item is associated with a BOM as a parent item. The field is blank if the item is not associated with any BOM. Otherwise, the following values are possible:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• <strong>Assembly</strong> - The item is associated with an assembly BOM.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Sales</strong> - The item is associated with a sales BOM.</td>
</tr>
<tr>
<td></td>
<td>• <strong>Production</strong> - The item is associated with a production order.</td>
</tr>
<tr>
<td></td>
<td>To open the related BOM, click <em>(Link Arrow)</em>.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No. of Item Components</th>
<th>Displays the number of item components that are currently included in this item's BOM.</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Resource Components</td>
<td>Shows the number of resource components that are currently included in this item's BOM.</td>
</tr>
</tbody>
</table>
6 Bill of Materials Handling

6.1 Bill of Materials Window

The BOM has a hierarchical arrangement of components. Enter all the child items and raw materials required to assemble and produce the finished product.

In the Bill of Materials window, Route Stage can be selected in the Type table field, to allow route stage association of BoM lines. The Route Sequence field will then be displayed in the table to indicate the order by which the route states will be performed.

1. From the SAP Business One Main Menu, choose Production → Bill of Materials.

2. View or define the fields in the Bill of Materials window:

<table>
<thead>
<tr>
<th>Field</th>
<th>Activity/Description</th>
</tr>
</thead>
</table>
| Type    | From the dropdown menu, select one of the following options:  
|         | • Item - Select this to define an item component.  
|         | • Resource - Select this to define a resource component.  
|         | • Text - Select this to enter text. With this option, all the remaining fields in the line are disabled.  
|         | • Route Stage - To add a route stage line. With a Route Stage type line, a route stage code would be entered in the No. field of this line.  
| No.     | From the choose from list, select an item for the Item type line, or a resource for the Resource type line. Values from relevant fields in the item master data or resource master data records are copied into the remaining fields in the line.  |
| Field          | Activity/Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
### Field Activity/Description

<table>
<thead>
<tr>
<th>Field</th>
<th>Activity/Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Up/Down Arrows</strong></td>
<td>You can change the presentation sequence of the component lines. To do so, select the desired component line and click ↑ or ↓ to move it up or down.</td>
</tr>
</tbody>
</table>

**Note**

Some fields are not displayed by default. To define which fields should be displayed, click ![Form Settings](image) in the toolbar.

**Note**

A resource can be a component of a phantom item.

### 6.2 Managing Bill of Material Components

Using the component management functionality, you can replace, add or delete components of all types from BOMs in a batch.

**Note**

If an error occurs during the execution of replacing, adding, or deleting components, none of the selected BOMs are updated.

### 6.2.1 Changing BOM Components

You can replace component lines of a BOM with different components or update the existing ones, for example, the quantity, issue method, and so on.
**Procedure**


2. From the Management Task dropdown list, select Change BOM Lines.

3. In the Select BOMs section, define the range of selection criteria for BOMs in which you want to replace or change components.

4. In the Select BOM Lines section, select one of the following:
   - **Item** - In the From and To fields, define the range of the item components in the selected BOMs you want to change or replace.
   - **Resource** - In the From and To fields, define the range of the resource components in the selected BOMs you want to change or replace.
   - **Text** - Enter at least part of the text which you want to replace. In the Replacement Text field enter the new text and move to Step 6, as the fields relevant to items and resources in the BOMs are not available in the window.

5. In the Specify Properties for BOM Lines to Be Changed section, proceed as follows:
   - If you want to replace the selected components with a different one, select the Replacement BOM Component checkbox. In the choose from list, define the replacement component and define the number of replacement components per existing components.
Example

You defined a range of BOMs in which you want to replace every Resource A and every Resource B with two units of Resource C. In each BOM, the system will replace every unit of Resource A with two units of Resource C. It will also replace every unit of Resource B with two units of Resource C.

- If you want to change parameters for the selected components or for the replacement component, select one or more of the following checkboxes and specify the desired values:
  - Change Additional Quantity
  - Change Warehouse
  - Change Issue Method
  - Change WIP Account

6. **Choose OK.**

The Bill of Materials - Component Management - Change Preview window appears.
7. The Selected checkbox is selected for each BOM in which the system is about to change the component. If you do not want to change the component in a BOM, deselect this checkbox.

Each parameter displays a column with the existing value and a column with the replacement value.

8. To execute the task, choose OK.

### 6.2.2 Adding BOM Components

You can add components of all three types to a desired range of BOMs.

**Procedure**


2. From the Management Task dropdown list, select Add BOM Lines.

3. In the Select BOMs section, define the range of selection criteria for BOMs to which you want to add a component.

4. In the Select BOM Lines section, select one of the following:
   - **Item** - In the From and To fields, define the range of the item components you want to add to the selected BOMs.
   - **Resource** - In the From and To fields, define the range of the resource components you want to add to the selected BOMs.
   - **Text** - Enter text in the Text to Be Added section and move to Step 6, as the fields relevant to items and resources in the BOMs are not available in the window.

5. In the BOM Line Details to Be Added section, define the following fields:
   - **Quantity**
   - **Additional Quantity**
   - **Warehouse**
   - **Issue Method**
   - **WIP Account**

7. The *Selected* checkbox is selected for each BOM to which the system is about to add the component. If you do not want to add the component to a BOM, deselect this checkbox.

8. To execute the task, choose OK.

### 6.2.3 Deleting BOM Components

**Procedure**

2. From the Management Task dropdown list, select *Delete BOM Components*.

3. In the *Select BOMs* section, define the range of selection criteria for BOMs from which you want to delete components.

4. In the *Select BOM Lines to Be Deleted* field, select one of the following:
   - *Item* - In the *From* and *To* fields, define the range of the item components you want to delete from the selected BOMs.
   - *Resource* - In the *From* and *To* fields, define the range of the resource components you want to delete from the selected BOMs.
   - *Text* - Enter at least part of the text line you want to delete.


![Bill of Materials - Component Management - Delete Preview](image)

6. The *Selected* checkbox is selected for each BOM in which the system is about to delete the component line. If you do not want to delete the component in a BOM, deselect this checkbox.

7. To execute the task, choose *OK.*
7 Production Orders

As in Bill of Materials Handling, the Route Stage in the Type field allows route stage association of all production order lines. In addition, it will facilitate a simple filtering ability of any combination of production order line types.

7.1 Production Order Window

Procedure

1. From the SAP Business One Main Menu, choose Production → Production Order.

View or update the following fields in the general area:

Note

Fields that are self-explanatory are not described in the table below.

<table>
<thead>
<tr>
<th>Field</th>
<th>Activity/Description</th>
</tr>
</thead>
</table>
| Type    | Choose one of the following production order types:  

- Standard (default) - to produce a regular production item, using a Production Bill of Materials |
<table>
<thead>
<tr>
<th>Field</th>
<th>Activity/Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td>You can select one of the following options:</td>
</tr>
<tr>
<td></td>
<td>• Item - This is the default option. The remaining fields for the Item option are populated by default from the BOM window associated with the parent item or from the Item Master Data window.</td>
</tr>
<tr>
<td><strong>Status</strong></td>
<td>Choose a production order status as follows:</td>
</tr>
<tr>
<td></td>
<td>• Planned - initial production order status</td>
</tr>
<tr>
<td></td>
<td>• Released - you release the production order to the shop floor for work; status at which receipts and issues are transacted</td>
</tr>
<tr>
<td></td>
<td>• Closed - you close the production order when all transactions have been completed.</td>
</tr>
<tr>
<td></td>
<td>• Canceled - production order is removed from the list before the production process starts</td>
</tr>
<tr>
<td><strong>Product No.</strong></td>
<td>Enter the parent item for the Standard and Disassembly production orders.</td>
</tr>
<tr>
<td></td>
<td>• Choose <img src="image" alt="link" /> to display the parent list of the Bill of Materials.</td>
</tr>
<tr>
<td></td>
<td>• Choose <img src="image" alt="link" /> to define a new Bill of Materials. For the Special production order type, select the item from the items list.</td>
</tr>
<tr>
<td><strong>Priority</strong></td>
<td>Displays the degree of importance of a production order, indicated by integer numbers. The default value is 100. You can manually change the number here. The smaller the number, the more important the production order.</td>
</tr>
<tr>
<td><strong>Routing Date Calculation</strong></td>
<td>This field determines if the automatic allocation of resources will occur, and if yes, how the resource allocation processes. It contains a list of the following options:</td>
</tr>
<tr>
<td></td>
<td>• On Start Date</td>
</tr>
<tr>
<td></td>
<td>• On End Date</td>
</tr>
<tr>
<td></td>
<td>• Start Date Forwards</td>
</tr>
<tr>
<td></td>
<td>• End Date Backwards</td>
</tr>
<tr>
<td><strong>Origin</strong></td>
<td>Indicates how the production order was created:</td>
</tr>
<tr>
<td></td>
<td>• MRP – a result of the MRP report recommendation</td>
</tr>
<tr>
<td></td>
<td>• Manual – entered by an authorized user</td>
</tr>
<tr>
<td></td>
<td>• Sales Order – created automatically based on a sales order</td>
</tr>
</tbody>
</table>

View or update the following fields on the Components tab:

- **Note**
  - Fields that are self-explanatory are not described in the table below.
  - Some of the fields are not visible by default. Use ![link](image) (Form Settings) in the toolbar to define which fields you want displayed.
<table>
<thead>
<tr>
<th>Field</th>
<th>Activity/Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Resource</td>
<td>When this option is selected, you can select a desired resource from the choose from list in the <strong>No.</strong> field. The remaining fields for the <strong>Resource</strong> option are populated by default from the BOM window associated with the parent item or from the <strong>Resource Master Data</strong> window.</td>
</tr>
<tr>
<td>• Text</td>
<td>Select this option to add text in the line; the remaining fields merge into one. The text is added automatically from the corresponding line in the <strong>Bill of Materials</strong> window associated with the parent item, or you can define it manually in this window.</td>
</tr>
<tr>
<td>• Route Stage</td>
<td>Select this option for a routed production order. The remaining fields for the <strong>Route Stage</strong> option are populated by default from the BOM associated with the parent item, or you can define them manually. With a <strong>Route Stage</strong> line, a route stage code would be entered in the <strong>No.</strong> field of this line.</td>
</tr>
</tbody>
</table>

| No. and Description   | These fields were originally **Item No.** and **Item Description.** If the production order has a **Route Stage** line, then in the **No.** field, the route stage code would be displayed. If necessary, you can manually select another route stage code here. |

| Base Qty              | Quantity of the components necessary to produce the bill of materials for one parent product. The value is copied from the **Bill of Materials** window. You can update this field if necessary.  
|                       | **Note**  
|                       | The **Base Qty** value of a resource component cannot be less than zero.                                                                                                                                            |

| Additional Qty        | The value is copied from the **Additional Qty** field in the **Bill of Materials** window; however, you can change it manually in the production order.  
|                       | **Note**  
|                       | Only components of the **Manual** issue method can have zero **Base Qty** and the **Additional Quantity** larger than zero.  
|                       | The additional quantity for by-products is always zero.                                                                                                                                                              |

| Planned Qty           | For each component line, the value of this field is calculated according to the following formula:  
|                       | *(Planned Quantity of the parent * Base Qty of the component)* + Additional Qty of the component                                                                                                                     |

| Available             | For resources, this field displays the total resource availability for the warehouse populated on the production order line. Click ➔ (Link Arrow) to update the internal capacity of the resource for the mentioned warehouse in the **Resource Capacity** window.  
|                       | After you update the internal capacity and return to the production order, the value of this field is refreshed.                                                                                                  |

<p>| WIP Account           | If the production order lines are populated with components from a BOM, the account defined in the <strong>WIP Account</strong> field of the BOM for the relevant component                                                                 |</p>
<table>
<thead>
<tr>
<th>Field</th>
<th>Activity/Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>populates this field. If the <strong>WIP Account</strong> field for the relevant component is blank in the BOM, this account is blank, too. You can manually update the account in this field before the production order closure. The value of this field is then copied into the <strong>Account Code</strong> field of the issue for production. If you leave this field blank, the related WIP Account applies according to the definitions in the <strong>Document Settings</strong> window. For more information, see section 7.6 <strong>Document Settings and WIP Account</strong>.</td>
<td></td>
</tr>
<tr>
<td><strong>Start Date</strong></td>
<td>The <strong>Start Date</strong> for the first <strong>Route Stage</strong> type line (included in the calculation) is set to the production order header <strong>Start Date</strong>. You can manually change the Route Stage type line <strong>Start Date</strong> to any date that falls between or is equal to the production order header <strong>Start Date</strong> and <strong>Due Date</strong>. It also must be less than or equal to the Route Stage type line <strong>End Date</strong>.</td>
</tr>
<tr>
<td><strong>End Date</strong></td>
<td>The <strong>End Date</strong> for the first <strong>Route Stage</strong> type line is set by adding the integer part of the <strong>Total Days</strong> value to the <strong>Start Date</strong> (and omitting any dates set as holidays if <strong>Consider Holiday Days for Routing Date Calculation</strong> is checked for the production order). However, for the <strong>Resource</strong> type line, the End Date is set by adding the integer part of the <strong>Required Days</strong> value of each <strong>Resource</strong> type line (and omitting any dates set as holidays if <strong>Consider Holiday Days for Routing Date Calculation</strong> is checked for the production order). The calculated <strong>End Date</strong> is then set to the <strong>Start Date</strong> of the next <strong>Route Stage</strong> type line. You can manually change the Route Stage type line <strong>End Date</strong> to any date that falls between or is equal to the production order header <strong>Start Date</strong> and <strong>Due Date</strong>. It also must be greater than or equal to the Route Stage type line <strong>Start Date</strong>.</td>
</tr>
</tbody>
</table>
| **Resource Allocation** | The value of this field (for all **Resource** type lines) is taken from the **Routing Date Calculation** field in the general area of the production order, and it cannot be edited. The following options are available:  
  - **On Start Date** - The capacity of the resource is allocated to the start date of the production order. This means that the value of the resource capacity in the **Open Qty** field is counted as **Committed** capacity on the start date of the production order.  
  - **On End Date** - The capacity of the resource is allocated to the end date of the production order. This means that the value of the resource capacity in the **Open Qty** field is counted as **Committed** capacity on the end date of the production order.  
  - **Start Date Forwards** - The capacity of the resource is allocated to the start date when it is assigned to the production order; however, if the **Open Qty** is greater than the **Single Run Capacity** for the start date, the system allocates only as much capacity as there is Single Run Capacity defined for the start date and continues to allocate the remaining capacity to the day after the |
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Field | Activity/Description
--- | ---
start date | The process continues forwards for each day until it allocates all the remaining Open Qty.
- **End Date Backwards** - The capacity of the resource is allocated to the end date when it is assigned to the production order; however, if the Open Qty is greater than the Single Run Capacity for the end date, the system allocates only as much capacity as there is Single Run Capacity defined for the end date and continues to allocate the remaining capacity to the day before the end date. The process continues backwards for each day until it reaches the current system date and allocates all the remaining Open Qty to the current system date regardless of how much Single Run Capacity is defined for that day.

**Note**
With resource allocation of Start Date Forwards and End Date Backwards, the system takes into account the Single Run Capacity, not the Internal capacity or the Available one. This means that if there are more production orders with the same start date or end date, the resource allocation is run against the Single Run Capacity for each production separately; it does not take into account whether there are already production orders which might have consumed the Internal capacity for that day.

**Note**
The triggers for running the resource allocation process are the following:
- Adding the production order
- Updating the Planned Qty and Warehouse on a resource line (only for the resource in question).
- Updating the Due Date field triggers the resource allocation process for all resources in the production order.

Updating the internal capacity does not trigger resource allocation, hence, if you have updated the internal capacity and want the system to run the resource allocation process to update the allocated amounts, you need to update the production order as described above.

| Run Time | Displays the quantity of the resource included in the production order expressed in time. The Run Time is calculated according to the following formula: 

Base Qty of the resource * Planned Qty of the parent item * (Time per Resource Unit / Resource Units per Time) |
|---|---|
| Additional Time | Displays the additional quantity of the resource needed to complete the production order, expressed in time. Additional Time is calculated according to the following formula: 

Additional Qty * Time per Resource Units / Resource Units per Time |
| Total Time | Displays the total of the Run Time and Additional Time. |
2. View or update the following fields on the Summary tab:

<table>
<thead>
<tr>
<th>Field</th>
<th>Activity/Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Actual Item Component Cost</strong></td>
<td>Total value of all item components (not including non-inventory components) issued for the production order.</td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong></td>
</tr>
<tr>
<td></td>
<td>Any item component which has been returned through the return components functionality in the Receipt from Production window reduces the Actual Item Component Cost value by its cost.</td>
</tr>
<tr>
<td><strong>Actual Resource Component Cost</strong></td>
<td>Records the cost of all resource components which have been issued for production.</td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong></td>
</tr>
<tr>
<td></td>
<td>You cannot return resources in the Receipt from Production window.</td>
</tr>
<tr>
<td><strong>Actual Additional Cost</strong></td>
<td>The cost of all non-inventory item components which have been issued for production.</td>
</tr>
<tr>
<td><strong>Actual Product Cost</strong></td>
<td>The cost of all received parent items, including any rejected items but excluding the received by-products.</td>
</tr>
<tr>
<td><strong>Actual By-Product Cost</strong></td>
<td>Records the cost of all by-product items which have been received from production, including any rejected by-products.</td>
</tr>
<tr>
<td></td>
<td>Click 🔄 (Link Arrow) to open the Inventory Posting List window and view the relevant cost breakdown for the posted by-products.</td>
</tr>
<tr>
<td><strong>Total Variance</strong></td>
<td>Displays the sum of costs of all parent items and by-products reduced by the sum of resource costs and the additional costs. The following formula applies: (Parent Cost + By-Product Cost) - (Item Cost + Resource Cost + Additional Cost)</td>
</tr>
<tr>
<td><strong>Total Run Time, Total Additional Time, Total Time</strong></td>
<td>Display the corresponding fields on the Components tab for the resource with the longest Total Time.</td>
</tr>
</tbody>
</table>
7.2 By-Product Handling in Production Orders and Production Processes

By-product item components are inventory item components entered with a negative quantity in the Bill of Materials and Production Order windows.

- The Manual issue method for by-products is available in addition to the Backflush issue method, and by-products are then displayed in receipts from production. The ability to receive by-products with the Manual issue method enables you to manage them with the Serial/Batches valuation method.
- Upon receiving a by-product in the receipt from production, you can define its cost in the Unit Price field.
- By-products can be rejected in the receipt from production document; rejection of a by-product has no impact on the posting behind nor on the Rejected Quantity field on the Summary tab of the Production Order window.

Note
Non-inventory items and resources cannot be by-products.

7.3 Change of Valuation Method of Item Included in Open Production Order

An item's valuation method cannot be changed if the item is a parent item included in an open production order.

Note
Parent items associated with sales or assembly BOMs cannot be used as a production order component.
7.4 Disassembly Production Order

Resources cannot be included in a disassembly production order. When a BOM automatically populates a disassembly production order, the resource lines are omitted. You cannot change Production Order Type to Disassembly as long as the production order contains resource components.

7.5 User-Defined Fields (UDF) Handling

If a UDF field with the same name and same type exists in both the Bill of Materials window component table and on the Production Order window table, then on entry of the parent item into a production order, the values of the UDF fields from the Bill of Materials window are copied into the corresponding UDF fields in the Production Order window.

By setting a UDF field in the Bill of Materials window to hold a link to a file, you cause that link to be copied into the corresponding UDF field in the Production Order window. This feature is important as a means of handling attachments such as manufacturing plans or other documents.

7.6 Document Settings and WIP Account

You can decide whether you want the costs of components in the production order to be posted to the WIP account of the parent item or to the WIP account defined for each component.

To do so, from the SAP Business One Main Menu, choose Administration → System Initialization → Document Settings.
In the **Document Settings** window for the production order document, in the **Use for Components Transactions** section, choose one of the following options:

- **Component WIP Accounts** - Uses the component WIP accounts throughout the production process. For example, if a parent item consists of a child item Item01 and a resource Res01, the default accounts are used as displayed below.

<table>
<thead>
<tr>
<th>Component</th>
<th>Default WIP Account</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item01</td>
<td>Depending on the definition in the Set G/L Accounts By field on the Inventory tab of the Item Master Data window of the component item, the WIP Inventory account defined at the warehouse, item group, or item level is used.</td>
<td>If you define a different account in the WIP Account field of the Production Order window for this item component, then the defined account is used as the WIP account. (The value from the WIP Account field of the Bill of Materials window is copied into the production order; however, if no account is defined in the bill of materials, then the WIP Account field in the production order is left blank.)</td>
</tr>
</tbody>
</table>

**Note**

If advanced G/L account determination rules are defined for the warehouse, item group, or...
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Production Orders

### Component Default WIP Account

<table>
<thead>
<tr>
<th>Component</th>
<th>Default WIP Account</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>the item component in question, other WIP Inventory accounts may be used.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Res01</td>
<td>The Resource WIP account defined on the Resources tab of the G/L Account Determination window applies, unless an advanced G/L account rule requires a different Resource WIP account.</td>
<td>If you define a different account in the WIP Account field of the Production Order window for this resource component, then the defined account is used as the WIP account. (The value from the WIP Account field of the Bill of Materials window is copied into the production order; however, if no account is defined in the bill of materials, then the WIP Account field in the production order is left blank.)</td>
</tr>
</tbody>
</table>

- **Parent Item WIP Accounts** - Uses the parent WIP account as the WIP account for the journal entries of the component transactions (both for item and resource components) throughout the production process. The parent item is defined in the bill of materials that was selected in the production order.

For example, if a parent item consists of a child item Item01 and a resource Res01, the default accounts are used as displayed below.

<table>
<thead>
<tr>
<th>Component</th>
<th>Default WIP Account</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depending on the definition in the Set G/L Accounts By field on the Inventory tab of the Item Master Data window of the parent item, the WIP Inventory account defined at the warehouse, item group, or item level is used.</td>
<td>If you define a different account in the WIP Account field of the Production Order window for this item or resource component, then the defined account is used as the WIP account. (The value from the WIP Account field of the Bill of Materials window is copied into the production order; however, if no account is defined in the bill of materials, then the WIP Account field in the production order is left blank.)</td>
<td></td>
</tr>
<tr>
<td>If advanced G/L account determination rules are defined for the warehouse, item group, or the parent item in question, other WIP Inventory accounts may be used.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 7.7 Closing Production Order and Handling Components Cost

Upon the closing of the production order, a journal entry is created automatically in which all WIP accounts used during the production process are zeroed down; the value from the WIP accounts is transferred to the WIP Inventory Variance account of the parent item.
Note

If an interim WIP consolidation mapping is defined for a WIP account, the WIP account is zeroed down and the value is transferred to the defined interim WIP account. This process may continue if further interim WIP accounts are defined. The last interim WIP account in the chain of interim WIP account mapping is then zeroed down and the value is transferred to the WIP Variance account of the parent item. For more information on the interim WIP consolidation mapping, see section 10 Interim WIP Consolidation Account Mapping.

Before posting the journal entry behind the production closure, a check is made to verify if the total component cost equals the total cost of the received parent items and its by-products. If there is a difference, it is transferred from the WIP Inventory Variance account of the parent item back to the Inventory account of the parent item. However, this applies only if the following two conditions are met:

- The parent item is managed by a validation method other than Standard.
- The parent item’s quantity in the inventory is greater than zero; it has not been sold out before the production order closure.

7.8 Changing Production Order Status in Batch

It is always important to regularly close production orders. And more than often, it is necessary to change production order status from Planned to Released, or vice versa. To facilitate the efficiency in doing these tasks, a batch update functionality is available to allow you to select and change the status of multiple production orders.

To access this function, go to Production -> Production Reports -> Open Items List, and in Open Documents dropdown list, select Production Orders.
You can filter production orders by selecting an option in the drop-down list in the Filter field. There are the following options here:

- **Released** - select this option, and all production orders with Release status will be displayed.
  
  You can select the orders you want to handle, and change their status to:
  
  - Released
  - Canceled
  
  **Note**
  
  Select the production orders by selecting the checkboxes in the Select field. You can select the checkbox one by one, or you can select a range of production orders by selecting the first required production order and then shift-selecting the last one required in the range.

- **Planned** - select this option, and all production orders with Planned status will be displayed.
  
  You can select the orders you want to handle, and change their status to:
  
  - Planned
  - Closed
  - Canceled
  
  **Note**
  
  If, apart from any scenario explicitly mentioned above, the status of any individual production order cannot be changed, then on attempting to change the status, the production orders which could not be updated will remain in the list, with their Select field.
8 Issue for Production

The following enhancements have been made to the Issue for Production window:

Some routing related fields, such as Route Stage, Route Sequence and Stage Description, are now included in the table for reference. They will be displayed only when a routed production order is selected for issuing.

8.1 Issue for Production Window

Procedure

1. From the SAP Business One Main Menu, choose Production → Issue for Production.

2. View the following fields:

<table>
<thead>
<tr>
<th>Field</th>
<th>Activity/Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td>For each item or resource component, the value of this field, as well as of the remaining fields, is copied from the Production Order window. The remaining fields are also inherited from the production order; however, for resources the following fields are blank and not editable:</td>
</tr>
<tr>
<td></td>
<td>• Vendor Catalog No.</td>
</tr>
<tr>
<td></td>
<td>• Bin Location Allocation</td>
</tr>
</tbody>
</table>
### Field | Activity/Description
--- | ---
• In Stock |  
• Committed |  
• Ordered |  
• Minimum Inventory Level - Displays zero. |  
• Available |  
• Inventory UoM - Displays Yes. |  
• UoM Code |  
• Items per Unit |  
• UoM Group |  

**Account Code**
For both resource and item components, the value from the WIP Account field of the production order is copied into this field unless no WIP account is defined in the production order. In such a case, it is defined according to the definitions in the Document Settings window. For more information, see section 7.6 Document Settings and WIP Account.

Note
If you update the Whse field in the Issue for Production window, this field is updated accordingly.

**Item Cost**
This field displays the total standard cost value posted in respect of the resource after the issue for production document is added.

**Distribution Rule, Project Code**
For each component, the values of these fields are taken from the relevant fields of the Production Order window.

### 8.2 Posting Behind Issue for Production

When you add an issue for production, in addition to posting expenses for items, in the same journal entry you also post resource expenses. The resource expenses are transferred from the resource expense account to the related resource WIP account. The total value posted for each resource unit equals Total Std Resource Cost as defined in the Resource Master Data window. The actual posting itself is split across up to ten resource expense accounts as defined by the advanced G/L account determination rules or the G/L account determination and the WIP account that is defined in the Account Code field of the Issue for Production window.

**Example**
- An Example Resource has a Total Std Resource Cost of 100 per unit which is split between Resource Std Cost 1 = 60 and Resource Std Cost 2 = 40.
The journal entry in respect of the resource component consumption of 10 resource units is as displayed in the table below.

<table>
<thead>
<tr>
<th>Account</th>
<th>Debit</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Std Cost Expense 1</td>
<td></td>
<td>600</td>
</tr>
<tr>
<td>Std Cost Expense 2</td>
<td></td>
<td>400</td>
</tr>
<tr>
<td>WIP Account</td>
<td>1000</td>
<td></td>
</tr>
</tbody>
</table>

This posting is added to the posting of any other item and resource component within a single journal entry created upon adding the issue for production. The total value that is posted to all the resource WIP accounts is added cumulatively to the Actual Resource Component Cost field on the Summary tab of the production order whenever an issue for production is added.
9 Receipt from Production

Procedure

1. From the SAP Business One Main Menu, choose Production → Receipt from Production.

2. View or update the following fields:

<table>
<thead>
<tr>
<th>Field</th>
<th>Activity/Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>By-Product</td>
<td>In addition to displaying the parent item, the receipt from production now displays the by-products as well. If an item is a by-product, the checkbox for this field is selected.</td>
</tr>
<tr>
<td></td>
<td>Note</td>
</tr>
<tr>
<td></td>
<td>o You cannot delete by-products with the Backflush issue method, only those with the Manual issue method.</td>
</tr>
<tr>
<td></td>
<td>o Backflush by-products have their quantity set to read-only and it is proportional to the quantity of the parent produced, but you can update the quantity for by-products with Manual issue method.</td>
</tr>
<tr>
<td>Unit Price</td>
<td>Displays the current cost of the by-product. You can update this field manually, unless the by-product has the Standard valuation method. The value in this field is used for posting the inventory value of the by-product in the journal entry behind the receipt from production.</td>
</tr>
<tr>
<td>Quantity</td>
<td>• For by-products with the Backflush issue method, you cannot update this field. However, if you update the quantity of the parent item, the value in this field updates proportionally.</td>
</tr>
</tbody>
</table>
### Field

<table>
<thead>
<tr>
<th>Field</th>
<th>Activity/Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• For by-products with the Manual issue method, you can update this field manually. Updating the parent item’s quantity does not affect this field.</td>
</tr>
</tbody>
</table>
| **Item Cost** | After adding the receipt from production, this field displays the following:  
  • For by-products, the cost of the by-product which has been posted in the journal entry behind the receipt from production.  
  • For parent items, the cost of the parent item which has been posted in the journal entry behind the receipt from production. |

#### Note

When returning item components, the Account Code field is by default populated with the value of the WIP Account field in the corresponding production order. If that field is blank, then the system applies the appropriate WIP account according to the definitions in the Document Settings window.

### 9.1 Backflush Components Handling and Impact of Additional Quantity

The following applies when processing Backflush components:

- Backflush components are always automatically consumed in proportion to the quantity of the parent item which is currently being received in the receipt from production.

- The consumption of Backflush components which are to be processed together with a receipt from production of the parent item is recorded in a separate journal entry linked to an issue from production document. The Remarks field of this issue for production reads that the document has been automatically generated to handle Backflush components related to a specific receipt from production.

- If Additional Qty has been specified for a Backflush component, it is automatically consumed on the first receipt of the parent item from the production order in addition to the regular proportional receipt of components.
10 Interim WIP Consolidation Account Mapping

This functionality enables businesses to automatically identify sub-assembly costs on closing a production order without the need to use nested BOMs and separate production orders for subcomponents.

**Example**

You produce bicycles and you want to identify the cost of bicycle parts at various stages of the production order. A bicycle wheel is made up of a number of components whose costs add up to the cost of the wheel. In addition to identifying the overall cost of the bicycle, you need to identify the cost of the wheel which would normally not be identified. Using the combination of WIP account settings and the interim WIP consolidation matrix, you can track the cost of the sub-assemblies through the chart of accounts.

This functionality provides mapping for multiple WIP accounts such that upon the closing of a production order, the WIP account postings for sub-assembly components are all zeroed down and transferred to a single sub-assembly interim WIP account. For example, to contain the total wheel cost, and then the sub-assembly, interim WIP accounts are zeroed down and their values are transferred to the WIP Inventory Variance account. If there is any difference between the value posted to the WIP Inventory Variance account and the value of the received parent items and its by-products, it is posted back to the Inventory account of the parent item according to the enhancements regarding the production order closing. The mapping matrix allows multiple levels of mapping.

**Procedure**

1. From the SAP Business One *Main Menu*, choose Administration → Setup → Production.
2. In the **Consolidate From Account** (left-hand side) column, select a WIP account from which the value will be transferred. In the **Consolidate To Account** (right-hand side) column, select an interim WIP account to which you want to transfer the value.

1. **Note**
   - If an account in the right-hand side column is also separately defined in the left-hand side column, then its value will be zeroed down and transferred to the account in the **Consolidate To Account** column.
   - You cannot define one account in the **Consolidate From Account** more than once.
   - Any WIP account or interim WIP account which is not included in the mapping matrix will have its value automatically transferred to the WIP Variance account of the parent item and subsequently to the relevant Inventory account.

3. To save the settings, choose **Update**.

**Example**

1. You define interim WIP consolidation mapping as displayed below.

2. You open a production order as displayed below.
The Child1 and Child2 items use WIP account 210102, which is included in the WIP consolidation mapping matrix.

3. You issue all the components. In the journal entry created behind, the values for Child1 and Child2 are credited from the Inventory account and debited to the WIP account 210102. The value for R001 is credited from the relevant standard cost expense accounts and debited to the WIP account 210102.

4. You report the production order’s completion. The journal entry created behind credits the WIP inventory account (defined for the parent item) with the parent item cost and debits the Inventory account.

5. You close the production order. The journal entry created behind closing the production order does the following:
   - Zeroes down the WIP account 210102 and transfers the value to the interim WIP account 210103 according to the WIP consolidation settings.
   - Zeroes down the interim WIP account 210103 and transfers the amount to the WIP Variance account.

   o If there is a difference between the value transferred to the WIP Variance account and the value of the received parent item and its by-product, it is posted to the Inventory of the parent item.